

Oracle® Banking Loans Servicing

Functional Overview

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Oracle Banking Loans Servicing Functional Overview, Release 2.12.0.0.0

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Preface

Oracle Banking Loans Servicing solution enables bank to efficiently service the entire life cycle of a loan account.

This preface contains the following topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

Audience

This guide is intended for the users of Oracle Banking Loans Servicing.

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Related Documents

For more information, see the following documentation:

- For installation and configuration information, see the Oracle Banking Loans Servicing Installation Guide - Silent Installation.
- For a comprehensive overview of security, see the Oracle Banking Loans Servicing Security Guide.
- For the complete list of licensed products and the third-party licenses included with the license, see the Oracle Banking Loans Servicing Licensing Guide.
- For information related to setting up a bank or a branch, and other operational and administrative functions, see the Oracle Banking Loans Servicing Administrator Guide.
- For information related to customization and extension, see the Oracle Banking Loans Servicing Extensibility Guide for Host, SOA, and UI.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

1 Overview

Oracle Banking Loans Servicing solution enables bank to efficiently service the entire life cycle of a loan account. Servicing life cycle covers account opening, payment appropriation, accounting, loan classification as non performing when borrower does not repay the loan as per contract, various account variations such as offer swap, restructure of loan, rate changes, extensions, and account closure, either through customer request for early closure or repayment by the customer as per contract. Oracle Banking Loans Servicing provides various inquiries which enable the bank to satisfy customer inquiries. Oracle Banking Loans Servicing can service loan accounts opened either through Oracle Banking Originations or any other loan origination system. Oracle Banking Loans Servicing has a single dashboard from which all loan servicing transactions can be executed and all inquires can be performed.

2 Key Features

This chapter describes the key features of Oracle Banking Loans Servicing.

2.1 Parameterization

This section explains the parameterization available in Oracle Banking Loans Servicing.

2.1.1 Define Loan Product

Bank can define Loan Products according to the market requirements. Product parameter definition gives flexibility to define different products having different attributes. A sample list of product parameters that can be configured is as follows:

- Control Parameters
- Allowed Term
- Allowed Currencies
- Fixed or Variable period Parameters
- Economic Cost Parameters
- Auto Debit for Installment
- Asset classification Parameters
- Fee Treatment Preferences
- Delinquency Parameters
- Allowed Facilities
- Statement Parameters
- Currency Parameters
- Alert/Document Parameters
- APR Applicable

2.1.2 Installment Rule Details

Installment rule maintenance provides options to define different installment types that can be used to draw the repayment schedule. A computation formula is associated with each installment type which is used to calculate the principal or interest amount to be paid by the customer. Following computation formulas are supported in Oracle Banking Loans Servicing:

- Interest Only Installment (IOI)
- Moratorium (MOR)
- Equated Periodic Installment (EPI)
- Adjustable Rate Mortgages (ARM)
- Interest and Principal Installment (IPI)

- Post Maturity (PMI)
- Interest Only Advance (IOA)
- Flexible Repayment Schedule (FRS)
- Equated Interest Principal Installment (EIPi)

2.1.3 Loan Schedule Setup

Loan Schedule type setup enables the bank user to define different repayment schedules that can be attached to a loan offer. Repayment schedule specifies the amount, number and type of installment that the customer has to pay as a part of loan repayment.

This enables the user to define repayment parameters such as the number of installments, interest frequency, the number of repayment stages, interest due frequency and repayment stage types. They are as follows:

- Moratorium Stage
- Interest Repayment Stage
- Principal Repayment Stage
- Post Maturity Stage

2.1.4 Define Loan Offer

Loan offer is the saleable form of product and has all the customer impacting attributes. A sample list of offer parameters that can be configured to suit requirements of customers is as follows:

- Facilities
- Penalty Parameters
- Quote Parameters
- Amount Parameters
- Alert/Document parameters
- Allowed Rate types
- Restricted Transactions
- Account Level Preferences
- Allowed Access Channels
- Allowed Fund Transfer Options
- Offer Type

2.2 Disbursement

Oracle Banking Loans Servicing supports both Automatic and Manual disbursement in a loan account. Disbursement can be done as of the current date or instruction can be set up for a future date.

Disbursement can be made through any of the following settlement modes:

- Current Accounts and Savings Accounts (CASA)
- External account

- Cash
- Bank Draft
- GL

Loan disbursements can be done either in full, scheduled partial, or ad hoc online.

2.2.1 Full Disbursement

Bank can pay out the entire sanctioned amount of loan account as a part of a single transaction.

2.2.2 Scheduled Partial Disbursement

Loans can also be disbursed through multiple partial disbursements as a part of pre-decided amounts over a period of time. User can track disbursements through the system to validate that the total amount paid by the bank to the customer through the systematic payouts is equal to or less than the sanctioned loan amount.

2.2.3 Ad hoc Online Disbursement

Online disbursements are ad hoc disbursements that are supported by the application. These can be done as and when the customer requests or depending on the bank's decision.

2.3 Repayments

Oracle Banking Loans Servicing enables repayments in a loan account. It is used for setting off the dues that have been created in the loan account through different arrears. Following types of repayments are supported:

2.3.1 Manual Installment Payment

Oracle Banking Loans Servicing provides the ability to perform installment payments manually using Make Payment, once the arrears are raised in an account.

2.3.2 Automatic Installment Payment

Bank user can also set up the instructions for loan repayment. Oracle Banking Loans Servicing invokes the due amount from the specified account on the installment due date. This provides the flexibility to the customer to ensure that arrears raised are settled on the repayment dates.

2.3.3 Advance Payment

This feature enables the customer to make additional payments in a loan account over and above the existing arrears. Additional payment is done in order to get interest benefits or to keep an amount in the account for upcoming installments.

2.3.4 Partial Payoff

Partial Payoff is an option through which a customer can pay off a part of his loan's outstanding balance. Customers normally choose to do partial payoffs to get the following benefits:

- It reduces the interest base of the loan account hence resulting in reduced interest amount for the remaining term of the loan.

- The loan schedule is redrawn providing the customer a benefit of either a decrease in the periodic installment amount or a decrease in the loan term based on the product specifications.
- Bank can charge a partial payoff fee to the customer.

2.3.5 Partial Payoff from RPA

RPA (Repayment Pending Appropriation) is a bucket internal to the loan account where advance payments are kept. Option is available to the customer to use these funds and make a partial payoff in the account.

2.3.6 Early and Final Settlement

Customer can settle the loan before maturity date using Early Final Settlement (EFS) feature. Payment can be made for the entire outstanding loan amount along with the arrears due, EFS fees and any other applicable costs to close the account. Customers have the flexibility to make an EFS payment greater than or equal to the computed EFS amount. The EFS payment can be either current dated or backdated.

A Backdated EFS is supported where, the closure value date is before the transaction processing date of the loan.

The following business scenarios are considered with respect to closure of a loan account before maturity:

- Online closure of the loan account.
- Customer requests the bank to generate a Payoff quote as of a particular date and it is valid till that particular date.
- Generate a request to the appropriate authority, as configured by the bank to negotiate with the customer for retaining the loan account.
- Automatic closure of loan account from payment through standing instructions (Savings or Current Account) or payments from external accounts with a provision for buffer days (number of days or confirmation to customer) to ensure the loan does not close immediately.
- Early Repayment Fee, if the loan is closed within a certain period.

2.4 Other Loan Transactions

This section describes other loan transactions supported in the Oracle Banking Loans Servicing.

2.4.1 Excess Refund

This option is used to payout any residual credit balance left in the account post loan account closure.

Customer can make payment from an external account into the loan account. If the payment amount is more than the amount required (closing the account) and if Auto Closure function is enabled, the system closes the account thereby leaving a credit balance in the loan account.

2.4.2 Repayment Holiday

Repayment holiday is the feature where in the customer gives an instruction to the bank for not debiting the installment provider account (repayment account) for a specified period. Customer pays the upcoming installments during that period in advance and an amount is kept in RPA bucket of the loan.

During the repayment holiday period, system appropriates funds equal to the installment amount on due dates from RPA bucket. Customer's provider account is not debited even though auto repayment instructions are maintained in the account.

2.4.3 Loan Rescission

Loan Rescission is the feature by which the customer or bank is given an option to cancel a loan that has already been disbursed. This feature is useful when the bank user has committed some errors while opening the loan account. This feature is also useful in case the customer wishes to cancel the loan subsequent to disbursement and the bank is willing to accept such request. In both these cases, rescission is allowed within the time period specified at the product level.

2.4.4 Accelerated Payments

Accelerated payment is a value added facility extended to the customers. On the repayment due dates, the customers are allowed to pay more than their contracted installment amount to obtain interest benefits. Accelerated payment is allowed both in Fixed and Variable rate period of loan based on configuration.

Accelerated payment is set up as an instruction and is allowed only when repayment instruction is set up for the account. The additional amount can be in terms of percentage of the contracted amount or can be an absolute amount over and above the contracted amount.

2.4.5 Redraw Transaction

Loan redraw is a feature by which the customer is allowed to withdraw funds available in the RPA bucket.

If the payment amount is greater than the existing arrears in a loan account, then the excess amount remains in Repayment Pending Appropriation (RPA) bucket.

2.4.6 Loan Reschedule

Repayment schedule is drawn for an account to arrive at the number of installments to be paid, frequency of installments and amount to be paid in each installment.

Account can be rescheduled on customer's request to give effect of increased or decreased interest rate or capitalized components. Option is available to capitalize existing arrears, recalculate installment amount or recalculate account term as part of reschedule function.

Repayment schedule type code cannot be changed as part of this function.

2.4.7 Loan Restructure

Loan restructure is a function wherein the repayment schedule type attached to a loan account can be replaced into by a new repayment schedule type.

This may happen on customer's request or bank may decide to restructure a loan, if the customer is unable to repay the loan for some period of time because of hardship or other reasons.

The option to capitalize all existing arrears is available. Also, the option to revise installment amount or reduce installment amount during restructure is provided. A new repayment schedule is drawn from the restructure date. A restructure of an account can be either current dated or backdated.

2.4.8 Loan Deferment

Loan deferment is a function where the bank can defer the installment payment in a loan account for a specified number of installments. It can be the result of a hardship relief approved by the bank.

Two types of deferment are supported in the application:

- During the deferment period, a moratorium period is introduced, interest is accrued for the period and either capitalized to the account or raised as arrears at the end of the deferment period. On completion of the deferment period, account is rescheduled and a new repayment schedule is applied.
- If arrears for the deferment period are raised as arrears at the end of the deferment period, on completion of the deferment period, account is rescheduled and a new repayment schedule is applied.
- Installment amount for the account post deferment remains the same, if the user chooses to capitalize arrears for the deferment period. Any additional amount due (due to the balance being increased due to capping of the arrears for the deferment period), is raised in the last installment due (on the loan maturity date).
- During the deferment period, an interest only period is introduced and only interest is charged to the account. On completion of the deferment period, account is rescheduled and a new repayment schedule is applied.

2.4.9 Loan Account Preferences and Indicators

Offer level preferences are inherited by an account by default. This function allows the user to modify any of the following preferences for an account based on requirement, except Next Repayment Review Date and Regulated Loan account.

- Accelerated Payment
- Redraw Facility
- Principal Offset
- Repayment Grace Days
- Next Repayment Review Date
- Statement Required
- Statement Frequency
- Appropriation Sequence for Performing accounts
- Appropriation Sequence for Non performing accounts
- Account Indicators
- Employee Account
- Employee Referred Account
- Restricted Account
- Regulated Loan Account

2.4.10 Principal Offset

Principal offset is the function where customers can link their Transaction Accounts to their loan account for getting the interest benefit.

The interest in loan account is calculated after reducing the linked account balance from the outstanding balance of the loan account.

Multiple offset accounts can be linked to a loan account. Balances of all linked offset accounts are considered while arriving at the loan balance on which interest is computed.

Interest on the excess balance held in the Transaction Accounts offset account, after reducing the principal remaining in the loan account is eligible for credit interest. In cases where there are multiple Transaction Accounts linked as offset accounts, the Transaction Accounts is prioritized to configure which offset account should receive credit interest first, if the Transaction Accounts balance is more than the loan balance.

A new Transaction Account (eligible for offset), which is in the same submission as the new loan account, is linked as offset account to the new loan account during loan account configuration.

2.4.11 Refund of Fees

This function can be used to refund a fee that has already been applied to the account. Partial refund or full refund of fee can be done using this screen. Fee refund happens from the date it has been applied, that is, a backdated credit is given in the loan account and all other transactions happened after that date are replayed till the current date.

2.4.12 Servicing Fees Breakup in Account Configuration

Loans module displays the breakup of servicing fees with the fee behavior for each of the servicing fee applicable for the loan account. This is displayed in account configuration and in settlement instruction.

2.5 Loan Account Variations

This section describes the loan account variations in Oracle Banking Loans Servicing.

2.5.1 Change Repayment Type and Rate Type

Change Repayment Type and Rate Type is an option through which the user can move the account from an existing repayment and rate type combination to another repayment type and/or rate type. For example:

- Current repayment type: IOI
- Current rate type: Fixed

Account with the above configuration can be moved to:

- New repayment type: EPI
- New rate type: Variable

Note that movement to the new repayment type can happen, only if it is present in the repayment schedule linked to the account.

Credit Assessment is optionally triggered when repayment type changes from P&I to Interest Only stages.

2.5.2 Offer Swap

Offer swap is a function where an account can be moved from one offer to another on customer's request. This is done to avail certain benefits available in the new offer. This is applicable for the loan account with interest rate type Variable.

2.5.3 Amend Account

The Amend Account function enables to perform the following variations to the account:

- Account Title
- Increase Approved Loan Amount
- Decrease Approved Loan Amount
- Increase Loan Term
- Decrease Loan Term
- Amend Repayment frequencies

2.5.4 Split Loan

Split function enables the user to split an existing loan account into two accounts. A new account is opened with the specified amount as a result of Split Loan transaction. New account can be configured as per the requirements, with respect to the rate type and repayment stage type.

This is requested by the customer in cases where part of the existing loan amount is required to be fixed to avail the fixed interest rate benefits.

Fee treatment for the Loan Split event is defined in loan product preferences. Based on fee treatment behavior defined, the split loan fee billed or capitalized.

2.5.5 Consolidate Loans

Multiple loan accounts under the same facility can be consolidated into a single loan account using this option. Survivor account is called as the parent account and its sanctioned amount is increased to the extent of accounts being consolidated.

Accounts getting consolidated into the parent are paid off (closed) as part of this transaction.

2.5.6 Change Line of Credit to Term Loan

This function enables the bank user to convert an existing Line of Credit account into a term loan account. Term loan is opened under the same facility. Hence, no credit assessment is done as part of this variation. User has the option to specify the required attributes as part of loan account configuration. A new loan account under the existing facility is opened and is disbursed for an amount equal to the outstanding Line of Credit account balance. Line of Credit account is paid off using the disbursed amount and facility is delinked from the Transaction Account. Transaction Account continues in the system.

2.5.7 RPA balance Retention During Restructure

As part of loan offer definition, if the parameter Retain RPA as part of Restructure is set, then the RPA balance is not utilized as part of restructure transactions, that is, loan consolidation, offer swap and loan restructure. In such case, the components such as unbilled interest, unbilled penalty interest (if any), periodic fees (in offer swap), economic cost and event fees are capitalized to the loan account without affecting RPA balance.

2.6 Inquiries

This section describes the various inquiry options available in Oracle Banking Loans Servicing.

2.6.1 Loan Balance Inquiry

This inquiry provides details of different components that constitute loan balances. It is classified into three categories:

- **Arrears**
 - Principal arrears
 - Interest arrears
 - Other arrears
 - Fee arrears
- **Unapplied credits**
 - Amount paid today
 - Funds in RPA
 - Contribution amount
 - Unclear funds
 - Unclear funds for contribution
 - Interest in advance
- **Unbilled**
 - Interest
 - Penalty interest
 - Uncollected interest

2.6.2 Current Schedule Inquiry

This inquiry is used to view the repayment schedule details for a loan account. It covers stage details and entire schedule details.

2.6.3 Fee Amortization Inquiry

This inquiry provides details of fee amortization. Fee deducted upfront from the customer during the first disbursement is amortized to spread the income over the entire life of the loan.

2.6.4 Account Arrear Inquiry

Arrears raised in a loan account can be inquired for a date range using this inquiry. Arrear types filter available to the user are as follows:

- Principal
- Interest
- Fee
- Paid
- Unpaid

- Other
- All Arrears

2.6.5 Overdue Aging History Inquiry

Arrear overdue aging history for a date range can be inquired using this inquiry.

2.6.6 Early Final Settlement Quote Inquiry

This inquiry provides details of the already generated quote in an account. The details include:

- Status
- Generation date
- EFS amount
- Effective date

2.6.7 Billing Inquiry

This inquiry provides details of the already generated bills for an account. The details include:

- Date of bill
- Total loan outstanding
- Current due
- Past due
- RPA balance
- Total amount due
- Due date
- Pay by date
- Amount paid

2.6.8 Payment Status Inquiry

This inquiry provides details of the payment status. The details include:

- Due date
- Installment amount
- Amount paid
- Last payment date
- Status

2.7 Calculators

This section describes the different calculators available in Oracle Banking Loans Servicing.

2.7.1 Accelerated Payment Calculator

This calculator is used to simulate time and interest saved by making the extra (additional) payment over and above the loan repayments. The additional payments can be done using the accelerated payment function.

2.7.2 Mortgage Offset Calculator

This calculator is used to simulate the interest amount saved due to mortgage offset. Offset can be achieved by using the principal offset function available in servicing.

2.7.3 Split Loan Calculator

Split loan calculator is used to derive the amount payable in fixed rate period and variable rate period for the specified amount.

2.7.4 New Loan Calculator

New loan calculator is used to simulate the repayment stage configuration and to identify the repayment amount for specified amount and term.

2.8 Internal Processes

This section describes the types of Internal Processes.

2.8.1 Arrear Raising and Appropriation

Arrears (principal, interest and fee) are raised in the loan account depending upon the repayment type and frequency. Arrears are raised on a specific date (called as the due date or repayment date for loan account) as per the repayment schedule.

Payments made in a loan account are appropriated against the arrears depending upon the appropriation sequence.

2.8.2 Auto Amend Repayment Holiday Expiry Date

The repayment holiday duration is automatically amended by the system when there is a change in the repayment amount of the account. Repayment amount can change due to any event such as repayment review, reschedule, rollover and loan restructure. It increases the installment amounts thereby the number of installments for which the customer can avail a repayment holiday is reduced.

2.8.3 Inclusion of Periodic Fee during Schedule Generation

Oracle Banking Loans Servicing supports the process of applying periodic fees for a particular period on loan accounts. Based on the stage in schedule, the periodic fees can be either capitalized or charged to loan account.

2.9 Batch Process

List of activities or events that can be configured in a batch process are as follows:

- Interest Accrual
- Interest Charging

- Interest Capitalization
- Interest Compounding
- Fee Amortization
- Accelerated Payment Review
- Account Payment Instruction Execution
- Contribution Pay in Instruction Execution
- Disbursement Instruction Execution
- Settlement Payout Execution
- Split Loan Transaction Execution
- System or Customer Initiated Rollover
- Repayment Review Generation and Application

2.10 Backdated Transactions

Backdated transactions are done in order to rectify the operational errors and to support the business cases in a de-centralized setup where the request capture and execution happens on two different dates.

Following backdated transactions are supported in Oracle Banking Loans Servicing:

- Backdated Installment Payment
- Backdated Advance Payment
- Backdated First Disbursement
- Backdated Subsequent Disbursement
- Backdated Offer Swap
- Backdated Change Repayment type/Rate type
- Backdated User Defined Margin (UDM)
- Backdated Index Rate Change
- Backdated Settlement Instruction
- Backdated Payment in Post Maturity (PMI) stage
- Backdate Early Final Settlement
- Backdated Revised Installment

2.11 Backdated Reversals

Backdated reversals are done to rectify the operational errors. Backdated reversals are supported in Oracle Banking Loans Servicing for the following transactions:

- Installment Payment
- Advance Payment
- Subsequent Disbursement
- Drawdown

- Standing Instruction
- Periodic Credit
- File Upload
- Cheque Credit

2.12 Delinquency Counters

Delinquency counters provide important information to understand the customer's payment patterns and risk behavior. Understanding the delinquency history of an account provides useful information in servicing a customer's account. Delinquency counters count the number of dues which are past due during a defined period of time. Loans module supports display of delinquency counters at account level.

Oracle Banking Loans Servicing has the ability to treat unclear funds as cleared when a payment is made to a loan account on due date and not apply a delinquency counter. In case the payment is dishonored on a later date, the delinquency counter is updated to apply to the account. This applies to payments made through Cheque or Electronic payments.

2.13 Amend Loan Account as part of Facility Amendment

Loan account can be amended as a part of the existing facility amendment. A new repayment schedule is generated and displayed in account configuration while amending the account. Following changes can be done in the account as part of Amend:

- Increase Sanctioned Amount or Term
- Decrease Sanctioned Amount or Term
- Change repayment Frequency
- Offer swap
- Add or update principal offset instruction
- Add or update accelerated payment instruction
- Add or update account repayment details
- Update communication preferences
- Link affiliates and holder preferences
- Add or update operating instructions
- Change repayment type or rate type
- Add or update periodic credit Instruction
- Capture cosigner account holder and statement preferences
- Capture of regulatory parameters

2.14 Annual Interest In Advance Loans

Annual Interest In Advance loans are generally offered with fixed rate terms of one, two, three, four or five years. On completion of Interest only period, the loan is typically converted into an equated monthly installment repayment schedule.

System supports the option to collect the first year's interest and fees in advance for IOA stage.

The subsequent period's interest and fees are expected to be paid by the customer in the beginning of period that is start of second year, third year, and so on depending upon the IOA term.

2.15 Fees Based On Rate Type

Oracle Banking Loans Servicing support charging different fees in fixed and variable rate period for an event. The fee income is reported into different GLs for fixed and variable rate period.

Also, if the account is a part of a bundle then the benefits in terms of margins and fee discounts can be different for fixed and variable rate period.

2.16 Penalty

Oracle Banking Loans Servicing supports charging of penalty fee in case if customer defaults on repayments. This fee is charged to the loan account at the end of grace period. Depending upon the fee treatment, this fee can be raised as bill or can be capitalized in the loan account.

Loans module compares arrears with penalty tolerance defined at loan offer definition and check if the total arrears are greater than the penalty tolerance before calling interest module to start penalty computation. If the arrears are greater than the penalty tolerance value, then the penalty interest computation takes place.

2.17 Non Financial Transactions in Statement

The following non financial transactions are displayed as part of the statement:

- Statement Period Interest
- Restructure
- Reschedule mode - Recalculate term
- Reschedule
- Offset Benefit
- Movement from one offer to another
- Loan Split
- Loan Deferment
- Loan Account Reopen
- Loan Account Rebooking
- Inward Payment final return before value date
- Interest Rate changes
- Fee Waived
- Facility of Accelerated Payment for the loan account
- Delink Offset Account
- Current dated Offset Linkage
- Consolidate Loans
- Change Rate Type/Repayment Type
- Auto-Closure of a Loan Account

- Account Branch Transfer
- Interest Rate Changes
- Change in Loan account preferences
- Change in Installment Payment amount
- Offset Linkage and Offset Delinkage
- Offset Benefit
- Loan Account Variations

2.18 Payout Quote

Oracle Banking Loans Servicing supports generation of a payout quote for Early Final Settlement (EFS) for a particular date. If the EFS transaction is done within the period (from the quote generation date till the specified date), the amount specified in the quote needs to be applied.

This saves the customer from any bank-initiated changes like rate change that may increase the final payout amount. However, if a customer-initiated transaction changes the final payout amount and it exceeds the tolerance limit, the quote becomes invalid. A backdated or a future dated EFS quote can be generated up to 90 days.

A payoff quote can be generated for account in Post Maturity (PMI) stage. Backdated Payoff quote can be generated on a holiday. Also, making backdated payment on holiday is supported.

2.19 Periodic Credit to Loan

Oracle Banking Loans Servicing supports setting up of periodic credit instruction to a loan account. The provider account can be an internal account or external account, an account from the other bank.

Periodic credit instruction can be set up for a fixed amount and for a period with defined frequency. Multiple periodic credit instructions can be maintained for a loan account.

A new transaction account, which is in the same submission as the new loan account, is linked as Periodic Credit Account to the new loan account during loan account configuration.

2.20 Bundle Recommendation During Split and Account

Oracle Banking Loans Servicing supports recommendation and selection of bundle as part of split loan and account opening within arrangement variations. Account is linked to the selected bundle on successful execution of the variation request.

2.21 LTV and Outstanding Exposure Based Interest Margins

Oracle Banking Loans Servicing supports interest margin definition and applicability based on the Loan to Value ratio and Outstanding Exposure values. These are used as facts and setup can be done using the same.

2.22 Rate Change during Moratorium Period

Oracle Banking Loans Servicing supports current dated as well as backdated index rate change for accounts in moratorium (no charging period) stage.

2.23 Offset Benefit Adjustment in Statement

Oracle Banking Loans Servicing supports re-computation of offset benefit and it is displayed in the statement for all backdated transactions where a payment, reversal, or variation is done in the account with backdated effect. This ensures that the correct offset benefit figures are displayed in the statement. The cumulative offset benefit amount is also re-computed and updated in the inquiry screen.

2.24 Reversal of a Backdated Settlement

Oracle Banking Loans Servicing supports the reversal of a backdated account or application level first settlement on the same day using the reversal function, both settlement payout as well as contribution amount are reversed.

2.25 Term Extension

Oracle Banking Loans Servicing supports the extension of term in case of reschedule in the account. As part of extension, the rate type of last stage is considered, and extended period has the same rate type as that of the last stage.

2.26 Variation Within First Charging

Oracle Banking Loans Servicing supports variations in a loan account before the first charging (principal and interest) has happened. This enables the bank to perform variations as per customer's request immediately after disbursement is done in the account.

2.27 Backdated Settlement with Contribution

Oracle Banking Loans Servicing supports backdated settlement instruction with contribution. This enables the bank to settle a backdated loan account using backdated contributions.

2.28 Net Rate Change Display

Oracle Banking Loans Servicing supports the display of net rate change due to any event in loan account. It is displayed as part of the account statement.

2.29 User Discretionary Margin in Fixed Rate Loan

Oracle Banking Loans Servicing supports application of user discretionary margin for fixed rate period of a loan account. This enables the bank to change net interest rate even in fixed rate loans.

2.30 Simulators

The application supports the following simulators:

- Early Final Settlement
- Partial Payoff
- Rate Change
- Payment Appropriation

2.31 Consumer Credit Insurance

The application supports Consumer Credit Insurance (CCI). The customer can apply for CCI along with the Loan product. Such policies offer protection against death, disability, unemployment, and so on. Customer can apply for the Insurance product in the Loan Origination process. CCI can be one-time or periodic.

- For one-time CCI, as part of account configuration, capitalized CCI premium amount is added to the loan amount of the nominated account (for capitalization). The repayment schedule of the loan account is generated during disbursement, considering the capitalized CCI premium amount.
- For periodic CCI, the repayment schedule of the loan account is generated considering a new bucket called Premium. The insurance premium's outstanding balance is maintained separately. This does not increase the outstanding principal, but it is included to arrive at the Total loan outstanding balance. The loan repayment schedule is re-drawn after the premium schedule is drawn, displaying the premium repayment amount in the Insurance column of the repayment schedule. When the premium repayment schedule is drawn, if the premium review date falls on a date that is greater than the Loan maturity date, the system aligns the premium review date to the loan maturity date and draws the premium repayment schedule.
- CCI Recalculate Premium parameter at Loan Bank Policy level controls whether a revised insurance premium is required during the following loan servicing events to reschedule the account. Based on the parameter, the loans module refers to the revised insurance premium from the Limits module.
 - Change Repayment type or Rate Type
 - Loan Split
 - Loan Consolidation
 - Offer Swap
 - Rescission
 - Early and Final Settlement (EFS)
 - Restructure
 - Increase or Decrease Amount or Term
 - Change Repayment Frequency
- In amend flow of origination, the customer can purchase a new CCI policy, if there is no existing policy linked to the facility.

2.32 Customized Rates

Customized rates are rates provided from the Treasury for big ticket loans. During account configuration, the user can input rates for customized rate loans. Customized rates are applicable only for fixed rate type. These rates can have options such as, For or Till (Optional). If the rate validity is maintained as For date, then the customized rate is applicable for the account only when the disbursement happens on the particular date. In case disbursement does not happen on the maintained For date, a new customized rate is to be entered on disbursement.

If the rate validity is maintained as Till date, then the customized rate is applicable for the account only when the disbursement happens before or on the date maintained. In case disbursement happens after the Till date maintained, a new customized rate is to be entered on disbursement. Customized rates for loans are applicable in all variation events where re-pricing is applicable. The For or Till options are not applicable for customized rates for variation events.

2.33 Internal Refinance

The bank or customer may choose to refinance an existing loan of the customer. In such cases, the purpose of the loan is internal refinance. The part or full proceeds of such loans goes towards the settlement (full or partial) of existing loan of the customer within the bank. In these loans, the amount to the extent of refinance amount is disbursed and credited towards the partial or full closure of the existing loan accounts.

Internal Refinance is permitted during both New Origination and Amend Lending Facility.

2.34 Risk Indicators

Risk Indicators functionality can help the banker to automate the actions that need to be taken as a prudent banker, when certain identified indicators of warnings are maintained. The features of risk indicators are as follows:

- Risk Indicators are defined at Loan Account, Facility, and Collateral Level.
- Banks can set up and modify Risk Indicators at facility, party, or account level which is applied on the loan account. Using the loan module the bank user can link or delink loan accounts to Risk Indicators.
- Impacts such as Prevent Disbursement, Prevent Redraw, Prevent Excess Refund, Stop Credits, Prevent Deferments, Prevent Change Repayment Date, Prevent Change Frequency, Prevent Restructure, Stop Periodic Credit, and Stop Repayment Instructions are available for loans.
- All the variation events are prevented if there are any Risk Indicator impacts with respect to account or party level risk indicators.

2.35 Multiple Interest Stages

Multiple interest stages (MOR, IOA and IOI) can be configured in stage configuration for a loan account. Repayment schedule is generated considering multiple interest stages.

The allowed combinations of multiple stages are as follows:

- MOR + (any one P and I) +PMI
- IOA+ (any one P and I) +PMI
- IOI+ (any one P and I) +PMI
- (Any one P and I) +PMI
- IOA+IOI+ (any one P and I) +PMI
- IOI+IOA+ (any one P and I) +PMI
- MOR+IOI+ (any one P and I) +PMI
- MOR+IOA+ (any one P and I) +PMI
- MOR+IOA+IOI+ (any one P and I) +PMI
- MOR+IOI+IOA+ (any one P and I) +PMI

2.36 Flexible Repayment Schedule (FRS)

Flexible Repayment Schedule (FRS) is a stage in loan repayment schedule where the following repayment methods can be used:

- **Balloon:** At the time of loan establishment, a single principal installment is determined and made due on loan expiry date (always on loan expiry date).
- **Bullet:** The entire loan term is defined as interest only and the principal outstanding is demanded on maturity.
- **Fixed/Flexible Seasonal Payments:** Along with the Interest only installments, optional principal payments in a particular season as fixed/flexible payments are configured.
- **Moratorium Interest Limit:** A type of loan where customer need not pay principal and interest (Moratorium period) up to a limit (limit is set for interest and interest + fee). Once the interest (+fees) limit is reached, then the repayment of interest only period starts and on maturity of the loan, the principal amount is demanded.
- **Escalated Payment:** At the time of loan establishment, it is decided to reduce the loan principal amount to a certain amount in certain period.

Variation events (Loan Split, Loan Consolidation, Offer Swap, Line of Credit to Loan and Change Repayment Type and Rate Type), Accelerated payment and bundling are not allowed in FRS accounts. One time and Periodic CCI are not supported in FRS accounts.

Loan Restructure is allowed in FRS accounts. Backdated transactions are allowed in FRS accounts. Backdated transactions beyond reschedule/restructure event are not allowed and Backdated Subsequent disbursement reversals are not permitted.

2.37 Cross Offer Checks

Customers may be required to hold certain accounts mandatorily, if they wish to avail certain other accounts. For example, Banks may mandate customers to hold specific types of Transaction Accounts to avail certain Home Loan offers. A setup is built to handle such cross product or offer linkages. During account configuration, a check is performed to evaluate cross offer dependency. If the opted offer is dependent or mandatory offer, then a check is performed on other accounts or offers of account holders (applied or existing). If the check is successful, then account configuration is allowed. This is also applicable in case of Offer Swap and Line of Credit to Loan variation events.

2.38 Fixed Period and Interest Only Period Control

The application is enhanced to define Minimum and Maximum Fixed Term and Interest only period controls at Loan Offer level. The Fixed periods and Interest periods set up for a loan account has to be within the prescribed terms at Offer level. These validations are checked during the following account configuration and other variation events:

- Origination, Structure Solution: Loan Account Configuration (new account)
- Origination, Amend lending facility: Open new loan account
- Manage facility within arrangement: Open new loan account
- Change Rate type and Change Rate Type and Repayment Type
- Loan Split
- Loan Consolidation
- Loan Offer Swap
- Manage Repayment Schedule: Restructure

- Amend Loan Account (Increase or Decrease - Term or Amount)
- Fund Flow Calculators: New Loan Account
- Line of Credit to Loan Account

The above validation is not checked in loan term extension in Reschedule (without selecting schedule code and with capitalize option) event.

2.39 Reschedule

Loan account can be rescheduled with or without capitalizing the outstanding arrears. During reschedule, user can input the installment amount (increase or decrease the existing installment amount) and draw a schedule.

2.40 Arrears Persistence Control

Bank level loan policy parameter Allow Consolidation or Offer Swap or Restructure when Arrears Exist is defined. This parameter controls the transaction with the following options:

- Allow loan consolidation when arrears exist and capitalize arrears on consolidation
- Allow loan consolidation when arrears exist and do not capitalize arrears on consolidation
- Prevent execution of the transaction

The arrears persistence check is performed while performing loan offer swap, loan consolidation and restructure events.

2.41 Purchase Rate Lock Agreement

Rate lock quote is a function where the customer can purchase an interest rate, which can be used within a specified period. It expires after the specified period. Customer can choose an existing rate lock quote if it is available or can purchase a new rate lock quote while performing re-pricing events like loan split, change rate type or repayment type. Purchase rate lock quote can be deleted before saving the transaction. Rate lock quote is applicable when the loan is in fixed rate type. If the net rate applicable is lower than the locked rate, the bank can configure the rate which is to be applied to the loan account. Rate lock fee can also be collected from the settlement account for loan account opened through Origination flow.

2.42 Regulatory Codes

The US market consists of certain regulatory requirements that pertain to Community Reinvestment Act (CRA). The relevant regulatory code pertaining to each regulation can be captured and saved at the account level.

2.43 Annual Percentage Rate (APR)

The annual percentage rate is a measure of the cost of credit, expressed as a yearly rate, which relates the amount and the timing of value received by the consumer to the amount and the timing of payments made.

APR provides borrowers with a bottom-line number that they can easily compare to the rates charged by other potential lenders.

2.44 Cosigner

A cosigner is a person other than the principal borrower, who signs for a debt and assumes equal liability for the same. The main difference between the cosigner and the guarantor is that the lender can attempt collection from the cosigner for the debt practically as soon as the bill is overdue while the guarantor does not become liable until the bank has exhausted all other means of collection from the original borrower.

Oracle Banking Loans Servicing provides the option to capture account holder and statement preferences for cosigners also.

2.45 Loan Billing

Bills are created to notify the borrowers of amounts due on a loan account. The bill is required to provide information to the borrowers to meet their information needs. Apart from the borrowers, the bill is sent to the co-signer and guarantor wherever applicable.

Bills sent to the borrower for each scheduled payment due can be sent as a notification in the case of an auto debit and can be sent as a maturity bill when the last payment is due. Bills are also sent to the customer post maturity at predetermined intervals.

A bill is sent to the borrower based on the lead days configured in Oracle Banking Loans Servicing. The billing lead days are linked to the repayment frequency. Billing is supported for different repayment frequencies.

Bill is generated during the tenure of the loan, which includes pre and post maturity periods, till the account is Closed or Written off.

The following information is included in the bill:

- Date of Bill
- Account Number
- Total Outstanding Balance
- Principal
- Interest
- Fees
- Insurance
- Late Charges
- Balance in RPA
- Current Due
- Total Amount due
- Total Past Due
- Payment Due Date
- Pay by Date
- Loan Maturity Date
- Net Interest Rate

Oracle Banking Loans Servicing provides the option to view the details of bills generated for various dates through the Inquiry option.

2.46 Avoid Pyramiding of Late Fees

When a borrower does not pay the loan due within the due date, banks charge late fees. The bank cannot pyramid late fees that is, charge a late fee again if the customer has paid all other dues and not paid the previously charged late fees.

Oracle Banking Loans Servicing keeps track of the late fees charged on an account and prevents further charging of late fees if the customer has paid all other dues within the due date.

2.47 Non Due Fees

Non Due fees are fees which are not included for penalty routine and delinquency tracking. These fees even if unpaid on the due date of bill are not included for penalty computation and delinquency tracking.

Oracle Banking Loans Servicing supports this functionality through parameter in the Loan Product Maintenance. This is applicable for all event based fees.

2.48 Payment Tolerance

Payments made to loan account within the tolerance percentage or flat amount maintained at the loan product level are treated as complying payment towards the dues. Short payments made within the tolerance limit are not subject to delinquency tracking.

2.49 Charged Off Status

When the borrower defaults on loan payments for certain number of days, the account is marked as charged off. Charging off an account is an accounting event which debits the Profit and Loss of the bank and credits the Loan Asset GL. The borrower is still liable to pay off the entire dues on the account.

There are restrictions on the transactions that can be posted to an account with Charged Off status.

2.50 Deferred Approval

For a certain list of identified transactions (mentioned below), Oracle Banking Loans Servicing provides the ability of deferred approvals and allows the users performing such teller operations to proceed with their teller batch closure, even when such transactions are pending approval.

When the approval request for these transactions is approved on (future) posting date, the transaction is approved and posted on the posting date when the approval is completed. However, the value date of the approval request of such a transaction is the posting date on which the initiator has posted the transaction.

There is a deferment period within which the approval cycle for such transaction needs to be completed. If this is not completed, then such approval requests are marked as expired and the original requests are appropriately canceled.

This functionality is applicable to only specific identified transactions listed below:

- Loan Offer Swap
- Close Loan Account
- Modify Interest Rate Type and Repayment Type

- Execute Back Dated Reversal of:
 - Loan Installment Payment
 - Loan Advance Payment
 - Loan Subsequent Disbursement
 - Loan Drawdown
 - Loan Payment through Standing Instruction
 - Loan Payment through Periodic Credit
 - Loan Payment through File Upload

2.51 Credit Assessment on Loan Variation Events

The application triggers credit assessment during the following loan variation events, if the new repayment schedule has Interest Only component. Move to IOI or IOA parameter at Bank Policy determines if credit assessment has to be triggered.

- Change Rate Type and Repayment Type
- Loan Split
- Loan Consolidation
- Loan Offer Swap
- Manage Repayment Schedule: Restructure
- Manage Repayment Schedule: Deferment
- Change Line of Credit to Term Loan

2.52 Maturity Rollover

Loan Maturity Rollover is the functionality where the customer requests to renew the loan for a further period of time, especially in cases when the borrower cannot service the loan based on the current terms of payment. Maturity Rollover is initiated by the borrower a few days before the maturity date.

- Maximum Maturity Rollover Period parameter at Product level defines the maximum period for which a loan can be rolled over.
- Maturity Rollover can be either online on the posting date or on a future date, where an instruction is captured for the future date.
- The rate type (Fixed or Variable) as on Maturity Rollover date is stamped for the loan extended term.
- The repayment type (EPI, EIPI, ARM or IPI) as on Maturity Rollover date is stamped for the loan extended term.
- System does not reprice the loan account. The net rate including all components as on rollover date is retained for the rate for the maturity rollover execution, for the new term.

2.53 Fee Amortization

Two types of fee amortization are supported in the application.

- Straight Line Method:
 - Origination fees and first disbursement fees are considered for fee amortization through Straight Line method.
 - The fee is amortized on the calendar month end.
- Effective Interest Rate (EIR or XIRR) method:
 - Origination fees and first disbursement fee are considered for fee amortization through XIRR method.
 - Only non-refundable fees are amortized.
 - Each fee is amortized individually.
 - Frequency of Fee Amortization frequency can be set to occur on every repayment date, or on the end date of every month.
 - Fee Amortization is stopped when an account is in Suspended status.

2.54 Maturity Date Intact

A parameter at Offer level for Maturity Date Treatment is maintained for the following events with options such as Intact and Change. If defined as Intact, then the maturity date of the account remains intact post the variation event. If defined as Change, then the maturity date is extended post the variation event.

- Change Rate Type and Repayment Type
- Loan Split
- Loan Consolidation
- Loan Offer Swap
- Restructure
- Deferment
- Change Repayment Date
- First Disbursement

2.55 Account Purpose Code

An account purpose code is captured during account configuration. The purpose code can be either Owner Occupied or Investment. This account purpose is used to provide margin in interest rate or different base interest to the loan account.

The account purpose code is editable during the life cycle of the account.

Based on the account purpose code, the account has different maximum interest only period.

2.56 Statement Handoff

Oracle Banking Loans Servicing provides the ability to handoff account statement information to external systems for production of account statements to the bank's customer.

2.57 Modification and Deletion of User Defined Margins

Oracle Banking Loans Servicing allows to modify and delete User Defined Margin (UDM) for Regular as well Penal Interest. The loan account is rescheduled based on the modification and deletion of the User Defined Margin.

2.58 Expense Amortization

The following two types of expense amortization are supported in the application:

- **Straight Line Method:** The expense is amortized on the calendar month end.
- **Effective Interest Rate (EIR or XIRR) method:** The expense is amortized on the repayment date.

2.59 Concession Group

Oracle Banking Loans Servicing provides the ability to stamp the Concession Group on the loan account. This fact is sent to Oracle Banking Relationship Pricing for margin rates and/or fees, as applicable.

2.60 Financial Reward

During new account configuration, if financial reward is applicable, it is stamped on the loan account. The credit of financial reward happens during first disbursement.

2.61 Documents View

The Documents section in Manage Loan Account page provides a view of the documents generated for the loan account during the origination of the loan.

2.62 Rebook Account

Oracle Banking Loans Servicing provides the ability to rebook a loan account with all the details of the old account copied to the new account. All Pricing (Interest and Fees), Bundle, Insurance, Facility, and Party details are cloned to the new rebooked account.

2.63 Reopen Account

Oracle Banking Loans Servicing provides the ability to reopen a closed loan account. The reopening of the loan account happens on the date of the closure or after elapse of some days. The maximum number of days within which a loan account can be reopened is configurable. Reopening of accounts in Principal & Interest (P&I) and Post Maturity (PMI) stages is also supported.

2.64 Charge Off Account

Oracle Banking Loans Servicing provides the ability to charge off a loan account either partially or in full. The below points are applicable:

Full Charge Off:

- When full charge off is performed on loan account, catch up accrual of interest and fees is calculated till date.
- Separate status as Charged off is stamped to the loan account.
- All transactions on fully charged off accounts are stopped.

Partial Charge Off:

- When partial charge off is performed on the loan account, arrears appropriation sequence is ignored and first the principal arrears is reduced. If there is any amount remaining after this, it reduces the principal balance.
- Partial charge off does not change the status of the loan account.
- Partial charge and Active balance are displayed as two separate buckets in the loan serve, loan payment, and inquiry pages.
- Partial charge off can be followed by another partial charge off or full charge off.
- Payments are allowed to be made on partially charged off account.

2.65 Generate Periodic Instruction in Advance to Collect EMI/Dues from Other Banks Using the NACHA Network

In case of periodic credit instruction, where the loan repayments are to be expected from an External account, the instruction is initiated in advance as per the parameter maintained at bank level in payments module. When the funds are received from the counter party bank, the same is processed as Inward payment for the loan account.

2.66 Charge Fee for a Cheque Payment towards Loan Account Returned in Clearing

Oracle Banking Loans Servicing provides the ability to charge fee when cheque payment towards loan installment is returned in clearing due to insufficiency of funds. This is applicable for cheque returns before value date and post value date clearing process.

2.67 Repayment Grace Days based on State

Oracle Banking Loans Servicing provides the ability to support repayment grace days based on State as fact. The solution provides the capability to define a rule and maintain repayment grace days based on State.

2.68 Iterative Method of Installment Computation

Oracle Banking Loans Servicing provides the ability to compute installment amount due for an account by Actual/Actual method. Installments are computed considering the actual number of days in the year.

2.69 First Payment after x Days

Oracle Banking Loans Servicing provides the ability to capture first payment date for a loan account which can be after 30, 45, 60, 75 and 90 days, after first disbursement. Loan payment schedule is drawn considering the first payment date selected.

2.70 Balloon Payments

Oracle Banking Loans Servicing allows balloon payments for loans with EPI schedules. Balloon payment is a predetermined principal installment due on the loan maturity date. Balloon amount is captured during account configuration.

2.71 Charge Fee for Outward Collection Return

Oracle Banking Loans Servicing provides the ability to charge fee when Outward Collection transaction towards payment of loan installment is returned to originating bank. This is applicable for collection returns before value date.

2.72 Charge Late Fee as Percentage of Installment Amount

Oracle Banking Loans Servicing provides the ability to support charging of late fee as percentage of the installment amount as well as percentage of unpaid arrears in the account with flexibility to cap the maximum fee amount.

2.73 Reversal of Charge Off

Oracle Banking Loans Servicing provides the ability to enable reversal of charge off transaction on fully charged off loan account.

2.74 Cost Center, Company Code and Officer Code

Oracle Banking Loans Servicing enables capture of Cost Center (used to represent line of business), Company Code (used for reporting for tax purposes and moving balance and income to the correct general ledger company) and Officer Code (one or more officer linked to an account).

2.75 Repayment Instruction for Loan Account

Account Payment Instruction can be set up for repayment of loan installments on the due date from the repayment account. In case of repayment instruction, loans module invokes the due amount from the repayment account on the due date. This ensures that the arrears raised are settled on the repayment dates.

The repayment account can be Own Transaction Account, Transaction Account (Savings or Current Account), GL or External Account. A new transaction account, which is in the same submission as the new loan account, is linked as repayment account to the new loan account during loan account configuration.

2.76 Skip Repayment Instruction and Periodic Credit Instruction

Oracle Banking Loans Servicing provides the ability to skip the next account repayment instruction and next periodic credit instruction.

2.77 Per Diem Interest Field in Payoff Quote

Oracle Banking Loans Servicing provides the ability to include interest computed on the account for a day in the payoff quote. Per diem is also computed for a backdated payoff quote.

2.78 Loan Term Less than Facility Term

Oracle Banking Loans Servicing provides the ability to capture loan term which can be less than the facility term during account configuration.

2.79 Interest Only Stage for Construction Loans

A construction loan is progressively drawn down to assist with the payments associated with the construction of a property. During the construction stage, normally banks provide IO stage to the borrower, so that the borrower need not make principal repayments till the time construction is complete. Oracle Banking Loans Servicing provides ability to make Interest Only stage mandatory for construction loans. This Interest Only stage is based on the construction period of the collateral and maximum construction period at credit policy. The total Interest Only period should be at least equal to minimum of the above two values.

2.80 Pledge Loans

Oracle Banking Loans Servicing provides the ability to identify if an account is eligible for pledge. An indicator at the account level, displays if the account is eligible for pledge or not, based on the rules configured. Facts are created to identify pledged accounts.

2.81 Loans Modification

Oracle Banking Loans Servicing enables restructuring of loan accounts. The modifications can be either a current dated or even a backdated modification. Modification of accounts are not restricted, if the term of loan extends beyond the maximum allowed term at product and product group level, due to the modification. The parameters set at the product and product group level are ignored when such modifications are performed. The count of the number of modifications performed on the account as on date and the last modification date are displayed at the account level. On successful modification, the account is marked as not eligible for pledge loan, automatically, irrespective of whether the installment amount or the loan term was revised.

2.82 Lending Questionnaire

Oracle Banking Loans Servicing enables capturing of questionnaires at account level. For loan accounts with bullet payment on maturity date, a questionnaire is enabled during the new account configuration. This questionnaire captures different modes of repayment along with amounts for each mode.

2.83 Fixed Rate in PMI Stage

Oracle Banking Loans Servicing enables stamping of fixed rate or customized rate for an account in the PMI stage. The last rate type of the account prior to moving into PMI stage is carried over to the PMI stage.

2.84 Payment Tolerance in Percentage

Oracle Banking Loans Servicing enables the bank to set a payment tolerance value in terms of percentage. Payments that are made to loan accounts within the tolerance percentage maintained at the loan product level are treated as complying payment towards the dues. Short payments made within the tolerance limit are not subject to delinquency tracking. The tolerance is applied on the payment amount due, as per payment tracker.

2.85 Indirect Lending

Oracle Banking Loans Servicing enables banks to configure and manage indirect lending.

2.85.1 Computation of Plan and Policy

Indirect Lending enables the bank user to capture details and compute compensation, subvention, chargeback, and payback amounts for accounts that are sourced by service providers. It computes and records details of compensation and subvention on periodic basis, based on relevant payment methods (upfront, upfront month end, pay as you go, and pay as earned). It can also post details of compensation, subvention, chargeback, and payback from an external origination system on an account without resolving them. The bank user can set up Indirect Lending using the Define Plan for Service Providers (Fast Path: INC01) and Maintain Plan Policy for Service Providers (Fast Path: INC02).

2.85.2 Chargeback and Payback

Oracle Banking Loans Servicing can compute and record details of chargeback and payback for the compensation paid to the service provider or subvention received from the service provider. Chargeback or payback is initiated when a customer closes the loan account before its full term (EFS) or when the account is charged off. This condition is configured in the Define Plan for Service Providers (Fast Path: INC01). A chargeback is applicable only when the compensation paid to the service provider for the loan account is paid upfront or upfront month end. A payback is applicable only when the subvention received from the service provider on loan account is received upfront or upfront month end.

2.85.3 Amortization

Oracle Banking Loans Servicing enables amortization of compensation and subvention amount which is paid or collected upfront from the service provider. The amount is amortized over the full tenure of the loan using Effective Interest Rate (EIR) method.

2.85.4 Compensation Reserve

Oracle Banking Loans Servicing enables the creation of a compensation reserve for individual dealers. The amount to be retained as compensation reserve is received from the Party module when dealer is onboarded using the Service Provider Onboarding (Fast Path: PI028) page. The compensation amount is paid to the dealer only after the total eligible compensation amount breaches the compensation reserve limit set at dealer level. The amount paid to the dealer is always the total compensation amount earned minus the compensation reserve amount.

2.85.5 Dealer Loss Reserve

Oracle Banking Loans Servicing enables the creation of a loss reserve for each account sourced by the dealer. The amount in the dealer's loss reserve is accumulated based on the input received during the account opening process. The total loss reserve is created by multiple accounts and can be utilized to make Principal Only Payment (POP) for a delinquent account. The dealer's loss reserve can be utilized to make POP for accounts which have contributed to the loss reserve.

2.85.6 Manage Dealer

Oracle Banking Loans Servicing has the ability to display details of dealer and accounts sourced by the dealer in the Manage Dealer (Fast Path: IDL100) page.

The Manage Dealer page provides the following functionality:

- Compensation and subvention receivable and payable amount for the current month
- Compensation and subvention as per last statement
- Dealer's settlement instructions and correspondence details
- Compensation and loss reserve balance as of current date
- Details of accounts sourced by the dealer
- Statement summary of all accounts, displaying account details, compensation earned, and subvention payable
- Settlement instructions for amount payable and receivable to the dealer
- Loss reserve appropriation for delinquent accounts to make POP

3 Core Components

This chapter describes the core components of Oracle Banking Loans Servicing. These components include functionalities that are used to perform primary operations and define the broad parameters within which the application functions.

3.1 Common Services

The Common Services module is composed of different maintenances and processing services, each of which serve to define the bank, the branch, and the various parameters within which a banking company seeks to operate, and the essential service calls required to honor the core functionalities. These services are used for various purposes by various Oracle Banking products. The common services and maintenance are broadly grouped as follows.

- Core Entity Services
- Calendar Services
- Currency Services
- Settlement Services
- Address Taskflow
- Questionnaire Framework

3.1.1 Core Entity Services

Core Services enable the bank to configure the broad parameters such as bank and branch configurations that include defining the structure of the bank through maintenance of regional offices, lines of business and various branches, along with unique identification codes, financial cycles and accounting periods, followed by the bank, the policies of the bank, geographical locations (countries, regions, states, cities, and so on), languages and the different time zones in which the bank operates.

Following are the maintenance pages that enable the bank to configure various core entity parameters required for the bank to support its day-to-day primary operations.

- **Bank Codes (Fast Path: CS01):** This page helps the user to define a unique bank code for the own bank.
- **Business Group (Fast Path: CS02):** This page helps the user to define a group various product groups based on their line of business. This helps the bank accredit a broker or introducer to handle the offers that are part of a business group.
- **Bank Parameters (Fast Path: CS03):** This page helps the user to configure various parameters such as bank name, address, bank currency, holidays, and so on.
- **Branch Parameters (Fast Path: CS06):** This page helps the user to configure various parameters such as branch name, address, branch currency, SWIFT and other payment network codes, and so on.

- **Other Financial Institution Details (Fast Path: CS07):** This page helps the user to configure the name, registration or business number and address details of different departments of other financial institutions or banks.
- **Country Codes (Fast Path: CS09):** This page helps the user to configure countries and its time zones.
- **State Codes (Fast Path: CS17):** This page helps the user to configure the states, province or emirates of a country.
- **Bank Policy (Fast Path: CS26):** This page helps the user to configure various policies of the bank related to AML reporting, unclaimed processing and so on.
- **Bank Policy Deviation Definition (Fast Path: CS39):** This page helps the user to configure specific deviations that the bank may want to apply during a business process.
- **Bank Policy Deviation History (Fast Path: CS40):** This page helps the user to view all the policy deviations applied during a specific business process.
- **Reason Codes (Fast Path: CS16):** This page helps the user to configure multiple primary and secondary reason codes that the bank may want to stamp to a business event at different stages of the business process.
- **Purpose Codes (Fast Path: CS24):** This page helps the user to configure various purpose codes that can help the bank to select a suitable product to service the customers need.
- **Transaction Code Maintenance (Fast Path: CS44):** This page helps the user to configure various transaction codes that can be linked to a financial transaction for accounting and reporting purpose.
- **Define Non-Financial Event Transaction Code Mapping (Fast Path: CS45):** This page helps the user to configure various transaction codes that can be linked to non-financial transactions for audit or reporting purpose.
- **Risk Codes (Fast Path: CS42):** This page helps the user to configure various risk codes that can be associated with credit applications during credit assessment.
- **Risk Category (Fast Path: CS41):** This page helps the user to group risk codes under a meaningful category.
- **Mitigants (Fast Path: CS43):** This page helps the user to configure user to configure various mitigant codes that can be used to mitigate the risks associated with a credit application.
- **Data Security Configuration (Fast Path: CS50):** This page helps the user to configure the data privacy and security configuration such as Masking in UI, Tokenization in Database (SSN only) and Masking in data portability (for a predetermined list of PII fields) field-wise (applicability and masking technique) and user-wise (masked for some users and plain text for other users) for the individual customers of the bank.
- **Audit Text Based Search (Fast Path: BAM56):** This page helps the user to track all the changes done in any of the maintenance records at any time.

The core entity provides various services to access those parameters configured through the above pages. Some of the most important services of this module that other modules use are as follows:

- Financial cycle for a given date
- Accounting period code
- Check last day of financial year

- Check accounting period end date
- Bank level AML threshold
- SWIFT address of the branch
- Bank and Branch Currency
- Branch Hierarchy
- ISO Country Codes
- Time Zones
- Other Financial Institution contacts

3.1.2 Calendar Services

Calendar Services enable the bank to configure rule-based calendars for the different branches of the bank, currencies and payment networks that the bank deals with. It also allows the bank to define ad hoc holidays to handle unexpected situations that may arise due to natural calamity or government directive. The generic rule-based calendar configuration can be extended for a period of N years using custom scripts.

The Calendar functionality is achieved through the following pages:

- **Holiday Rule Maintenance (Fast Path: CAL01):** This page helps the user to define the generic rules that need to be evaluated to mark a day as a holiday in a calendar. This rule is applicable for every calendar year defined.
- **Calendar Type Maintenance (Fast Path: CAL02):** This page helps the user to define a calendar type and link the holiday rules. They can later attach the defined calendar type to a branch, currency or payment calendar.
- **Ad hoc Calendar Maintenance (Fast Path: CAL03):** This page helps the user to define any ad hoc holidays to handle unexpected situations that may arise due to natural calamity or government directive.
- **Define Payment Calendar Codes (Fast Path: CS15):** This page helps the user to define a calendar and link the holiday rules for a clearing or payment network that the bank deals with for its transactions.

The calendar services serve to record and retrieve the various holidays of the bank in a calendar year. Some of the most important services of this module that other modules use are as follows:

- Current working date
- Previous working date
- Next working date
- Working day check for a given date

3.1.3 Currency Services

Currency Services enable the bank to configure international currency codes, currency pairs, exchange rate types, buy and sell spreads, exchange rates, exchange rate history and attributes of various currencies such as spot days, decimals allowed or rounding, which can be used for various purposes by different products under Oracle Banking suite.

The Currency support functionality is achieved through the following pages:

- **Currency Codes (Fast Path: CY01):** This page helps the user to configure the unique ISO currencies used in banking and business globally. This page also allows the bank to configure various currency related attributes such as adopted countries, spot days, decimals allowed, amount format and rounding rules.
- **Amount Text (Fast Path: CY02):** This page helps the user to configure the locale word equivalent of an amount that is in practice in a country. This page also allows the configuration of pre and post decimal text values for each currencies.
- **Currency Pairs (Fast Path: CY03):** This page helps the user to configure the currency pairs supported by the bank through a specific branch. This page also allows the configuration of the currency quote method (direct, indirect) and the common currency used as through currency for the calculation of exchange rates.
- **Currency Branch Parameters (Fast Path: CY04):** This page helps the user to configure the currencies in which the branch is allowed to transact.
- **Currency Denominations (Fast Path: CY05):** This page helps the user to configure the currency denominations in circulation as notes and coins for each currency.
- **Currency Rate Types (Fast Path: CY06):** This page helps the user to configure the exchange rate types such as STANDARD, EFT, and TC that are commonly used in the banking industry for calculating exchange rates.
- **Exchange Rate Spreads (Fast Path: CY07):** This page helps the user to configure the buy and sell spreads for a currency pair that the bank may want to apply on the mid-rate to calculate the exchange rate.
- **Exchange Rate History (Fast Path: CY09):** This page helps the user to retrieve and view the latest rate available of a currency pair. This page also helps the user to view rate history of a currency pair on a specific date, a date range or the movement of rates in the past one to three months.

Any module that requires currency related service for its operations refers to the currency services module.

The currency services module provides various services to access those parameters configured through the above pages. Some of the most important services of this module that other modules use are as follows:

- ISO currency codes allowed in a branch
- Amount Rounding off Rule and Rounding off unit for each currency
- Amount Format for each currency
- Get Exchange Rate for a given currency pair
- Get Exchange Rate Spread for a given currency pair
- Last Rate Date
- View Exchange Rate Movement in a date rate
- Convert amount of a currency into another currency of the currency pair

3.1.4 Settlement Services

This module provide services to settle the money involved in a transaction. It provides the mechanism to define and maintain various modes of settlement in both settlement directions (Pay and Receive) that aligns with both payment models. It also provides the ability to capture settlement instructions for core modules and to capture pay or receive instructions as instructed by the customers.

Further, all types of transactions, whether online or batch and immediate or future-dated, can utilize the services of this module to handle settlements.

Settlements can also be initiated with blank rows or with amount pre-populated from the modules. In case the amount is pre-populated, the modes remain blank. While selecting the account in the course of settlement, details such as the type of account, party names, available balance, and utilized amount are displayed to facilitate selection of the appropriate account.

Settlement provides the following settlement modes:

- Cash
- Own Transaction Account
- Other Transaction Account
- Registered Transaction Account
- Linked Account
- Payment to External Account
- Payment to Loan Account
- Ledger
- Re-invest into new TD Account
- Re-invest into existing TD Account
- Cards
- Cheque
- Manager's Cheque Issuance
- Manager's Cheque Liquidation

Fetching accounts for Own Transaction and Loans from external legacy system is supported. Through an interface with the OCH source and with relevant validations, the accounts are fetched and considered for an instruction. The execution of such instructions is an implementation activity.

Further in Origination, the accounts which are inflight can be fetched to set up instructions. For example, offset account for a loan account or repayment account for a loan account.

The money settlement functionality is achieved through the following pages:

- **Define Domain Category Settlement Mode (Fast Path: PM030):** This page helps the user to attach settlement modes from the list provided above to a transaction event of a domain such as Payment, Insurance and Banking.
- **Define Product Settlement Mode (Fast Path: PM031):** This page helps the user to attach settlement modes from the list provided above to a transaction event linked to a product such as Loan product or Transaction Account product.
- **Settlement Taskflow:** This taskflow can be linked in any of the transaction pages to configure the settlement instruction as per the bank's or customer's choice. This taskflow allows the user to select one or more settlement modes available for the transaction event while creating the settlement instruction.

- **Settlement Instruction Execution:** Services are available to settle the money as per the instructions provided for an event when it occurs. The service supports execution of the settlement instructions either online or batch or future-dated as per the configuration.

3.1.5 Address Taskflow

Common Services also provides a generic address taskflow to configure any type of addresses such as home address, correspondence address, office address, collateral address, employment address, company registered address, branch address and so on.

The address taskflow is invoked wherever required and capture appropriate addresses. The address taskflow provides an option to the bank to capture a detailed address manually or using an integrated address search engine in a single line.

3.1.6 Questionnaire Framework

The Questionnaire framework enables the bank to define various questions that the bank may want to ask its customers during business processes such as determining offer eligibility during the application form capture process, loan account configuration, verification process, and so on. The answers recorded can be used for making various decisions or offer a product or service to customers.

The Questionnaire functionality is achieved through the following pages:

- **Section Maintenance (Fast Path: CS104):** This page allows the bank to configure various questions that they may want to ask during a business process to service the customer with appropriate products and services. This page also allows the bank to create conditions and dependencies to display the questions in a specific order.
- **Questionnaire Maintenance (Fast Path: CS103):** This page helps the user to link the questions to the specific business process such as insurance application, offer eligibility check, loan account configuration, verification process, CCI, and so on.
- **Questionnaire resolution:** Questionnaire IDs can be configured for other modules as appropriate to the relevant business event where the questions need to be displayed for capturing the responses. During the specific business event, the relevant module makes a call to common services with the configured questionnaire ID to get the questions for capturing the responses. The captured responses are stored with unique instance IDs so that the responses can be edited at a later stage.

3.2 Rules Framework

The Rules framework enables the bank to define various business rules, which are in turn used for specific purposes. It is a generic setup and used as a common module to define and resolve the defined rules.

Two flavors of rules can be defined - Decision Table and Guided Rule Editor. Facts are evaluated and used for defining inputs and the defined outcomes are given to the calling modules.

There are basic validations that the rule should be meaningful and complete. That is, the values of facts should be defined such that the evaluation will not remain incomplete. The number of facts and outcomes can also be defined by the business users. Maximum of 8 facts can be used to define rules.

Each defined rule belongs to a domain category and hence can be linked for the specific purpose of that domain category. The rules are attached at the respective placeholders in modules and executed at relevant places. For example, rules for asset classification, fees, interest setup, alert template resolution, and so on.

The above functionality is achieved through the following pages:

- **Rule Author (Fast Path: RL001):** This page helps the user to define a Decision Table and Guided Rule Editor based rule for a domain category.
- **Rule Simulator (Fast Path: RL002):** This page helps the user to evaluate the functionality of the defined rules by simulating a required scenario with sample test inputs.
- **Rule Search (Fast Path: RL003):** This page helps the user to search and view a defined rule.
- **Expression Builder (Fast Path: RL004):** This page helps the user to define various complex arithmetic expressions or formulas using facts and numerals. These expressions can be used while authoring a rule.
- **Filter Definition (Fast Path: RL005):** This page helps the user to define various filters that can be applied dynamically to identify certain details. The filters defined currently are being used to identify various accounts that qualify for collections. This functionality is specifically used in Collections module.
- **RuleSet (Fast Path: RULE01):** A RuleSet can be created using this page by grouping one or more rules that uses the same set of inputs. This functionality also helps to order the execution sequence of the rules where multiple rules need to be asserted for the same set of inputs. This functionality is specifically used in Collections module.
- **Rule Execution:** Rule IDs can be configured by other modules as appropriate to the relevant business event where the rule needs to be resolved. The modules call the rule resolution services at appropriate business events to evaluate the conditions to get the defined outcome.

3.3 Common Account

The following features are offered as part of Common Account.

3.3.1 Regulatory Parameters

Regulatory Parameters are required to capture the regulatory codes applicable to each regulation at the account level. The Account Regulatory Parameters (Fast Path: ACCT007) page displays all the questions and answers that have been chosen by the user at the time of account opening. The questions and answers for the same are, however defined at the Product Group level.

Deferred approval of a fee refund transaction on a CASA or a loan account is supported. Based on a predefined number of days, the task is available for approval by the supervisor and on lapse of such periods, the task becomes void.

3.3.2 Risk Indicator's Impact Configuration

With the variety and complexity of products and services offered by a bank to its customers, there is a need to follow prudential norms to safeguard the interests of the bank and also avoid any fraudulent or malicious activities. Banks fall back upon the system to help them aid in this objective. Risk Indicators functionality helps the banker to automate the actions that need to be taken as a prudent banker, when certain identified indicators of risks are maintained.

Through risk indicators framework, a bank can also maintain various restrictions that it wants to put on an account due to party's due diligence status.

This functionality is addressed using the Risk Indicators Impacts Cross-Reference (Fast Path: ACCT010) page.

3.3.3 Hardship Relief

Whenever a relief type is given, system shows a simulated relief benefit amount on the page. User can click on the page to get the relief details for relief types. If the details of relief benefit for arrears types is required to be known, then the user can click on the page to get the details of benefit for different arrears types.

Relief types:

- Waive interest
- Waive arrears
- Waive fee
- Waive repayment
- Reduce loan installment amount
- Defer payments
- Increase or decrease term of loan accounts

The above functionality is addressed in the Hardship Relief Assistance (Fast Path: ACCT013) page.

3.4 Party

The following features are offered as part of Party.

3.4.1 Party Information

Customer is at the heart of product sales and service and technology for any business. This is more so in service organizations like banks. Recognizing the fact, the Party module serves as the single source of information data-store of all customers for Oracle Banking suite of products.

Party module acts as the master party repository for all products under Oracle Banking suite.

Party module provides a placeholder and data store for all information related to parties that bank or financial institution deals with as part of its business. The parties include customers, agents, vendors, brokers, and so on. The information includes demographics, risk information, financial information, identification information, and so on.

Party information is created only once and all activities, business, history and contacts of the party are based on the unique party profile. This enables the institution to have an immediate, real-time and complete view of the party at all times. In addition to the streamlined management of party information, centralized party management allows views of party activity, holdings, and exposures across products of Oracle Banking suite.

Basic information about a party is maintained, which may typically contain information as per banking customs and practices specific to the countries in which the bank operates.

Usually the following information is captured:

- Customer Name (Fast Path: PI100)
- Correspondence details, such as residence address, business address, preferred means of communication, preferred language, time zone, preferred times and modes (Fast Path: PI100)
- Contact details of a party like telephone, mobile, email. Consents to receive electronic communication, alerts, virtual calls also can be captured.

-
- Type of party, that is, Individual, Organization, or Trust
 - Nationality and country of residence
 - Details of the party's identification document such as Social Security Number
 - Consents required to be obtained from a customer as per regulations
 - The maximum exposure the bank is prepared to assume for the party
 - Credit rating of the party
 - KYC, AML, Tax statuses, party financial details, employment history
 - Anti-Money Laundering characteristics of party
 - Access channel preference of a party
 - Party's signature and photo image (Fast Path: PI100)
 - Other details regarding the party such as whether the party is CTR exempted and whether the party is an insider or related interest of an insider
 - Tax residency details of party

3.4.2 Party Onboarding (Fast Path: PI048)

Addition of a party is referred as Party Onboarding. The Party Onboarding page is flexible and allows the user to capture the data in any sequence according to the data availability. The user has a facility to onboard a party by entering the bare minimum details. User can capture additional details for the party through Single Party View (Fast Path: PI100). Every party is associated with a role such as Customer, Member, Broker, Vendor and so on. Based on the party role, certain onboarding fields may vary. Customer can be onboarded on a standalone basis. While onboarding, the ability to capture AML Consents and view last confirmation date is provided. Service Provider Onboarding (Fast Path: PI028) functionality enables onboarding of broker, introducer and other service providers.

3.4.3 Relationship Management (Fast Path: PI020)

Relationship Management enables banks to maintain business relationships for large organizations and SME customers and to enable specific access. Specific relationships can be maintained to share collateral, share financial information, access bank accounts of the organization and SME customers via internet banking and transact on the accounts. Creation of multiple business relationships between the same parties is also supported.

3.4.4 Due Diligence

Banks can maintain rules by which identity verification maintained against due diligence can be carried out. It also provides a view of due diligence and identity verification history of a party. Based on the due diligence preference selected in the Party Bank Policy, the due diligence of the party can be triggered by the user and performed once the onboarding is completed. Manual due diligence confirmation can be done with or without running a rule depending on whether a rule is selected in the Party Bank Policy under manual due diligence rule option.

3.4.5 Groups

Groups functionality enables the bank to create groups of customers who are related to each other in some way. For example, business relationships, income reliance, asset sharing and so on. By creating groups, a user can initiate group submissions and view credit exposure at a group level. Customers can be added to

multiple groups. They can also be added or deleted from a group. A group itself can be deleted. Searches are also enabled for groups.

3.4.6 Party Merge

There are instances where for a single party multiple party IDs get created. This happens because banks have multiple systems from which account get originated. Most often there is no check between the systems to do party dedupe to prevent creation of multiple party IDs. There can also be cases where due to error in data entry the dedupe fails, or the user may override the dedupe results and create multiple IDs for the same party.

Having multiple IDs for the same party is not an ideal situation and leads to inconvenience to the customer and the bank in managing the accounts of the customer. Such multiple parties IDs can be merged to retain a single party ID in the system. The party ID on the accounts are also be replaced.

3.4.7 Party Financials

Capturing financial information in definable format is supported for all party types such as Individual, Organization and Trust.

Various financial parameters (such as salary, home loan, general living expenses and so on) can be defined under different categories (such as income, expense and so on). For defining business statements, applicable parameters are grouped together to form statements such as balance sheet or profit and loss.

Capture of the following statements is supported:

- Balance Sheet
- Profit and Loss
- Financial Ratios
- Statement of Equity
- Cash Forecast
- Business Plan

Multiple templates for the same statement type can be created. For business customers, these statements are clubbed together under a financial template. Bank can specify which statements are to be added together. For retail customers, financial templates can be used to group together the different asset, liability, income and expense parameters. Multiple financial templates can be defined. Questionnaire can be linked to templates so that the banker can record responses to questions regarding the customer's financials.

Applicable template is resolved using rules. The rules for resolution of templates can be set up based on the facts - Product Group, Purpose Type, Request type, Pre-approved and Party Type. In case of multiple applicants, parties in the submission, a priority can also be setup to resolve multiple templates.

Capturing of financial information can be deferred by creating a separate human task for the back office team from the Capture Application flow in Origination as well as standalone flow in Party module.

Bulk upload of the financial documents can be done while capturing financial profile in the Origination flow as well as standalone flow in Party module.

3.4.8 Party Bank Policy (Fast Path: PI314)

Bank policy can be created to define various parameters related to party such as residence stability, minor age, and financial year. It also includes the following parameters:

-
- Preference for triggering due diligence, whether auto or user initiated
 - Due diligence types and related identity verifications
 - Due diligence checks to be done for a combination of party type and party role
 - Rules to derive the relationship manager for a party type
 - Rules to derive the list of managers for Broker and Introducer
 - Preference of the bank to provide access channels for member
 - Option to enable or disable mandatory capture of upfront consent before data capture
 - Option to default the consent values during party onboarding or keep them blank
 - Option to attach rule for Manual Due Diligence
 - Option to set if Resident Stability check is applicable for all products or asset and credit card only
 - Option to set if FATCA/CRS capture is required during account opening and/or party onboarding

3.4.9 Single Party View (Fast Path: PI100)

All important party details can be viewed and managed from in a single page. The details include the following:

- Name
- Photo and signature
- Preferred address for communication
- Preferred contact details
- Total relationship
- Memos on the party
- Party profile
- Party relationships
- Party holdings
- Risk indicators
- Due diligence
- Notifications
- Customer requests
- Credit worthiness

Users can view, update and add data pertaining to party from the child pages within Single Party View. Also, certain Personally Identifiable Information (PII) data elements of party can be masked and tokenized for data security purpose. Role-based access (Read Only or All Access) can be configured for Profile, Snapshot and Holdings widgets.

3.4.10 Party Search

Along with Basic and Advanced search capabilities, simplified search capability is also available, using which a party can be searched by name, mobile number and email ID. When brokers search for a party, only the parties associated with them are searchable, and not the entire list of parties maintained in the bank.

3.4.11 CRS and FATCA

Information about other tax residency of a party and the countries in which the customer has tax liability along with the tax identification for the country can be captured. Parties who have a tax residency in US are marked as reportable under FATCA and those who have tax residency in other countries are marked as reportable under CRS. Party also provides the ability to capture the other details reportable under FATCA and CRS. These details can also be captured during account opening and party onboarding.

3.4.12 Data Privacy and Security

The following functionalities are supported as part of data privacy and security:

- Ability to mask field-wise and user-wise and tokenize (SSN only) in database.
- Ability to bulk export the Party PII data elements in standard file format for individual parties through the Request Party Information (Fast Path: PI501) page.
- Ability to delete certain Party PII data elements (optional attributes) for individual parties.
- Ability to delete party details from the database (that is, mark the party as closed) and its linked entities as unsearchable (provided regulatory and geographical rules are met). This is applicable for all the party types namely, individual, organization, and trust.

3.4.13 Personally Identifiable Information (PII)

The capture of the following list of Personally Identifiable Information (PII) elements for a party is supported.

Table 3–1 List of Personally Identifiable Information (PII) elements

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
1	Full Name	Full name of a party (derived field) Multiple name types can be maintained for a party.	M	N
2	Date of Birth	Date of birth of a party	M	Y
3	Birthplace	Place of birth of a party	O	N
4	Address	Current, past and future address details of a party for multiple address types such as home, work, postal and more. Includes address types (Work, Residential, Postal, Seasonal, Holiday), Line 1 to Line 12, City, State, Country and Pin Code	M	N
5	Gender	Gender of a party	O	Y
6	Country of Citizenship	Country of citizenship of a party	C	N
7	Nationality	Nationality of a party (same as Country of Citizenship) This is a backend field and not available in UI.	O	N

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
8	Party Identification	Tax and Other identification details of a party	M	Y
9	Other Tax Residency Details	All FATCA (US)/CRS (Non US) details of a party	O	Y
10	First Name	First name of a party	M	N
11	Second Name	Second name of a party	O	N
12	Middle Name	Middle name of a party	O	N
13	Last Name	Last name of a party	O	N
14	Photographic Images	Images of party's photograph and signature	O	N
15	Login Name	Email ID or User ID or Customer ID of a party	C	Y
16	Marital Status	Marital status of a party	O	N
17	Mother's Maiden Name	Maiden name of a party's mother	O	Y
18	Religion	Religion of a party	O	Y
19	Ethnicity	Ethnicity details of a party	O	Y
20	Race	Race details of a party	O	Y
21	Blood Group	Blood group of a party	O	N
22	Industry	Type of industry in which a party is employed	O	N
23	Occupation	Occupation of a party	O	N
24	Languages	Preferred language of a party	O	N
25	Emergency Contacts	Name and contact number of emergency contact person for a party	O	N
26	All Telephone Numbers	Contact details such as phone numbers, email addresses, fax numbers and so on, of a party along with preferences. Includes Fixed Landline Office, Fixed Landline Work, Fixed Landline Others, Fixed Landline Seasonal, Mobile Work, Mobile Personal, Mobile Seasonal, and Mobile Others	O	N
27	All Email Address	Email ID details of a party. Multiple email IDs can be maintained with any one ID set as preferred. Includes Work, Personal, Seasonal, Others (including the one captured in Basic details tab)	C	Y

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
28	All Social Network User ID	Social Network details of a party such as Linked In, Facebook, Twitter, and Hi5	O	Y
29	All Messenger User ID	Social Network Messenger details of a party such as GTalk, Yahoo, MSN, and Skype	O	Y
30	Education History	Educational details of a party such as qualification, grade, university, and so on	O	N
31	Employer Name	Name of party's employer in the party's past and current employments	O	N
32	Employee ID	Employee ID of a party in the party's past and current employments	O	N
33	Job Title / Designation	Designation of a party in the party's past and current employments	O	N
34	Gross Annual Salary	Gross annual salary of a party in the party's past and current employments	O	Y
35	Smoker	Indicator to denote that a party is a smoker or non smoker	O	N
36	Height	Height in centimeters (cms) of a party	O	N
37	Weight	Weight in kilograms (kgs) of a party	O	N
38	Hobbies	Hobbies and interests of a party	O	N
39	Disabled	Risk indicator to denote that a party is disabled	O	N
40	Deceased	Risk indicator to denote that a party is deceased	O	N
41	Bankruptcy	Risk indicator to denote that a party is bankrupt	O	N
42	Title Reference Number	Title reference related details for a collateral (applicable for Property type of collateral where party is collateral owner)	O	N
43	Property Contact Details	Property Contact Details for a collateral (applicable for Property type of collateral where party is collateral owner)	O	N
44	Builder Contact Details	Builder Contact Detail for a collateral (applicable for Under Construction Property type of collateral where party is collateral owner)	O	N
45	Valuer Agent Details	Valuer Agent Details for a collateral (applicable for Property type of collateral where party is collateral owner and valuation of collateral is applicable)	O	N
46	Vehicle Identification Number	Vehicle Identification Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
47	Chassis Number	Chassis Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
48	Registration Number	Registration Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
49	Engine Number	Engine Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
50	Financial Information	Complete financial details captured for a party	C	N
51	Bank Account Information	All bank accounts (account ID, account type and amount) where a party is an account owner.	C	N
52	Shareholder of	List of organization names where a party is a shareholder	O	N
53	Marketing Consent	All marketing consents (including text and value)	O	N
54	Electronic Communication Consent	Consents given by a party to receive notices and documents through electronic means of communication. If selected, it is mandatory to capture at least one preferred email address for the party.	O	N
55	All Other Consents	All consents at party level (including text and value)	M	N

3.4.14 Personally Identifiable Information (PII) Shared with Third Party Systems

The application shares the Party PII details with the following third party systems:

■ Analytics System

- The Analytics Application enables financial institutions to manage enterprise performance, risk, financial compliance and customer insight through analytical tools for various analysis and report generation.
- They primarily depend on the data supplied by various enterprise applications for the analytics. The application provides various details related to the bank, branches, customers (including Customer PII details) and accounts to such analytical systems.
- Using this analytics, the bank or financial Institution is better able feel the pulse of their business health and helps to fine tune their services and offerings to the customers

■ Customer Master Data Management System

- The Party module can be integrated with any customer master data management system or can work as a master data management system on its own. The customer details are first created or updated in master data management and then updated in the Party module.
- The party details (including PII details) are shared with the customer master data management system as part of customer data life cycle.
- There may be synchronous update of such data in the systems.

■ Customer Relationship Management System

- The Party module can be integrated with any customer relationship management system. The customer details are shared between the CRM system and the Party module, with updates synced up with or without a customer data management system in the middle.
- The party details (including PII details) are shared with the customer relationship management system as part of customer data life cycle.

The list of Party PII details that are shared with these third party systems is as follows:

Table 3–2 List of PII's shared with third party systems

Sr. No.	Party PII Details	Third Party Systems		
		Analytics	Customer Master Data Management	Customer Relationship Management
1	Full Name	N	Y	Y
2	Date of Birth	Y	Y	Y
3	Birthplace	N	Y	Y
4	Address	Y	Y	Y
5	Gender	Y	Y	Y
6	Country of Citizenship	N	Y	Y
7	Nationality	Y	Y	Y
8	Party Identification	Y	Y	Y
9	Other Tax Residency Details	Y	Y	Y
10	First name	Y	Y	Y
11	Second Name	Y	Y	Y
12	Middle Name	Y	Y	Y
13	Last Name	Y	Y	Y
14	Photographic Images	N	Y	Y
15	Login Name	N	Y	Y
16	Marital Status	Y	Y	Y

Sr. No.	Party PII Details	Third Party Systems		
		Analytics	Customer Master Data Management	Customer Relationship Management
17	Mother's Maiden Name	N	Y	Y
18	Religion	N	Y	Y
19	Ethnicity	N	Y	Y
20	Race	N	Y	Y
21	Blood Group	N	Y	Y
22	Industry	Y	Y	Y
23	Occupation	Y	Y	Y
24	Languages	N	Y	Y
25	Emergency Contacts	N	Y	Y
26	All Telephone Numbers	N	Y	Y
27	All Email Address	N	Y	Y
28	All Social Network User ID	N	N	N
29	All Messenger User ID	N	N	N
30	Education History	Y	Y	Y
31	Employer Name	Y	Y	Y
32	Employee ID	Y	Y	Y
33	Job Title / Designation	Y	Y	Y
34	Gross Annual Salary	Y	Y	Y
35	Smoker	N	Y	Y
36	Height	N	Y	Y
37	Weight	N	Y	Y
38	Hobbies	N	Y	Y
39	Disabled	N	Y	Y
40	Deceased	N	Y	Y
41	Bankruptcy	Y	Y	Y
42	Title Reference Number	Y	N	N
43	Property Contact Details	N	N	N
44	Builder Contact Detail	N	N	N
45	Valuer Agent Details	N	N	N

Sr. No.	Party PII Details	Third Party Systems		
		Analytics	Customer Master Data Management	Customer Relationship Management
46	Vehicle Identification Number	N	N	N
47	Chassis Number	N	N	N
48	Registration Number	N	N	N
49	Engine Number	N	N	N
50	Financial Information	Y	N	N
51	Bank Account Information	Y	N	N
52	Shareholder of	N	N	N
53	Marketing Consent	Y	Y	Y
54	Electronic Communication Consent	Y	Y	Y
55	All Other Consents	N	Y	Y

3.4.15 Customer Onboarding from Oracle Sales Cloud

Customer onboarding can be done from Oracle Sales Cloud using the Party onboarding functionality. The pages are rendered inside the Oracle Sales Cloud application as User Interface Mash Up.

3.4.16 Customer Establishment

Customer Establishment is the initiation of a new customer into the eco system of a bank. It supports onboarding a legal entity wherein there is no business arrangement or agreement with the bank (that is a customer can be onboarded without applying for a product through Origination). It aims at supporting a single point of access to customer data and providing a consolidated view of a customer across the enterprise. It provides a single platform to onboard customers across different lines of business.

With the existing productized integration of the application with Oracle Customer Hub (OCH), a list of entities that are common between OCH and the application have been identified. An OCH first pattern is followed, whereby data for common entities between OCH and the application is read from OCH. Any modifications to the party data under the common entities is updated to OCH and then to the application.

It primarily supports the following functions:

- Performing due diligence verification of a customer
- Authorization enabled servicing for existing customer information (for example, updating the address or phone numbers)
- User-friendly interface that matches the sequence of customer data capture
- Out-of-the-box integration with customer MDM (pre-integrated with Oracle Customer Hub)
- Read and update customer data

- Onboard customer
 - New to bank customer (Onboard in OCH and the application)
 - Existing customer in OCH (Onboard in the application)

3.5 Incentive

Incentive module supports calculation of broker and dealer compensation for sourcing loans. The loans are sourced by these service providers, for which bank pays them commission. Incentive module supports defining plans and plan policies for service providers.

3.5.1 Define Plan for Service Providers (Fast Path: INC01)

Through this page, the plans can be defined for service providers:

- **Compensation Plan:** It is defined as an agreement between bank and dealer or broker, where the bank pays compensation (commission) based on various criteria to the dealer for selling bank loans at interest rate which is higher than buy rate. Compensation is applicable for service provider dealer and broker.
- **Subvention Plan:** It is considered when the dealer sells the loan at lower than the buy rate. Dealer is responsible for paying the interest difference between the two. Subvention is applicable only when service provider is dealer.
- **Charge Back Plan:** It is recovery of excess compensation amount eligible to be paid or paid to the dealer. It is applicable only when the payment method is upfront or upfront month end. This can occur in two scenarios:
 - Early closure (Early Final Settlement)
 - Charge-off (Delinquency)
- **Payback Plan:** It is paying back excess subvention amount eligible to be received or received from the dealer. It is applicable only when the payment method is upfront or upfront month end. This can occur in two scenarios:
 - Early closure (Early Final Settlement)
 - Charge-off (Delinquency)

3.5.2 Maintain Plan Policy for Service Providers (Fast Path: INC02)

Through this page, plan policies can be created for service providers. The plan policy resolves the plan ID (created using INC01). Bank can use different facts for resolving plan ID. Based on the resolved plan ID, the details of the applicable plan of compensation, subvention, charge back and payback are calculated.

3.6 Multi Entity Multi Branding

The application provides a framework that enables enterprises to cater to their Multi Entity Multi Branding (MEMB) requirements using a single implementation of the application. The banking companies can make use of the MEMB framework to save costs in IT infrastructure and achieve operational efficiency.

Banking groups prefer to market several products under various brand names so as to get increased shelf space in the banking market. The different products they market are managed by several lines of businesses which act as independent units.

The solution provides flexibility for the banks to define multiple levels of entities as per hierarchy within an enterprise. Users are always linked to the lowest level in the hierarchy. It gives the flexibility to resolve data for any entity above this level. Bank servicing units or branches can be configured to service one or more business units.

Users are mapped to a Home Business Unit and can have access to one or multiple Business Units.

Quite often it so happens that the products launched by the banking group under one brand compete with the products launched by the same banking group under some other brand in the market. In such cases confidential data should not be shared across the competing units.

Similarly, some Business Units in the enterprise offers products and services which complement each other. The data of such complementary units should be visible across the business units to reap the benefits of cross selling of products and services.

In order to reduce the overall investments in IT infrastructure, banking groups prefer to use the same IT infrastructure to cater to its entire banking empire of the enterprise.

The following key features of MEMB helps in resolving the data availability issues:

- Supports the co-existence of multiple entities within a single enterprise, such as Legal Entities, Market Entities and Business Units, while ensuring that system data is precisely partitioned between these entities.
- Facilitate information sharing across complementary business units.
- Ensure that confidential data is not accessible across competing business units.
- Robust and responsive to changes in information security policies over time.

The solution offers partitioning of data amongst multiple entities based on visibility rules configured for different categories of users of the bank and self-service channels for efficiently sharing and securing critical information across complementary and competing business units respectively.

3.7 Eligibility Framework

A bank may need to specify a set of predefined values as the eligibility criteria for each entity and evaluate whether a particular value or a set of values matches eligibility criteria defined at any time.

Banks have varying product offerings such as retail loans, mutual funds, and payment services to suit the diverse profile of clientele they have. Each of these products offered is targeted towards a specific group of customers and will have its own inherent characteristics. For example, a bank might want to offer one product only to a specific group of customers, namely salaried individual customers. The bank might want to offer this product through a list of pre-defined branches only. The bank might want to offer a product only in a specific currency. For example, all home loans are to be in local currency only.

Eligibility framework is a simple maintenance using the user-friendly rule framework. Using Rule definition, offer eligibility is achieved. Rules are set up using specific offer eligibility fact groups. Such fact groups are for channels, party, collateral, purpose codes and sourcing entity including brokers. System returns the value of the rule on evaluation which determines whether a customer is eligible to apply for a specific offer.

The various parameters based on which offer eligibility rules can be defined are as follows:

- Allowed or Disallowed list of **Channels** in which an offer is to be made available.
- Allowed or Disallowed list of **Collaterals** for an offer.
- Allowed or Disallowed list of **Facilities** for an offer.

- Allowed or Disallowed list of **Party Values** for an offer
- Allowed or Disallowed list of **Sourcing Entities** for an offer

3.8 Accounting Services

Accounting acts as the pillar upon which the other functional components rest. Through this single entity, bankers can consolidate and maintain balances and turnovers for all types of accounts held by a bank. In addition, the module enables to retrieve online information on the product ledgers maintained in a bank.

The following features are offered as part of Accounting.

3.8.1 Bank Level Parameters

Accounting provides a facility to maintain basic information about a bank. The basic details such as GAAP code, yearend profit and loss ledgers, and suspense ledgers for real, contingent, and profit and loss that are maintained for a bank are applicable for all the branches of the bank. Processing a GL in a particular branch is governed by branch level parameters.

The above functionalities are addressed in the following pages:

- Define Accounting Configuration (Fast Path: AS001)
- Define Accounting Bank Policy (Fast Path: AS002)
- Define Branch Parameters (Fast Path: AS003)
- GAAP Maintenance (Fast Path: AS005)

3.8.2 Accounting Ledger

The accounting ledger has been structurally designed as a tree, bearing a multi-level structure (like a tree's main branch and sub-branches). At the head is the Head GL that does not report to any other GL. The subsequent levels consist of Nodes and Leaves. A Node GL is one that reports to another GL and has other GLs reporting to it. A Leaf GL is one that reports to another GL but does not have any GL reporting to it. Leaf GLs are merely points of contact through which all entries are passed to the nodes based on financial periods. Consolidation of all accounting takes place at the nodes.

Accounting supports categorization of head GLs to any of the following categories:

- Asset
- Liability
- Expense
- Income
- Contingent Asset
- Contingent Liability
- Memo
- Position
- Position Equivalent

The bank can opt for position accounting for a foreign currency by maintaining a position GL and a position equivalent GL for every foreign currency transacted by the bank.

The above functionalities are addressed in the following pages:

- Define Accounting Periods (Fast Path: AS007)
- Define Accounting Ledger Group (Fast Path: AS008)
- Define Accounting Ledger (Fast Path: AS009)
- Define Accounting Ledger (Additional) Details (Fast Path: AS010)

3.8.3 Accounting Template Creation

The accounting template contains a list of events for which accounting entries have to be passed. The list of events is specific for every product class. The user can define accounting entries for each of these events and attach them to a product. The accounting entries will be passed on the occurrence of these events for each account.

The above functionality is addressed in the following pages:

- Define Inter Branch Parameter (Fast Path: AS006)
- Define Event Accounting Class (Fast Path: AS020)
- Define Domain Category Accounting Template (Fast Path: AS016)
- Define Domain Account Role Mapping (Fast Path: AS019)
- Define Product Account Role Mapping (Fast Path: AS018)
- Define Product Accounting Template (Fast Path: AS015)
- Define Product Group Accounting Template (Fast Path: AS014)
- Define Product Group Role Mapping (Fast Path: AS017)

3.8.4 System Accounts

System accounts are the lowest level at which accounting entries are posted. The system stores GL balances at this level. System accounts help a bank to get a breakup of the GL balances which provides the details on the various attributes of a transaction. The bank may configure all such parameters for the generation of system accounts.

The bank needs to set up certain elements known as System Defined Elements (SDE) for generation of system accounts. The SDE elements can either be a product attribute or an account attribute and if such attribute is of type Number or Date, then the bank may configure the system to consider the value in ranges (buckets).

The above functionality is addressed in the following pages:

- Define System Defined Element (Fast Path: AS013)
- Define SDE Number Range (Fast Path: AS012)
- Define System Defined Element Class (Fast Path: AS011)

3.8.5 Servicing

Accounting supports inquiry of unprocessed events, accounting transactions, product ledger balance, and suspense and reconciliation of suspense and office accounts through the following pages.

-
- Unprocessed Event(s)/Entry(s) Inquiry (Fast Path: AS021)
 - Accounting Transaction Inquiry (Fast Path: AS022)
 - Product Ledger Balance Inquiry (Fast Path: AS023)
 - Suspense Inquiry and Reconciliation (Fast Path: AS024)
 - View and Reconcile Office Accounts (Fast Path: PL088)

3.9 Alerts

The solution offers the following features:

- Alerts and bank notifications can be generated and sent to customers, cosigners, broker or introducer (only bank notifications), and some external parties for pre-defined events. The events can be financial and non-financial. On occurrence of such activity or events customers get alerts. Message templates can be maintained for each alert. The message template will be resolved based on a rule set up, in addition to the existing parameters.
- Dispatch of alerts can be deferred if alert dispatch type is selected as Deferred for Subscription type of alerts. In such cases, the alerts are not sent on occurrence of an event, instead they are put on hold and sent at end of day.
- Alerts can be dispatched to recipients such as, initiator of transaction on completion of approval process or to a broker on certain events occurring either due to the milestone being reached in Origination workflow or servicing events based off maintenance or transactions performed from Origination. For example: Account opening is an activity and CASA account opening can be an event under this activity. Fund transfer can be an activity which will have fund transfer credit event and fund transfer debit event.
- Rules can be defined for alerts based on business requirement. For example: Transaction amount greater than USD 100.
- Customers and some external parties of bank can also subscribe for specific events. The subscription for alerts can be for specific customer account.
- Alerts can also be sent to third parties such as brokers and so on.
- Alerts can also be sent to other related parties linked to the account apart from the account holders.
- Alerts can also be sent to Secure Mailbox.
- The alert template rule can be used to include a fixed outcome, if alert can be dispatched. This attribute can be used to handle scenarios where the bank may not want to dispatch alerts directly to customers when they have contacted the bank through a broker. The bank may want the notifications to be sent directly to the brokers who in turn manage the communications with the customer. This parameter brings the flexibility where bank can choose to notify customers or not depending upon the business model adopted by the bank.
- Alerts can also be sent from different email IDs and phone numbers, when alerts are to be sent by different market entities or business units.
- Other delivery channels such as mobile, app, or twitter can be configured, so that alerts hand off can be sent to those channels.

The above functionality is addressed in the following pages:

- Message Template (Fast Path: AL03)
- Alert Maintenance (Fast Path: AL04)
- Alert Subscription (Fast Path: AL05)

In cases, where the alerts have missed the desired recipient due to technical/DND or other reasons, alerts can be inquired and resent manually. The above functionality is addressed in the Alert Support (Fast Path: AL10) page.

3.10 Content

Documents form an integral part of any bank without which they are not able to perform their day-to-day business activities. Content offers the capabilities to manage documents and content. It is designed to provide a uniform set of services for content management across different modules. It serves as a standalone system for managing all the document related processes in an organization. These documents are basically of two kinds:

- **Inbound Documents:** Documents collected from customers
- **Outbound Documents:** Documents generated and dispatched to customers

These documents once defined can then be easily attached to individual processes or entities by creating some custom rules based on various parameters.

The following features are offered as part of Content.

3.10.1 Document Type Definition

A definition of every document to be used, whether inbound or outbound, can be created. Once defined, a unique document type is created. Details like whether an inbound document type is recurring in nature or permissible delivery channels for an outbound document type can be configured. Additional data like tags for inbound and inserts (scanned copies of additional materials to be sent along with documents) for outbound documents can be specified.

A number of inbound document types can be logically grouped to create a document category. Documents under a category can be marked as mandatory or optional. An inbound document that is received and stored in IPM can be retrieved and sent as an outbound document, like a covering letter, along with this particular inbound document as an insert.

The above functionality is addressed in Document Type Definition (Fast Path: CNM01) page.

3.10.2 Document Policy

Various rules can be created to help associate a document type or document category with certain processes or events or certain entities like party. Document Policy is assessed in runtime to determine what set of documents need to be collected or dispatched to respective bank customers. Policies can be created at Application, Collateral, Party, Product Group, and Submission level.

The above functionality is addressed in Document Policy Definition (Fast Path: CNM03) page.

3.10.3 Interface with Third Party Systems

For generation and dispatch of outbound documents, the capability is present to interface with multiple external third party document management systems. Various document templates stored in these systems can be accessed from Content module. The framework enables triggering of different API pertaining to

different document generation systems. The document upload service can be consumed by other external system for enabling inbound document upload. The data sufficiency required to interface with external systems of physical documents storage is present. Additionally, services can be exposed for upload of documents that have been rescanned.

3.10.4 Document Checklists

Document Checklist is a taskflow that can be invoked by various modules at appropriate stages of a business process to view and act on both inbound and outbound documentation requirement that gets resolved as per the document policy defined for a particular event or process. There is provision to upload inbound documents and create instructions for generation and dispatch of outbound documents from checklists. Various delivery channels like Post and Email can be specified for a document to be dispatched to a recipient.

Ability is provided to override the mode of delivery for one or all of the list of documents generated in the outbound checklist.

3.10.5 Regeneration and Resending of Documents

A configuration is available at service level to allow or suppress multiple regeneration of outbound documents in all tasks supporting outbound documents panel.

An inbound document given by a customer and stored in IPM can be retrieved and sent back to either the same party or customer, or to another email ID or mailing address as entered in the page or task flow.

3.10.6 Acceptance and Execution of Documents

For outbound document types it can be specified whether they require customer acceptance and/or execution process. Any business process which generates this document type can use these flags and built a mechanism to track the acceptance of the document by the customer or execution of the document.

A separate taskflow is present for displaying documents which require acceptance or execution. User can manually update the status of documents once customer has accepted the document or a document execution has been completed.

3.10.7 Document Search and Upload

Soft copies of every inbound and outbound document are stored in an external system called Image Processing System (IPM) where versions of uploaded documents are also maintained. User can assess these soft copies anytime from Content module. Every uploaded document is given a unique index which helps in further processing of document.

Inbound document can be scanned for virus and malware before uploading.

A separate page is provided for searching a document based on various parameters like document type, document status, indexes, and so on. The page can also be used for updating indexes, status and tags of a document.

The above functionality is addressed in Document Search and Upload (Fast Path: CNM06) page.

Documents which are not part of document policy can be collected from customer by uploading them from a separate ad hoc document upload page.

Upload of multiple documents is supported in application tracker and in verification task inside the inbound checklist page. The allowed limit for a single document file in multiple documents is 20MB and the total upload limit for all documents is 40MB.

Documents are allowed to be configured with expiry tracking types for inbound document after they are uploaded depending upon the document upload date, issue date of document or expiry date of document.

Both functionalities of questions related to the documents upload in context of verification and document for a set of questions is supported.

3.10.8 Document Upload by External System

System allows upload of documents for inbound as well as outbound documents and stores details of external system reference ID, external system name, receiver name and brand name with document type.

3.10.9 Services to Support Digital Channel

The following services are supported:

- Service to fetch deleted items for a digital channel.
- Service to accept digital acceptance for a digital channel.
- Ability to display the document type or document category differently in digital channel.

3.10.10 Stitching of Documents

Documents (external or uploaded or generated any of the types) can be inserted at the beginning or at the end of another generated document, such that all of them are stitched together as insert in one document through Documaker.

3.10.11 Rectification of Documents

When documents are uploaded through an external vendor, there are chances that the upload may fail due to following reasons:

- Invalid index type for the document type
- Invalid document type
- Non availability of the primary index
- Technical reasons such as size mismatch, clarity of documents, or corrupted document

The first three fall under rectifiable category while the last one is non rectifiable.

All such failed documents are queued for taking relevant actions and can be filtered for rectification. All rectifiable documents can be rectified by changing document type or index type. An option to move the rectifiable documents to the non rectifiable queue is also provided. The documents under rectifiable and non rectifiable queues can be filtered using sourced by, document type, received on date and error type filters.

The above functionality is addressed in Rectify Documents (Fast Path: CNM21) page.

3.11 Remittances and Collections

Remittances and Collections offers a solution for functions such as clearing, collections and payments which are required by the end customers for their ad hoc requirements and which are commonly required for various other products under Oracle Banking suite. Remittances and Collections functions can be invoked as a part of Settlements by other modules such as CASA, Term Deposits, or Loans.

The bank needs to opt for any one of the two offered models at the time of implementation and it is a one-time choice.

Model 1: In this model, the entire initiation of the transaction as well as the network resolution and so on (based on the internal day 0 maintenances) is performed within Oracle Banking. This includes activities such as file uploads, exception handling, processing of any inward transactions and so on.

Model 2: In this newly introduced model, the capability is provided to integrate with any of the third party payment product processors. The bank has the option to opt for the Oracle Banking Payments product in which case Oracle Banking is pre-integrated with the in-house Payment product processor. However, Oracle Banking also has the capability to integrate with any other product processor.

Given this scope, only the following three pages are maintained in Oracle Banking:

- **Initiate Outward Collection and Payment (Fast Path: PY011):** This page captures the basic details and initiates an outward collection request or an outward payment request.
- **Define Bank Float (Fast Path: PY001):** Since the product processor does not have any control over accounts maintained in Oracle Banking, the float definition is handled out of Oracle Banking. Bank float helps in defining the type of accounting that is performed specifically for the outward collection flavor in the US region.
- **Reject Code Maintenance (Fast Path: PY100):** Since the product processor speaks to the external network in this model, this maintenance page is used to map the internal Oracle Banking level exception codes with the network level reject codes that are maintained by the product processor.

In the Model 2,

- The initiation happens from Oracle Banking, either as a standalone capture or through the Settlement route.
- The customer account level validations (if the account is with Oracle Banking) is done at Oracle Banking. All other network level validations are performed by the product processor.
- Similarly, the customer side accounting happens at Oracle Banking while the network side accounting is performed by the product processor.
- File uploads happen from the product processor and only customer side validation calls are sent to Oracle Banking.
- All the exception handling is routed to queues maintained with the product processor.
- Oracle Banking needs to have a data synchronization with the product processor for Account Details Sync, Network Details Sync, Reject Codes Sync, and Branch Sync.

All functionalities described in the below sections pertain to the Model 1.

3.11.1 Core Functionality

The Remittances and Collections provides the following core functionalities:

- The Payments or Clearing or Collection (also referred to as Remittances and Collections) Services are composed of different maintenances (Day 0 Maintenances), each of which serve to define the various parameters within which a banking company seeks to operate, and the essential service calls required to honor the core functionalities. These services are used for various purposes by the various products under Oracle Banking suite.

- The Clearing Services can be used to perform one of the basic functions of a bank, which is to accept and honor written instruments and enable customers to issue instruments for money transfer, be it a Cheque, Manager's Cheque, Demand Draft, or Money Order.
- The Collections services provides for functions similar to the Clearing Services with one difference. The clearing services cater to the transfer of money vide a physical instrument whilst the electronic collections cater to transfer of the funds vide electronic channels. Collections services cater to various incoming and outgoing collection instructions such as Request For Debit (RFD) or Direct Debit. The services to manage Mandates, such as Addition, Deletion, Edit, of Mandates (which form the basic authorization mechanism for Collection Instruments) are also provided for.
- The Payments Module provides the services of Domestic Payments using any of the bank's chosen networks and includes initiation and processing of outward payments as well as receipt and processing of inward payments.
- The Payments and Collections work out of the same module with some incremental features like Mandate Registration and Counterparty Maintenance for Collections.
- Exception Management provides services to manage any exceptions arising out of the processing of instructions in any of the above mentioned modules that is, Clearing, Collections or Payments.
- Bank Drafts can be issued, liquidated or printed on the request of the customers. The status of the instruments issued can be modified for a fee and the instruments can be reprinted if necessary.

3.11.2 Maintenances

The entire Remittances and Collections module is based on the maintenances that are configured as part of the initial setup. These maintenances define the behavior of each of the individual functionalities and also enables the setting up of the processing logic or processing rules.

The entire set of maintenances help the bank to set up the various clearing zones, identify the network through which any instruction is sent or received as well as the treatment for each transaction in case of returns or refusals.

The various maintenances to be set up are as follows:

- **Zone Maintenance (Fast Path: PC001):** The various clearing zones and circles are maintained in Zone Maintenance page. Zone and Circle are geographical locations. The Circle ID is used to identify the location of the institution and can be further used to resolve the endpoint for the clearing transaction. Each Zone may have multiple Circles attached to it. Each Bank-Branch is attached to a single circle. This will be maintained in Bank Directory maintenance.
- **Bank Directory Maintenance (Fast Path: PC226):** Bank Directory is used to maintain and inquire a list of all institutions (banks and their branches) that may participate in clearing and payment transactions. This maintenance also captures the address of the bank-branch and the applicable Clearing Sort Code (routing number), IFSC code and SWIFT code which are also termed as Institution ID types.
- **Float Configuration (Fast Path: PC006):** Float configuration is used to maintain the various combinations of float days involved in the resolution of the related value dates in clearing and payment transactions. Various types of floats can be maintained based on the Posting Date, Activation Date, Endpoint Entry Date, Endpoint Value Date, Bank Value Date or Customer Value Date.
- **Endpoint Maintenance (Fast Path: PC220):** Endpoint is the physical entity with which the bank interacts for clearing or payment transactions. Different Endpoint can be maintained for different currencies. Under this maintenance, various aspects of the endpoint such as Institution ID Type,

Calendar ID, Electronic gateway used by endpoint, network used, and so on can be recorded. One or more endpoint segments can be attached to an endpoint. Endpoint segment denotes a logical grouping to which instruments deposited or uploaded are attached.

- **Clearing Branch Linkage Maintenance (Fast Path: PC018):** Normally a single branch within a certain geographical area such a city or a district is assigned to perform the clearing related activities for all other branches within the city or district. The Clearing Branch Linkage maintenance is used to link all the branches of the Bank as defined in the Branch Master in Common Services to their respective Clearing Branches. This maintenance is used to determine the clearing branch GL for clearing transactions on any account in any branch.
- **Institution Endpoint Participation Maintenance (Fast Path: PC218):** This maintenance is used to list all the institutions participating in an endpoint. We can also capture the correspondent institution for an institution which participates through its correspondent. The various transaction types such as DD, RFD, Clearing, and so on have to be selected for the institution participating in an endpoint.
- **Transaction Template Maintenance (Fast Path: PC232):** Payments and Clearing transactions may have to be classified and assigned different preferences across various set of parameters. Such classification may further need to be differentiated for transactions where the drawee and beneficiary accounts are within the same installation, within the same bank but on different systems or in different banks. This is supported by defining the Transaction Templates. A transaction template is defined for a combination of Transaction Type, Collection Type and Transfer Type.
- Transaction Template defines the various Amendment Parameters which can be modified for re-processing of transactions that were rejected during upload. It defines the parameters to be used for arriving at or validating the activation date for a transaction. It also defines the parameters with respect to reject, recall and dispatch behavior for each transaction namely, the date till when such an action is valid and the basis for calculating that date. It also defines whether a particular transaction can be processed or not as a 'Return'. Further, the retention days for various types of transactions can be defined. For Clearing transactions the instruments applicable for that transaction are linked in the Instrument Category Linkage section.
- **Transaction Category Maintenance (Fast Path: PC217):** There are various types of Payments and Clearing transactions such as Inward Clearing, Outward Clearing, Incoming Collections, Outgoing Collections, Incoming Payments, Outgoing Payments, and so on. Each of these transaction type is defined and maintained in Transaction Category Maintenance. The attributes for recognizing duplicate records are defined for each transaction category. Transactions for reject, recall and reverse of clearing and payment transactions are also defined as categories and linked to the respective transaction category in the Category Relations section. Each transaction category is defined on the basis of Transaction Type, Collection Type and Transfer Type. This maintenance also defines if a mandate needs to be validated or not in case of an inward collection transaction.
- **Instrument Category Maintenance (Fast Path: PC210):** For paper based clearing there could be multiple types of instruments such as Savings Account cheques, Overdraft Account cheques, Demand Drafts, and so on. All these types of instruments are defined and maintained using the Instrument Category Maintenance. Each instrument is classified as either a Manager's Cheque (for example, Demand Drafts) or a Personal Cheque (or just Cheque, for example, Savings Account Cheque, At-par Cheque). The bank can also identify the number of days post which the cheque (instrument) has to be considered as Stale or out-of-date. Additionally, the instrument can be identified as allowed in local presentation to support At Par clearing. This is useful when there are multiple clearing houses all over the country to support local clearing and within such a set-up certain types of

instruments can be processed for clearing at any of the clearing houses, preferably the one pertaining to the location of the beneficiary.

- **Reject Code Maintenance (Fast Path: PC016):** While processing payments and clearing transactions by upload, the record may either pass or fail certain validations performed by the system. Failed records are marked as Rejected and queued for Reject Processing. The reason for rejecting a transaction needs to be available for each record for further processing. Similarly, a user too can reject a record which was passed by system (for example, signature mismatch check is done manually and system may pass the record) by assigning a reason for reject.
- The reject reasons are assigned to reject codes and are defined and maintained in Reject Code Maintenance. Each reject code is linked to a transaction category and instrument type. Also each reject code is linked to one or more system exception codes (business policy violation codes) which are the codes that identify the exception conditions as encountered by the system during processing.
- **Endpoint Reject Code Linkage Maintenance (Fast Path: PC214):** An end point may recognize a separate set of reject codes from those used by another end point or by the bank. To facilitate this the bank can define End Point specific Reject Codes using the End Point Reject Code Linkage. Using this maintenance, the bank can also identify which particular reject codes can be set for auto return. A record which encounters such a reject code will be marked for return automatically and will not wait for the Outward Clearing (OC) batch for return processing.
- **Institution Category (Fast Path: PC247):** An institution type and the way it is identified can be defined in this maintenance. Institutions can be identified by way of various standardized IDs such as SWIFT, BSB, IFSC, IBAN and so on. The various types of such identification codes can be defined.
- **Processing Queues (Fast Path: PC207):** Users can define the various processing queues that they require for any Payments or Collections transaction. The default queues are SUCC and PROC.

3.11.3 Clearing

Clearing module offers the ability to accept, post, process and clear all kinds of physical instruments like cheques, drafts, and so on. Inward clearing (where the customer's account is debited) and outward clearing (where the customer's account is credited) are handled out of the clearing module.

The various transactions or processes involved in clearing are as follows:

- **Cheque deposit (Fast Path: PC213):** Cheques deposited to the credit of CASA, TD, or Loans can be accepted. Any valid CASA or GL account can be captured as the beneficiary account. The details pertaining to the cheque such as amount, currency, instrument type, routing number and narration are captured.

Based on the float configuration, proceeds are credited to the account either as cleared funds or unclear funds.

- **Immediate Credit (Fast Path: PC206):** There may be a request from a customer for immediate credit against the cheque deposited for outward clearing. The Immediate Credit option helps to extend such credit against a cheque already deposited for that account and is in unclear status. There can be a case of full immediate credit or a partial immediate credit.
- **Clearing File Upload (Fast Path: PC111):** Outward as well as Inward Clearing File Upload is not a separate interface rather it is supported through the GEFU interface. Any outsourced agency may also send periodic information dumps (in electronic file formats) to the bank with summarized information of funds that need to be credit to customer's account. This enables the bank to extend unclear funds to

the customers rather than awaiting details. The clearing module supports such activities. File uploads can be Summary Uploads (intra-day) and Detailed Uploads (end of day).

- **Float Extension (Fast Path: PC239):** There may be occasions when a cheque deposited to customer account may not be honored by the drawer's bank within the specified float or when there may be delay at the endpoint in providing clear funds to the bank due to unavoidable circumstances. In such cases, the Float Extension option is used.
- **Global Float Extension (Fast Path: PC239):** There may be occasions when a particular institution may not be able to complete processing for clearing transactions and provide clear funds. In this case one can use the Global Float Extension option to extend the float for all Outward Clearing and Outward Collection which were drawn on a particular institution. The new value date for these Outward Clearing and Outward Collection items will be arrived at based on the number of days entered for extending the float.

Float extension will be applicable to Outward Clearing and/or Outward Collection as per selected activation date and Transaction Type (belonging to selected Institution ID) and having instrument value date greater than current date.

- **Inward Clearing run/Outward Clearing run and Clearing File Uploads**

The Inward Clearing (IC) process is executed online, when the inward clearing file is uploaded. The inward clearing process can be run multiple times and those instruments which came for processing after the previous IC run will be available. This service can also be executed through the scheduler.

The Outward Clearing (OC) process can be executed online and at any point during the day. This service can also be executed through the scheduler. Outward clearing process is run for Returns Batch processing; Endpoint consolidation for GL entries (if defined); and Call to pricing to fetch fees to debit CASA accounts for Inward Returns. OC can be run multiple times and all those instruments which were not picked up in the earlier OC run, will be picked up now. Clearing module handles the status of the instruments for this purpose. Once the OC is run for the returns clearing, all instruments in scan reject will be marked internally returned. Then there can be no more action which can be done in the Scan Pass (Fast Path: PC203) or Scan Reject (Fast Path: PC204) page.

The number of days available to act on passed or returned instruments are defined as the maximum response days. For outward clearing, they are based on the value date and for inward clearing, they are based on the posting or the activation date.

- **Clearing Inquiries (Fast Path: PC009):** The user can do a cheque status inquiry of both an inward as well as an outward clearing cheque. Based on the search criteria, the cheque status can be inquired, till the data is purged.
- **Exception Handling/Returns Handling:** All the returns of Inward clearing (referred to as Outward returns) are handled as part of the Outward clearing run (Fast Path: PC234).

All returns of Outward clearing (referred to as Inward returns) are a part of the Inward clearing file and hence no separate treatment is required for the same.

All exceptions are handled out of Scan Reject (Fast Path: PC204) page. The refusal of returns is also handled as part of the returns handling process.

- **Accounting:** Accounting for Clearing transactions involves Customer Accounts (CASA, TD and Loans for outward clearing, CASA for inward clearing) and certain General Ledger accounts such as

Endpoint GL, Intermediary GL (used for consolidation entry for endpoint), Cheque For Clearing (CFC) GL and Inward and Outward Clearing Suspense GLs.

- **Alerts:** Alerts for certain defined events are generated and communicated via SMS, email, and so on.

3.11.4 Payments and Collections

The features are as follows:

- The Payments module enables the bank to send payments to multiple networks. The payment transaction capture can be initiated from multiple channels like Internet Banking, Branch, and Phone Banking.
- The Payments module has a provision for interfacing with other external systems for various purposes such as fraud check, bill payments, and messaging.
- The Payments module is a comprehensive transaction handling and management system, which integrates with the overall system for settlement of payments, charges, commissions and MIS. All the relevant account balances will be updated when transfers are processed.
- Exchange rate conversions are automatically effected in cases of cross-currency transfers based on the rate and method of conversion that is defined.
- Any transactions, which involve transfer of funds between accounts, involves the user to provide certain specifications.
- Once the transaction is submitted, the system sends funds transfer messages to external networks based on the transaction type and pass the appropriate accounting entries.
- In case of incoming transactions, rules are maintained in the Payments module to enable STP. On receipt of any payment message, it resolves a Product for each of the transaction and accordingly the customer is credited or debited.
- Payments module is broadly classified into two stages - Capture and Processing. Capture is where user captures the transaction and basic validations are done. Processing is where the resolutions such as network, value date, settlement resolution is done, and the transaction is handed over for messaging and release into the network.
- Payments can be either Incoming Payments or Outward Payments. Similarly, Collections can be either Inward collection or Outward Collection.
- An Outward Collection transaction involves the transfer of funds from a different account into customer's account. Such transactions are initiated by the creditor who instructs his bank (the creditor bank) to draw a certain sum from the debtor's account (in the debtor bank), assuming that such an agreement exists between the debtor and the creditor of the transaction and their respective banks.

For Outward Collection, customer can set up credit mandate for periodic collections or onetime collection through branch banking.

- Funds Movement service is a facility which the bank can use in its direct banking. The bank can expose a single UI to its customers for the entire breadth of payment services. The underlying Funds Movement service then identifies the relevant trigger module as well as the final destination. Based on this, the type of payment, that is funds transfer, domestic payment, international payment, collections or a bill payment transaction service will be called. The entire orchestration is managed by the Funds Movement service.

- An Inward Collection transaction involves receiving the incoming collection message from the creditor bank, and processing the payment by drawing a certain sum from the debtor's (customer's) account provide. Such an agreement is maintained between the debtor and the creditor of the transaction and between them and their respective banks.

For Inward Collection, customer can register a mandate through branch banking for an Inward Direct Debit.

- Outward collection processes consists of key activities such as addition of linked accounts, verification of linked accounts, setting up a credit or receive funds instruction, and raising a Collection request.
- All the payments and collections transactions can be viewed by using the Payments and Collections Transaction Inquiry (Fast path: PC211) page. User can search and inquire a transaction using various search options.

The above functionalities are addressed in Payment or Collection Transaction (Fast Path: PC216) page.

3.11.5 Business Payments/Business Collections

The features are as follows:

- Business Payments allow a business customer to transfer funds from one account to many accounts and is useful for regular multiple transfers, such as payrolls, creditors payment. Money can be transferred to a customer's own accounts, to third party CASA or loan accounts within the bank or to accounts with other financial institutions. In other words, it is single debit and multiple credits. Business payment can be triggered from Internet banking, branch through file upload. Business payment can be current dated as well as future dated up to a maximum of 120 calendar days.
- Business collection allows customer to collect funds from many accounts to credit a single account. Money can be collected from third party accounts or own accounts within the bank or to accounts with other financial institutions. For example, Insurance Premium Collection. In other words, it is single credit and multiple debits. Business collection can be triggered from Internet banking, branch through file upload. Business collection can be of current dated as well as of future dated.
- Business Payments or Business Collections transactions can also be uploaded as Standing Instructions through a file upload. The option to define if it is one time transaction or the recurrence pattern if it is a repetitive transaction is provided.
- Fees for Business Payments (Credit) and Business Collection (Debit) are charged on a cumulative number per month basis calculated on the number of transactions processed at a fixed price per transaction.
- The facility for business payments or business collections is defined at the CASA offer level.
- Direct Entry Identification Code Maintenance: DE Identification Code refers to direct entry user ID. This is used by the corporates while processing business payment and collection. There can be more than one DE Identification ID for single customer which have been assigned to the customer according to the Line of Business (LOB) For example, ABC company may have 3 different DE Identification ID for three different line of business (Banking, Insurance, Wealth Management).
- Trace Account: Trace account number is an account number on which dishonor transaction is posted. Trace account number is used when external payment is sent as part of business payment, and external bank has returned such transaction due to any reason. Such return is processed to trace

account mentioned in original record. This will be applicable to business payment and not to business collection.

The above functionalities are addressed in Business Payments / Business Collections (Fast Path: PC112) page.

3.11.6 Mandate Registration

The Mandate is an instruction given to the bank by the customer to honour an inward direct debit received from the counterparty. It is a prerequisite setup required to honor an inward direct debit. The mandate ID maintained by the customer would be communicated to the counterparty bank through a response file or an equivalent mode.

The conditions defined in a mandate, which need to be considered while validating a transaction are typically:

- Validity of the mandate
- Amount requested to be within maximum limit defined in mandate
- Sufficiency of funds

Such inward collections transactions that have been successfully posted can be recalled within the maximum response days as defined in the transaction template.

The above functionality is addressed in Mandate Registration (Fast Path: PC008) page.

3.11.7 Counterparty Maintenance

The linked account maintenance will capture details of the counterparty. On submission of a request, counterparty's account would receive a penny credit along with a reference number. The reference number would form a part of the transaction narration and can be checked by the counterparty. Status of the linked account would be Unverified till the time it is authenticated. In addition to the linked accounts, this option can also be used to maintain a list of payees by the customer.

The above functionality is addressed in Counterparty Maintenance (Fast Path: PC015) page.

3.11.8 Exception Handling

All the transactions handled out of Clearing, Collections, or Payments are finally routed through two pages which are the Scan Pass (Fast Path: PC203) page and Scan Reject (Fast Path: PC204) page. The transactions that have passed all validations set for that particular transaction successfully will move into the Scan Pass page.

A user may be permitted the following actions against a particular transaction from the Scan Pass page:

- **Reject:** The user can reject the transaction and move it to the Scan Reject queue.
- **Recall:** The user can recall a transaction. This is typically applicable for an inward collection transaction that has been successfully posted. The transaction can be recalled within the permissible time limit as defined in the Transaction Template (maximum response days).
- **Float Extension:** The user can allow for extension of float in certain circumstances and this is possible by accessing the transaction in the Scan Pass page.

All the transactions that fail due to any or all validations set for that particular transaction will fall into the Scan Reject queue.

A user may be permitted the following actions against a particular transaction from the Scan Reject page:

- **Float Extension:** Similar to the action in Scan pass, float extension can be permissible for a transaction in Scan Reject.
- **Reject:** Normally for transactions arising from the clearing or collection functions, all line items falling in the Scan Reject items are picked up at the end of day or during the day when the user invokes the OC run. These transactions are then processed as outward returns. At times, the user may want to manually reject the transactions and in such cases, the Reject action is invoked. A refusal (that is, reject of a return, also called as Type 3 transaction) is handled in this workflow.
- **Reprocess:** The user may want to reprocess the transaction and settle it against another CASA account, or a GL account. In such cases, the reprocess option is invoked.

The Scan Pass and Scan Reject queues are primarily governed by the Day 0 setup and the option of enabling or disabling any action button is driven by what is defined in the Day 0 setup.

3.12 Asset Classification (NPA Management)

The date of first default is stored to keep a track counter of number of consecutive days, for which an account is irregular. This is computed from the day, the account first became overdue, till the day all the arrears are fully paid. Hence, this counter is distinct and independent of the DPD count computed for an account.

Partial charge off of loan and transaction account is allowed in addition to the full charge off and reversal of full charge off functionality.

Asset classification also provides an option at account level to stop the account from being classified automatically and vice-versa.

3.13 Branch

The following features are offered as part of Branch.

3.13.1 Maintenances

The following are the maintenances that can be performed for branch.

- **Branch Vault Maintenance (Fast Path: BR001):** The vault is maintained at every branch to hold the physical cash for branch operations. The minimum and maximum cash limit that needs to be maintained at a branch vault is defined in this page. Each branch is allowed to hold only one vault.
- **Teller Batch Closure Configuration (Fast Path: BRM09):** This page helps the user to configure the pre-specified task codes to be configured with actions such as Halt, Ignore and Defer. Based on this configuration, the teller batch closure will be either halted or will be processed if any of the task codes are pending for approval. This ensures that the teller batch is not held up, if any transactions (which do not involve cash) are pending for the approval. Such transactions can be approved at a later stage on a future date with the backdated transaction date. This page allows to configure the transactions which can be deferred for authorization that are pending for approval.
- **Teller Currency Limit (Fast Path: BRM01):** This maintenance allows configuration of currency restrictions for tellers. These restrictions are applied on the roles created in the application and are applicable for all the tellers mapped to that role. The minimum and maximum limit allowed for the role for a particular currency is maintained. The tellers who are mapped to the roles for which the minimum and maximum limit is maintained are called Cash Users, whereas others are called Non Cash Users.

3.13.2 Transactions

The branch-related transactions that can be performed are as follows:

- **Open Branch Batch (Fast Path: BRM02):** Opening a branch batch for a particular date indicates to the head office that the branch is open for the selected date. Posting date gets auto-populated once the previous day branch batch is closed. Teller is not allowed to perform any cash operations till the branch batch is opened by the supervisor.
- **Open Teller Batch (Fast Path: BRM03):** Opening a teller batch for the particular date indicates to the system that all transactions performed by the teller will be stamped with the selected date. System allows the user to initiate the teller batch with expected cash that has been retained from previous day or it will allow user to start with zero cash.
- **Branch Currency Transactions (Fast Path: BR002):** This page is used to transfer cash to and from vault. It can also be used to transfer cash between different tellers in the same branch. If the cash held by a user is greater than or less than or equal to the minimum limit, system allows user to transfer cash to another teller.
- **Denomination Exchange (Fast Path: BR009):** This page is used to exchange denominations for the particular currency. High value denominations can be exchanged for multiple low value denominations or multiple low value denominations for the equivalent high value denominations. The application does not post any accounting entries for the same and does not increase the debit or the credit count.
- **Miscellaneous General Ledger Transfer (Fast Path: BR008):** This page is used to transfer the cash to and from GL account. In case of debit transaction, expected units are decreased, while in case of credit transaction, expected units are increased.
- **Book Cash Shortage or Overage (Fast Path: BR006):** This page is used to book the cash shortage for the particular currency. If the physical cash present with the teller is less than the cash attributed in the application, then teller can book a shortage. Similarly, if the physical cash present with the teller is more than the cash attributed in the application, then the teller can book an overage.
- **Reversal of Cash Shortage or Overage (Fast Path: BR007):** This page is used to reverse the cash shortage or overage booking. Shortage GL can be nullified by debiting the particular CASA or GL account and crediting the shortage GL. Overage GL can be nullified by debiting overage GL and crediting the particular GL or CASA account. Partial shortage reversal is also allowed. Also, if any customer or teller pays shortage or overage amount by cash, then cash denomination panel can be used to update cash position.
- **Buy/Sell Foreign Currency (Fast Path: BR014):** This page is used for exchanging the foreign currency or local currency to the equivalent local or foreign currency by a customer or non-customer, that is a transacting party.
- **Close Teller Batch (Fast Path: BRM05):** This page is used to close the teller batch for current posting date. Batches are allowed to be closed only after processing the posted transactions for the posting date. It processes the closure based on the settings configured in the Teller Batch Closure Configuration page.
- **Absent Teller Activity (Fast Path: BR011):** It may happen that the teller is absent or has to leave in emergency, or go to another branch, and is unable to transfer cash for that day. In such cases supervisor or branch manager takes the control over cash box of such teller and performs the remaining activity like sell cash to vault, book overage/shortage, if any and finally close the teller batch of absent teller using this page.

- **Close Branch Batch (Fast Path: BRM04):** This page is used to close the branch batch for the posting date, indicating that the branch operations are stopped for that posting date. Branch close posting date is same as branch batch open date and is auto populated. All the teller batches have to be closed before closing the branch batch for the posting date.
- **Report Request (Fast Path: 7775):** This page is used to generate different ad hoc reports from the report categories by providing the required report parameters.
- **Advice Report (Fast Path: 7779):** This page is used to view the report and its status, for which the user has initiated the request.

3.13.3 Inquiries

The following are the inquiries that can be made for branch.

- **Branch Batch Status Inquiry (Fast Path: BRM06):** For corporate office or head office, users can check the branch batch status of any branch. For non-head office branches, users can view only that branch's status. Branch batch status is displayed for the current and previous posting date. Inquiry can be performed by branch wise or status wise. If the inquiry is performed at branch wise, then system displays the data specific to that branch. If the inquiry is performed at status wise, then system displays the data specific to that status.
- **Cash Position Inquiry (Fast Path: BR012):** This page is used to inquire the cash position of Branch, Teller and Vault.
 - Branch Cash Position: Users can inquire the total amount and the number of debits and credit transaction for a particular branch or for all branches. Branch cash position for the selected currency = Teller cash position of all the tellers for the selected currency + Vault cash position for the selected currency.
 - Teller Cash Position: Users can inquire the total amount and the number of debits and credit transaction for a particular teller or for all tellers.
 - Vault Cash Position: Users can inquire cash position for vault of a branch.
- **Interim Cash Inquiry (Fast Path: BR010):** This page is useful to tellers for identifying discrepancies during the day rather than at the end of the day and take necessary actions to find the discrepancies before end of day. It enables the users to inquire the balance of the physical cash which the user has entered against the system generated cash position. They can also record the cash position, view any recorded overage or shortage and print the details.
- **Teller Batch Status Inquiry (Fast Path: BRM07):** This page is used to view the status of all teller batches. It displays whether the user batch for the posting date is opened, reopened or closed. For corporate or head office, the teller batch status for the particular branches can be inquired.
- **Teller Transaction Verification (Fast Path: BR013):** This page helps supervisors to view and verify all the teller transactions with the available physical documents, before closure of the teller batch.
- **Work Item Inquiry (Fast Path: WL001):** This page is used by tellers and supervisors to view the status of all financial and non-financial transactions performed by them during the posting date for which the teller batch is open. They can also reverse their posted transactions.

3.14 Security Management System

The application, comprising of several modules, has to interface with various systems in an enterprise to transfer or share data, which is generated during business activity that takes place during teller operations or

processing. While managing the transactions that are within application's domain, it also needs to consider security and identity management and the uniform way in which these services need to be consumed by all applications in the enterprise. This is possible, if these capabilities can be externalized from the application itself and are implemented within products that are specialized to handle such services. Examples of these services include authentication against an enterprise identity-store, creating permissions and role based authorization model that controls access to not only the components of the application, but also the data that is visible to the user based on fine-grained entitlements.

There are two alternate options provided for end-to-end security. Either Local security (based on database) or Oracle Identity Manager can be used to provide authentication or authorization mechanism.

3.14.1 Security

The application uses the best of breed components from Oracle's Fusion Middleware to deliver cutting edge solution in terms of a banking platform. The participating systems are as follows:

- Oracle Identity Manager (OIM) is used for managing user provisioning.
- Oracle Access Manager (OAM) is used for managing declarative authentication and SSO.
- Oracle Platform Security Services (OPSS) is used for runtime evaluation of authentication/authorization.
- Oracle Adaptive Access Manager (OAAM)/Oracle Adaptive Risk Manager (OARM) is used for step-up authentication and fraud management.
- Oracle Internet Directory (OID) is used as the identity/policy store.

For configuration details of the mentioned applications, visit the Oracle® Collaboration Suite Security Guide at http://docs.oracle.com/cd/B25553_01/collab.1012/b25494/toc.htm.

3.14.1.1 Set Up User Roles and Entitlement Policies

Every bank employee is mapped to an enterprise role. The enterprise roles are created in Oracle Internet Directory (OID) or equivalent Lightweight Directory Access Protocol (LDAP) store.

For handling business transactions, a user may need to be mapped to a set of services that are typically available to a single role. Such role is referred as the Application Role. Entitlements are defined on resources for the particular application role using Policy Management task. These entitlements drive the access privileges granted to the application role. For example, "perform" on an application service or "view" on a report resource.

Authorized personnel from the bank can use Oracle Directory Services Manager (ODSM) for OID maintenance or the native role configuration functionality provided in the system.

A bank user can be mapped to multiple application roles. Each application role can be linked to its authorization policy within which coarse grained and fine grained authorization configuration can be done.

Examples of user access restrictions are as follows:

- Allow users without access restrictions to only view and select product groups classified as Office Accounts, once the user selects New Deposit from Landing page of Application Form during account opening process.
- Only allow users with access privileges to capture Office Account Ledger within the following list of tasks (maintenances or transaction) or common taskflows.

- All financial transactions where settlement mode is GL
- Miscellaneous General Ledger Transfer (Cash Deposit to GL)
- Cheque Deposit to GL
- Journal Multi Voucher Entry
- Product ledger Balance Inquiry
- Reconcile Office Accounts
- Payment or Collection Transaction
- Scan Reject
- CASA Backdated Transaction
- In the Common Settlement taskflow, one of the supported modes is GL, that is Ledger. Once this option is chosen, based on the branch, the system will allow the user to filter and select the appropriate GL to perform the transaction. From the picklist, the appropriate ledger code can be selected by the user.
- System provides a mechanism to define these entitlements or access policies that are to be maintained for the application roles applicable within the bank.

3.14.1.2 Transaction Blackout Configuration

Transaction Blackout typically is required when the bank wants to implement blackout or restrictions on the execution of certain maintenances or transactions. Such restrictions may be required for different business scenarios. A mechanism is provided to have user based blackout (combination of customer and application role) or total blackout for a particular transaction.

The dimensions on the basis of which the blackout details are maintained will typically include:

- Transaction (or application service)
- Channel (from where the request is initiated)
- Start Time (beginning of blackout date and time duration)
- End Time (end of blackout date and time duration)

Over and above this maintainable blackout, there is also a system enforced blackout during batch operations. There is a configuration by which the Banker Portal tasks can be allowed or disallowed during execution of batch processes. This is checked when the application service associated with the particular maintenance or transaction in the application is executed. An error message is displayed, if the blackout condition is met.

3.14.2 Local Security

This option for security is based on the database. User, group, and role information is stored in database. The authentication and authorization services are provided using the Weblogic security framework. Custom authenticator called SQL authenticator has been developed to provide security to the application service and UI.

- Manage User Creation (Fast Path: SM004)
- Define Application Role (Fast Path: SM002)

- Define Enterprise Role (Fast Path: SM003)
- Password Policy Management (Fast Path: SM001)

3.14.3 Approvals

Typically, the administration team within the bank configures the tasks for approvals as per the bank's credit, pricing, regulatory or other policies. Within the application, the approval configuration is to be done primarily on the application service being executed corresponding to the task or business function being performed.

Artifact Dependency Map (ADM) is a mechanism provided to assert and identify the application services that are associated to a particular task or business function. The overridable business exceptions or reason codes associated with the application service can be configured for approval.

The application is pre-integrated with the Oracle SOA Suite for executing its business workflows. The Originations module uses several process or human workflow features to originate customers and accounts. The Approvals module makes use of the sophisticated participant assignment, routing or work-list features to fulfill the approvals use cases.

- The SOA suite identifies its users through authentication provider pointing to OID. The application UI and app servers also point to the same identity store to provide authentication rights to its users.
- Work-list users or process users are protected through access policies set up in OPSS. The SOA server domain is also re-associated to the same domain that the application UI and app-servers use to get the benefits of a centrally set up policy store.

Whenever a transaction is submitted by a user (banker, customer, and so on), security access check interceptors assert role-based access and fraud policies added on the service executed. Additionally, these interceptors also evaluate whether there are approvals configured on the service.

The output of these asserters is a decision on whether approvals are required or not. If approvals are required, the application executes the process (BPEL) configured for the transaction. Thereon, the BPEL process takes the responsibility of routing the approval task (work-item) to the configured assignees and ensuring that the assignees take the required action to complete the approval process.

Approval checks are of the following types:

- **Dual Control:** Any transaction can be set up for approvals (4-eyes principle).
- **User Limits:** User Limits assenter evaluates whether transaction amount is within limits available to the user (role).
- **Matrix Based:** Matrix assenter evaluates a matrix of facts available in the context of the transaction. This assenter is used to evaluate the delegated commitment authority and discretionary pricing facts.
- **Business Override Severity Configuration:** The severity configuration for the reason codes typically are as follows:
 - IGNORE
 - OVERRIDE
 - OVERRIDE - LOCAL (Local Authorization)
 - OVERRIDE _ RULES (This option provides the flexibility to maintain different entitlement rules per service and reason code combination)

- REJECT
- NOTIFY

This severity option can be configured differently for combination of dimensions like application role + branch + channel.

The approval task typically indicates to the approvers the following details:

- Request details including the initiator's user ID, and date and time when the request was initiated
- Business exception or reason code and its corresponding description
- View approver's history as part of the approval work-item
- Capture comments to indicate approval/rejection

Local Authorization provides a mechanism for the approver to action the approval request from the initiator's workstation, thereby saving time in remote access of the approval work item from the worklist. Typically, it is useful for scenarios like over-the-counter transactions where the number of users in physical branch are less.

Support for deferred approval is allowed for set of tasks and based on the preconfigured periods. The supervisor can approve the same and if no action is taken within the period, the task becomes void. The posting date of such transactions will change to the date on which the supervisor approves the transactions.

3.14.3.1 Matrix Based Authorization

This section explains the matrix based authorizations.

3.14.3.1.1 Pricing Approval Negotiations

Matrix based authorization are supported for different pricing dimension negotiations like:

- User Discretionary Margin (UDM)
- Fees
- Customized (base) rate capture
- Economic cost negotiation in servicing transactions like Term Deposit Redemption

This functionality is available for a wide range of transactions spanning Origination (for lending covering Loans and Overdraft) primarily as part of Structure Solution step, Loans (Actions within Manage Loan Account like Split Loan or Offer Swap OR Actions in Manage Facility Within Arrangement task like Add New Account respectively), and Term Deposit (Contract Modification or Fund Term Deposit).

The key difference at a high level between Origination and Non Origination approvals is that there is a Return task capability for origination approval rejections while this capability is available for servicing only in a limited set of tasks.

Different attributes are provisioned which can be used in rules for UDM or fee negotiation approvals. For example, Requested Amount and Product Group for a UDM negotiation approval while the Fee Negotiation details for Fee negotiation approvals. Also, generic attributes like business unit, transaction branch are available.

3.14.3.1.2 Credit Approval Negotiations

This functionality is for approval of credit for lending applications within the Origination process. Matrix attributes like aggregate application amount, sum of facilities being applied based on the Loan To Value (LTV) group, business unit and so on can be used to create different rules for getting the applications approved.

3.14.3.1.3 Collateral Processing Approvals

Configure approval matrix authorization for the following transactions in LCM module:

- Collateral Sub Division
- Collateral Consolidation
- Collateral Valuation
- Collateral Realization
- Release of Collateral

Common Attributes as well as certain specific attributes with respect to these transactions can be used for creating conditions for authorization rule within Policy Management task in the application as well as approval task assignment rules within Oracle SOA Suite.

3.14.3.1.4 Transaction Limit Checks

Flexibility is provided for transaction limits checks as part of Approval module for handling approval of:

- Daily or Cumulative limit checks for specific transactions
- Cumulative limit check for a group of transactions
- Specific override limits for a customer or account for handling exceptions to the transaction limit checks configuration

3.14.3.1.5 Cancel Pending Approval Request

Flexibility is provided to initiators to cancel their approval requests prior to the completion of the approval process. Currently, this option is available only to the initiator of the approval request. Another advantage of this capability is that when the Close Teller Batch fails due to approval requests pending completion, the initiator can cancel such requests and proceed with teller batch closure. Prior to this option being available, the initiator had no option but to pursue the required approvers to either approve or reject the requests.

3.14.3.1.6 Approval Process Tracking

The following capabilities are provided:

- View the status of the approval tasks associated with a particular request pending approval.
- View complete task history and state transitions for each of the approval tasks created.

Approval of Origination tasks can be tracked through the Application Tracker (Fast Path: OR100). The status of approval requests initiated from assisted or banker pages can be tracked through Work Item Inquiry (Fast Path: WL001).

3.15 Enterprise Product Manufacturing

The following features are offered as part of Enterprise Product Manufacturing.

3.15.1 Define Product Type (Fast Path: PM049)

Product Type Definition helps categorize different types of products based on Product Class and Origination work flow behavior. Product Types are factory shipped and cannot be modified. Product Types are linked to the Product Class in the background.

3.15.2 Define Credit Policy (Fast Path: PM009)

Credit Policy definition is a predefined template which enables the Credit Manager to organize various Origination parameters for different asset classes and link it to a specific product group.

Credit Policy Template can be configured for a specific product group and business unit combination. Hence, setting up of Credit Policy Template as part of day zero is mandatory for the Origination system for Asset type of products.

During Origination process, depending on the product group selected in the respective Business Units, the system validates the attributes, which are configured in the Credit Policy Template.

As part of Credit Policy definition the main functionalities defined are product type, purpose codes, group type, Origination workflow behavior, collateral types and categories, facility category, credit and behavioral decision parameters, Insurance related parameters, and so on.

3.15.3 Define Statement Policy (Fast Path: PM007)

A Statement Policy can be configured to specify the statement delivery modes, frequency and other parameters. The statement policy defined can be attached to a CASA, TD or Loans type of product, which are inherited by the accounts opened under these products (with relevant modifications as required).

As part of statement policy the main functionalities defined are delivery modes, billing statement parameters, statement frequency, statement generation based on occurrence of certain events, statement generation parameters on account opening and closure of account, blocking of statement generation with specific user and system defined statuses, and so on.

3.15.4 Define Offer Bundle (Fast Path: PM026)

The solution provides a feature to the bank to group products across different lines of business. For example, product offers of home loan, transaction account and credit card can be bundled together.

A bundle is considered as a single unit for sale and specific benefits can be configured for customer who subscribes for the bundle.

The solution is beneficial to the bank as well as customers. Using this feature the bank can cross sell products to new and existing customers, and earn revenues in the form of bundle subscription and maintenance fees, while the customers are benefited in terms of additional interest margins and discounts or waivers on fees. These bundle benefits can be offered for a limited period or perpetual.

The above functionalities are addressed in the following maintenances:

- Define Offer Bundle (Fast Path: PM026)
- Bundle Bank Policy (Fast Path: PM005)

3.15.5 Define Transaction Restrictions (Fast Path: PM027)

Define Transaction Restriction Maintenance is used to restrict transactions between accounts of two different product offers for selected events.

3.15.6 Define Reward Maintenance (Fast Path: PM053)

Non-financial benefits or rewards refer to compensation given in a transaction (non-monetary benefit). A non-monetary physical reward can consist of almost any material objects such as jewellery, precious metals, electronic gadgets, gift coupons or an automobile, and so on.

Non-financial benefits are product offers that banks give their business or retail clients to help them operate more efficiently and to increase their business.

As part of reward maintenance definition, the main functionalities that are configured are reward code and description, validity period, terms and conditions of the reward, eligibility rules linkage of the rewards to TD, CASA, Loans, Credit Card, and so on. The rule is executed during account opening.

3.15.7 Link Product Group to Business Group (Fast Path: PM028)

A business group is a group of associated product groups, which helps identify a particular business area. A broker or an introducer is linked to one or more of these business groups. Due to this all the product offers that are a part of the product groups linked to the business groups are available to the broker or introducer. The user can define eligibility rules that are linked to the product offers. The eligibility rules can validate and identify the set of product offers, which the broker or the introducer is allowed to handle.

3.15.8 Define Product Settlement Mode (Fast Path: PM031)

Define Product Settlement enables to link the combination of product and event to a default rate type. It also facilitates the association of the various settlement modes to different rate types and transaction codes. As a result of this linkage all the accounts under the product and affiliated with the events will be considered for treatment under the rate type and transaction code associated here.

3.15.9 Define Domain Category Settlement Mode (Fast Path: PM030)

Define Domain Category Settlement enables the user to link the combination of domain and event to a default rate type. It also facilitates the association of the various settlement modes to different rate types and transaction codes. As a result of this linkage all the entities in a domain, and affiliated with the events are linked to a rate type and transaction code associated here.

3.15.10 Link Product Offers for Principal Offset Facility (Fast Path: PM025)

Loans and CASA module supports Principal Offset functionality. Principal offset means a loan or an overdraft account is linked to one or more CASA accounts so that the credit balance available in CASA accounts can be used to offset the loan balance to avail the interest benefit.

The interest for loan or overdraft account is calculated on the principal remaining in the loan or overdraft account, minus the aggregate amount of savings in one or more deposit accounts. Borrowers still have access to their savings and if they withdraw money from savings during the month, the next loan or overdraft payment is calculated on a higher principal balance.

The Link Product Offer for Principal Offset Facility screen allows user to link loan product offers and the corresponding CASA product offers for offset linkage. Based on the linkage, the principal offset is allowed only between the accounts opened under the linked product offers.

3.15.11 Define Interest Rule (Fast Path: PM011)

Interest rules can be defined as per Pricing Policy. Pricing works on the concept of defining charges on the basis of rules created based on customer, transaction, account and other attributes.

3.15.12 Define Product Interest Linkage (Fast Path: PM017)

The interest rules defined for a product class are associated to a product. The interest rules are applicable for all product and currency combinations. The following interest rules have to be defined for every Product + All Currency combination.

- Interest Computation Rule
- Interest Accrual Rule
- Interest Capitalization Rule
- Interest Settlement Rule

3.15.13 Define Campaign (Fast Path: PM024)

Campaign refers to a series of advertisements using various marketing tools that share the similar messages and thoughts to promote a business or an event. Different media resources such as newspapers, billboards, TV commercials and digital space are used in typical promotional campaigns. Campaign can be defined by maintaining start and end dates along with product groups and product offers that are a part of the campaign. Accounts can then be opened under the campaign. Campaign eligibility rule and grace days can also be defined for each campaign.

Banks may run campaigns from time to time that offer certain pricing benefits. A common setup is available to define such campaign with unique identification so that these may be used across modules.

3.15.14 Product Hierarchy View

Product Hierarchy View provides a consolidated view of hierarchy of all the product classes, product groups, products and product offers. It enables the user to drill down from the product class to the product offer level. It displays important attributes of each entity. It also enables viewing of key linkages at each level. The user can view the hierarchy in a single view and can toggle between standalone views of each entity.

3.15.15 Link Dependant Product Offers (Fast Path: PM018)

Customers may be required to hold certain accounts mandatorily if they wish to avail certain other accounts. For example, banks may mandate customers to hold specific types of CASA accounts to avail certain Home Loan product offers. A setup is required to handle such cross product or product offer linkages.

To support such requirements, Link Dependent Product Offers screen is used to maintain the dependent and mandatory product offers. This relationship can be maintained with the Nature of Dependency as All or Any XX.

3.15.16 Product Templates

The template functionality is supported in some of the pre-specified maintenances. This functionality helps the auto population of all the data from the previous saved template.

When the user creates a new record, then on capturing the key values, all the attributes or values from the template are defaulted. At any point in time only one template is saved. However, the user can update the template any number of times. The last saved values are stored in the template for the respective screens.

3.15.17 Define Loan Bank Policy (Fast Path: PM004)

All global level parameters that impact Loans as a product class are defined in Loan Bank Policy. These parameters do not change often and remain as the basis for defining all Loan product and product offers of the

bank.

This definition has control parameters, reprice parameters, user discretionary margin persistency parameters along with parameters for access channels.

3.15.18 Define Hardship Relief Policy (Fast Path: PM006)

If a customer is going through a financial hardship due to certain events such as job loss, drought, accident, and so on, and is unable to make repayment for the outstanding dues in the account, the bank may provide certain type of relief for a specified duration. Bank evaluates customer's case and bank could provide hardship relief for the agreed period. This relief may be necessitated due to a regulatory directive in some cases.

The Hardship Relief Policy allows the user to configure hardship reliefs allowed for Loan products. Different types of relief can be configured, namely, freeze interest, waive arrears, reduce installment, revise installment amount, deferment of loan, rollover of repayment or arrears, change Interest rate, consolidate loan, change term, change DPD calculation, and so on.

3.15.19 Define Installment Rule Details (Fast Path: PM058)

Each loan account contains a loan repayment schedule. Repayment schedule directs the bank to charge the loan account and guides the borrower to repay the loan. Installment rules are used to define repayment schedule whether interest is to be paid by the customer or principal to be paid or both. Installment rule contains date basis on which installment due (interest or principal) is to be paid. The available date basis are Calendar and Anniversary. If Calendar date basis is selected, then interest or principal is to be paid on a month end, such as, 31st Jan, 28th or 29th Feb, 31st Mar, 30th Apr, and so on. If Anniversary date basis is selected, then interest or principal to be paid on the disbursement or selected day. For example, 10th of every month.

3.15.20 Define Loan Schedule Type (Fast Path: PM059)

Schedule Type setup enables the bank to define different repayment schedules that can be attached to a loan product offer. Repayment schedule specifies the amount, number and type of installment that the customer has to pay as a part of loan repayment.

3.15.21 Define Product Group

A product group is defined for a list of products that are closely related as they function in a similar manner, belongs to a product class-product type combination, has similar marketing strategies, and has similar pricing strategies. For example, various range of home Loan products such as Home Construction Loan, Home Improvement Loan, Home Extension Loan, Land Purchase Loan, and so on, which a bank markets under Home Loan portfolio belonging to asset class Loan can be grouped as Home Loan product group.

This maintenance requires the banker to choose the Origination workflow behavior, the linkage type and the group type, upfront. The Origination workflow behavior can be asset, liability, investment, insurance or credit card. Parameters for definition change based on this selection.

As part of Loan product group, the attributes captured at high level are product type, investment type, allowed currencies, fast refinance applicable, settlement required, co-signor applicable, applicant eligibility rule, draw and repayment period, regulatory questionnaire linkage, hardship policy, and credit policy. Whether product groups are eligible for In Principle Application or not can be defined.

3.15.22 Define Loan Product

Loan product is defined under product class Lending and product group specifically defined for Loans. Various parameters that should uniformly apply to product offers created under the product are defined here. Control parameters, currency parameters and Asset classification parameters are maintained in this definition. Most parameters maintained here are not overridable in the Loan product offer, so this definition is referred during processing for such parameters. This definition also has fee treatment preferences for account opening as well as servicing. Delinquency parameters, allowed facilities, term parameters, statement linkages, and alert and outbound documentation parameters are also maintained here.

3.15.23 Define Loan Product Offer

Using Define Loan Product Offer screen, user can create a product offer ID under a product. Multiple product offers can be created under a product. A product offer can be created with start date and expiry date, advertising message and standard features such as facilities, penalty parameters, quote parameters, amount parameters for variation events, documentation parameters, allowed rate and transaction type, account preferences, and channels.

Some of these parameters are choices to be exercised during account configuration in account opening and afterwards in servicing.

3.16 Limits Management

The following features are offered as part of Limits Management.

3.16.1 Setup Limits

Limits and Collateral Management (LCM) allows setup of one or multiple credit facilities for a customer. Limits can be set for each facility granted to a customer. The Broker or Introducer details are stamped at the Credit Facility level. The bank can set up credit facilities for various products of the bank such as Loans, Foreign exchange, Overdrafts, Trade Finance, Flexible Credit Facility that supports fixed and variable rate revolving credit accounts, and so on. The bank user can capture the limit amount and limit currency, along with limit start date, limit expiry date, date for first disbursement, date for last disbursement, credit risk score, risk grade and effective dates as applicable to the customer's credit facility. The solution supports creation of facilities of Revolving and Non-Revolving types. In case of a Revolving Type, once the repayment is made, the amount of limit will be automatically reinstated to the extent of repayment, whereas in case of Non Revolving line, the limit will not be available for further draw down. Facility start date is the account opening date when the facility is originated from Origination. Following features are supported:

- A unique Borrowing Entity can be created for a customer or a group of customers and an overall limit can be assigned to the Borrowing Entity. The setting of the limit at Borrowing Entity level is optional. If the limits are set at Borrowing Entity level, then the application will validate the limits defined for each Credit Facility against the overall limit granted to the Borrowing Entity. The system also supports creation of Credit Facility with back-dated value.
- Creation of facility tree (subline under main line) is a configuration in facility category. If facility tree creation is allowed as per the configuration then within a Credit facility, several sub facilities can be defined for a product group or across a combination of product groups. Each sub facility can act as a parent facility for an additional level of sub facility, resulting in the definition of limits at multiple levels. Accounts are linked at the lowest level of limits (operating line).
- A guarantor or a cosigner to the credit facility can be captured at the credit facility.

- Concession group is a concept that can be used to provide pricing benefits. This is stored at a credit facility level.
- Multiple collaterals can be linked to the Parent Credit Facility. The LCM system computes Loan to Value ratio and stamps the same at Parent Credit Facility level.
- Capture start date and end date for draw period and also the repayment period at facility level for HELOC.
- Two methods of Loan to Value Ratio computation are supported, that is Quadrant Deduction method and Uniform LVR method. This computation factors to In Principle Approval and Internal Refinance figures. LVR determines the LTV Code. LVR and/or LTV Code are stamped at the Parent Credit Facility level.
- Treatment of senior charge of other bank is considered while calculating the LVR of the facility. If the treatment is selected as Add Charge to Exposure, then the system adds the other bank's senior charge to the exposure while calculating the LVR. If the treatment is selected as Deduct Senior Charge from Collateral, then the system deducts the other bank's senior charge from collateral during LVR calculation. This is applicable only for Uniform LVR.
- The definition of Temporary Excess Limits and limits for Advance against Unclear Funds (AUF) is also supported. Both the Temporary Excess and the AUF limits are defined at the account level. Bank can configure if system should check due diligence compliance (such as KYC, AML) on customers prior to sanction of temporary excess and advance against unclear funds limits.
- There is also a provision to set up a Periodic Fee at facility level. The loan account or CASA account can be nominated to collect the Periodic Fee at facility level.
- Risk indicators can be attached to the Credit Facility. This prevents facility modification in the event of a garnishment order, litigation or bank assessed risk.
- Credit Facilities can be monitored using available alerts and reports to track utilization and deterioration of LVR.
- Within the sanctioned limit, the flexibility to create new sublines, amend existing sublines and link or delink accounts is supported without the need to perform a fresh Origination process.
- Grace period is maintained in global parameter of renewing the facility after expiry. The system allows renewing the facility within configured period.
- Supervisory LTV (SLTV) Rule: SLTV is a control level LTV that places a restriction on the maximum amount that can be lent to customer against a specific category of collateral. The SLTV for the various combinations of facts can be defined as part of a rule. The rule will be attached in the Global Parameters page under the SLTV accordion. System should refer to the definition of SLTV (as part of the global parameters page) whenever LTV ratio calculation is done (as part of origination or servicing) and should be able to give a warning message thereby prompting the user to ask for additional collateral or mortgage insurance.
- An Evergreen revolving credit facility, that is the facility for which term is not defined, can be set up. A configuration to categorize a facility category as Evergreen is provided.
- Secondary Purpose of the credit facility can be amended during amending the credit facility. It is mandatory during creating or amending the credit facility.
- Specific collateral and charge combination can be excluded from LVR computation.

The above functionality is addressed in the following pages:

- Global Parameter Details (Fast Path: LCM48)
- Credit Facility (Fast Path: LCMS58)
- AUF/Temporary Excess Limits (Fast Path: LCMS54)
- Borrowing Entity (Fast Path: LCMS51)
- LTV Matrix (Fast Path: LCM52)

3.16.2 Utilization of Limits

Utilization Management is used for keeping an online check on the usage of Credit limits. This ensures that a customer's liability to the bank at any given point of time remains within the stipulated limit. The exposure tracking mechanism in utilization management helps to track the exposure of selected Borrowing Entities or customers. The application provides view of Effective Line Amount, Available Amount, Utilized Amount, Blocked amount and Outstanding Exposure.

The application tracks all transactions initiated from various modules which impacts Credit Facility by increasing or decreasing the utilization.

In case of Revolving type of Facility, the increase in Utilization will increase the Utilized amount and the Outstanding Exposure Amount and decrease the Available amount for the associated Borrowing Entity and Credit Facility. Whereas the decrease in Utilization will decrease the utilization and the Outstanding Exposure Amount and increase the available amount for the associated Borrowing Entity and Credit Facility.

In case of Non Revolving type of facility, the decrease in Utilization will only decrease the Outstanding Exposure Amount and will not increase the Available amount and also will not decrease then utilized amount.

If the Borrowing Entity and Credit Facility has an associated parent facility, then the utilization will be tracked and updated at all the parent levels by the application automatically.

In case an account is rebooked, all previous credit facility utilization will be inquired by using a new account number.

If the credit facility is closed due to the closure of the account and the account is reopened, then the credit facility will also reopen in reopening process of account and credit facility will be available for utilization.

The above functionality is addressed in the following pages:

- Utilization Request (Fast Path: LCM067)
- Utilization Inquiry (Fast Path: LCM68)

3.16.3 Earmarking of Funds

The solution also offers earmarking facility. The banker can put a hold on a facility for a specified amount with a start date and expiry date. This blocked amount will not be available for utilization unless specifically requested to use the blocked amount for specified transactions. The block will be released automatically when the specified transaction is completed.

Flexible Credit Facility (revolving) allows force placement of earmark on repayment in the revolving account in fixed period.

The above functionality is addressed in the Facility Earmarking (Fast Path: LCMS56) page.

3.16.4 View Credit Exposure to a Party

Centralized control and monitoring of Credit Exposure is provided along with tracking and reporting exposure by customer, geography, sector, industry, and so on.

It provides a consolidated view of Credit Exposure to any selected Borrowing Entity, Customer, or Customer Group. This view displays the following types of exposures for the selected Borrowing Entity or customer:

- Total Credit Exposure: Origination submissions for Internal Refinance and In Principle Approval are factored in the Total Credit Exposure and displayed in the View Customer Credit Exposure page and File Summary Report.
- Direct Credit Exposure to the customer
- Guaranteed Exposure which indicates the amount guaranteed by customer
- Cosigned Exposure which indicates the amount cosigned by the customer
- Related Exposure which indicates the exposure to parties related to customer
- Associated Exposure is visible for Customer Groups only. This displays the direct and guaranteed exposures of the associate members of a selected customer group.
- Utilization details at Facility, Sub Facility or Account levels
- Collateral Details and Charge details, if any.
 - Collateral address is displayed in Collateral Description field for Property type of collateral in file summary report.
- If there are multiple banks under an enterprise:
 - Credit exposure of each bank under the enterprise is displayed.
 - Guaranteed exposure of each bank under the enterprise is displayed.
 - Related exposure of each bank under the enterprise is displayed.
 - Insider exposure of each bank under the enterprise is displayed.
 - Total exposure of each exposure type is displayed.
 - Proposed credit facility of the party can be included or excluded for calculating the credit exposure.

The application provides information for monitoring credit limits and exposure across all the products under Oracle Banking suite.

Credit Monitoring as a part of the risk management function, includes monitoring the exposure in terms of various parameters such as country, customer, currency, collateral, sector, and so on, to which credit is made available.

Provision to generate and print the File Summary Report with all the above mentioned details from the View Credit Exposure page is available.

The above functionality is addressed in the View Customer Credit Exposure (Fast Path: LCM65) page.

3.16.5 Credit Facility Review

Generally bankers analyze the behavior of the Credit Facility from time to time and also examine the relevant documents to review the conduct of the Credit Facility offered to the customer. Manual as well as automatic facility review are supported and a comprehensive information view is available to support review by the user, based on the bank's credit policies. On review, the banker may decide to extend the Credit Facility for a

further period of time if required and restrict to maximum number of extensions allowed for the facility. The reviewer may also recommend increase or decrease in the credit limit or cancellation of limit which may be referred to competent authority for decision.

Automatic Credit review can also be configured based on business rules.

Renewal of expired facilities is supported with the ability to control the charging of facility fees between the expiry and renewal of facility.

The above functionality is addressed in the Facility Review (Fast Path: LCMS19) page.

3.16.6 LCM Serve

LCM Serve is a one-stop solution which provides a single unified view of the credit facilities, collaterals, insurance policies, other types of facilities such as AUF and Temporary Excess, and the compliance status of the terms of credit (conditions and covenants). It helps the bank in performing the following functions:

- Provide a holistic view of the entities linked to the party in LCM and establish a correlation between them to help serve the customer better.
- Provide a comprehensive view of the facilities and the linked entities for prudent risk management by the bank.
- Ability to initiate relevant transactions from the LCM Serve page across all entities of LCM which include facility review or renew, credit facility maintenance, collateral valuation, collateral charge renewal, compliance of condition and covenants, manage linked insurances, and so on.
- Ability to highlight statuses that need immediate action across entities linked to the facility.
- Ability to decrease the facility amount when the credit facility certifies the following conditions:
 - Credit Facility should be revolving.
 - Sub facility creation should not be allowed.
 - Nature of facility should be None.
 - Effective limit basis should be limit amount.
 - Define Linkages
- Ability to support Progressive Disbursements as follows:
 - Ability to set disbursement requirement for the collateral using the Global Parameter Details (Fast Path: LCM48) page.
 - Ability to configure and select appropriate reason codes for modification or cancellation of payout instructions.
 - Ability to configure and resolve inbound documents.
 - Ability to perform collateral valuation before the disbursement.
 - Ability to display origination and servicing fees for collection.
 - Ability to perform collateral disbursement at various construction stages (first or second disbursements).
 - Ability to perform single or multiple disbursements under same construction stage.
 - Ability to validate stage wise available balance before performing the disbursement.

- Ability to persist the disbursement details in this page, when the details were maintained or captured in the Settlement Instruction BPM task.
- Ability to comply conditions that are applicable for the facility, collateral, or party in context before performing the disbursements.

The above functionality is addressed in the Limit and Collateral Management (Fast Path: LCM100) page.

3.16.7 Credit Monitor

Credit Monitor is a single dashboard, which provides both credit management and credit operations teams, a unified view for monitoring and tracking the performance of the credit portfolio. It provides the following details as part of multiple widgets:

- Delinquency and NPA status of the credit portfolio of the party, which includes current outstanding exposure and delinquency status, deterioration in asset classification, cases of frequent default, and so on.
- Factors that indicate credit at risk which includes monitoring the deterioration of credit and risk scores, decline in credit turnover, continuous breaches in condition and covenants, and so on.
- Monitoring and tracking operational activities, such as tracking due dates, overdue dates, and exceptions pertaining to limits, collateral, conditions and covenants, and insurance.

The above functionality is addressed as part of the Credit Monitor (Fast Path: LCM101) page.

The flexibility to configure the dashboard based on the bank's business requirements is provided as part of the Credit Monitor Preferences (Fast Path: LCM102) page.

3.16.8 Other Features

Other features include:

- Automatic closure of Credit Facility (only Non Revolving type)
- Total of Sub Credit Facility limits should be equal to the Parent Credit Facility limit in case of Non Revolving Type of Credit Facility.
- Determination of LTV based on the Bank Value LVR or Market Value LVR of the facility
- Negotiation of deferred fees at the time of collection
- Charging of fees for processing Temporary Excess Limits and Advance against Unclear Funds
- Accrual of Periodic Facility Fees
- Report generation of credit extended to insiders and tracking of exposure of related interest of insiders. Such exposures can be validated against the insider threshold maintained by the bank. There is also a capability to validate the exposure of executive officer and the related party of executive officer with the minimum of Executive Officer Credit Threshold or Executive Officer Credit Limit amount maintained in the Bank Policy (Fast Path: CS26) page.
- Identification of an account as secure or unsecured.
- Capability to store the LVR even if it is calculated by the external system.
- Hand off of limit data to the common staging area during the End Of Day process.

- Ability to capture details of external credit facility that are available in the legacy system and share the same collateral details to Origination.
- Ability to display the external credit facility details and collateral details that are used to compute the market and bank LVR. This functionality is applicable only if the LVR Calculation Method is set as Residual Collateral Value Allocation.
- Ability to reduce the term deposit amount less from the numerator as well as denominator, if term deposit is linked to the Family Guarantee type of collateral. This improves the LVR and reduce the instance of additional LMI needed to be provided by the customer to secure a loan. This functionality is applicable only if the LVR Calculation Method is set as Residual Collateral Value Allocation.

3.17 Collateral Management

Collateral refers to the asset obtained by the bank to secure a loan or advance. This is done to mitigate the risk of default by the borrower. Banks also use the value of the collateral to ascertain the amount of funds that could be advanced to the borrower. Collaterals are of various types such as Property, Vehicles, Marketable Securities, Deposits, Business Assets and so on. Additionally, less prevalent collaterals like Water, Vehicle License, Industry Business Value, Non-Financial agreement, Intangible assets, Bullion, Aircraft, Artwork, Financial Agreement and Undertaking are also supported.

3.17.1 Capture Collateral Details

Various collateral types, collateral categories and sub-categories can be defined. There are various preferences which can be defined at the collateral category level for example, hair cut percentage to arrive at bank value, whether valuation and title search are applicable, whether charge creation is required, and so on. There is also an ability in the solution to identify Low Risk Collaterals and perform check on the identified set of liquid assets. Additionally, the banker can also define if collateral address is mandatory, optional or not required for a given collateral type, as part of the business configuration.

After defining the collateral types and categories, the details required for setting up a collateral record such as collateral description, estimated market value, ownership details, address details, notice days for expiry of collateral can be captured. The collateral description is defaulted to collateral type. In case, address is applicable for a collateral, the collateral description is populated with address. Certificate of title details can be captured on a separate tab during collateral creation process. Optional additional details specific to the collateral type or category can also be captured for example, for a property type of collateral, details such as number of rooms, year of construction, date of purchase, dimensions of the property, project name, property contact details can be captured. Similarly for guarantee type of collaterals, the guarantor name and supporting collateral to the guarantee can be recorded. System has the ability to automatically create a personal guarantee collateral when the guarantor is onboarded in the application as a party. System also has the capability to change the collateral sub category during collateral update process for Guarantee and Indemnity type of collaterals, if collateral sub category is applicable.

Multiple charge types can be set-up for a collateral category, with any one as default. Charge details applicable to the collateral such as charge type, priority, and so on can also be captured including other bank charges. In cases where the charge of the collateral is held by other banks, a deed of priority can be generated to capture the priority of charge and obtain the consent of other banks holding a stake on the collateral. There is an ability to capture the consent for subsequent mortgage while capturing an own bank charge if any higher priority charges of other banks are present for the same collateral. The registered dealing number of the other lender's mortgage over the collateral can be recorded.

The solution has the ability to perform dedupe of a collateral record on each tab of collateral and supports configuration of Probable Match criterion for dedupe (any one or more of the dedupe parameters can be selected for checking probable match).

The solution also offers the ability to maintain Risk Indicators for collaterals, with an option to define actions on risk indicators such as Prevent Release of Collateral, Prevent Discharge of Collateral, and so on.

The solution also has the ability to provide a view of all the facilities, sub-facilities and accounts linked to a given collateral, either directly or indirectly.

The solution also has the ability to trigger a reason code based approval when user delinks a supporting collateral from Guarantee and Indemnity collateral.

When a charge is created on collateral by any bank of the enterprise, then that charge can be used by other banks in the enterprise, as the charge in such collateral is in favor of the enterprise.

Other features include:

- Term deposits and savings account with other banks can be linked to a Deposit type of collateral.
- Documents in support of collateral can be uploaded and linked.
- Creation of a General Securities Agreement and capture of the underlying assets that constitute to the General Securities Agreement.
- Capturing of Guarantee Arrangement Type for collateral type Guarantee and Indemnity.
- Capturing of License state and type for Liquor and Vehicle licenses.
- Ability to change collateral sub-category during collateral modifications for Property type of collaterals.
- Ability to increase or decrease the bank haircut value during collateral creation process to an extent of haircut variance range maintained in collateral category preference. Once the collateral is created, bank haircut cannot be amended during the update process.
- Ability to capture details of under construction property like the construction start date, land value, entity responsible for constructing on the property, that is Owner Builder, Registered Owner Builder, or Builder.
 - Owner Builder: Individuals who can construct on property owned or leased by them.
 - Registered Owner Builder: Individuals who have obtained a license to construct on a property owned or leased by them.
 - Builder: A builder is appointed to complete the construction.
- Capture additional details for the builder like contact person details and the builder's account details.
- Service to pass the maximum construction period to account configuration in Origination for direct collaterals which are marked as Under Construction.
- Ability to capture number of bathrooms for Property collateral type and all categories except Water Property.
- Ability to capture at collateral level that customer has given verbal payment authority to proceed with the subsequent or all future disbursements.
- Ability to capture the effective date from which the builder, owner builder, or registered owner builder has taken over or assigned with the construction work.
- Ability to display an indicator to show the current builder.
- Ability to view all the builders added for future reference.

- Ability to retain the information related to Under Construction details, Construction Stage details, or Verbal Payment Authority field, if at least single disbursement is performed.
- Ability to deselect the Under Construction option, even if single disbursement is performed.

The above functionality is addressed in the Collateral Details (Fast Path: LCMS08) page.

3.17.2 Marking Lien Against Deposits

When a deposit (Term Deposit and Savings Account) type of collateral is provided, the bank marks a lien on the deposit. Multiple deposits can also be provided to form a single collateral. Unmarking or release of a lien on a term deposit taken as collateral can be done online. The user can achieve this function by reducing the lien amount to zero and closing the collateral. If a risk indicator is maintained against a collateral, there is an option to prevent release of lien against a term deposit.

The above functionality is addressed in the Collateral Details (Fast Path: LCMS08) page.

3.17.3 Collateral Perfection

The charge recorded on collateral may require stamping and/or registration with the relevant authorities for the bank to have a statutory right over the collateral in case of default by the customer. Ability to record registration details for the charge on collateral is provided. Multiple charges can be combined and registered under a single charge registration number. An outbound document can be generated as a part of Charge Creation.

For every charge type, a Charge Registration Renewal Frequency can be configured. A charge renewal date is established from the Charge Registration Date. A continuation statement can be generated x days prior to the charge renewal date.

When collateral is returned to the borrower, the collateral record can be marked as Released or Discharged. The release of collateral is affected online. The collateral record can also be closed and the charge released. A termination statement can be sent to customer.

Bank can configure if the due diligence checks (such as KYC, AML) need to be verified for the collateral owners of the selected collateral. This check will be done before initiating collateral perfection.

Ability is provided to interact with DMS module through the Inbound document policy for identifying the documents to be resolved for the respective collateral entities. Additionally ad hoc documents can also be uploaded through the inbound document panel. There is also an ability to interact with DMS module through the outbound document policy for identifying the recipients and the documents to be dispatched to the respective recipients related to the collateral.

The above functionality is addressed in the Perfection Capture (Fast Path: LCM022) page.

3.17.4 Realization of Collateral

If collateral is sold by the bank to recover the amount due from the borrower, the realization details will be recorded against the collateral. This includes details like dates and amounts realized on disposal of the collateral. The costs incurred in connection with the realization process can also be captured. Any expense paid for realizing the collateral like legal or brokerage charges can be recorded and collected as part of this process. The loan accounts to which the proceeds were appropriated can be recorded as well. It is also possible to define an approval matrix based on parameters like collateral market value, currency, and so on.

The above functionality is addressed in the Collateral Realization (Fast Path: LCM060) page.

3.17.5 Collateral Valuation

The bank undertakes the process of collateral valuation to ascertain the estimated fair market value of the collateral provided by the customer. The hair-cut percentage can be applied to the assessed value of the collateral to arrive at Bank Value and to calculate the Loan to Value Ratio. Policy deviations, if any, can be lodged as part of the valuation process. Collaterals can be Non Market Based or Market Based.

3.17.5.1 Valuation Process for Non-Market Based Collaterals

The valuation for non market based collaterals is generally carried out by the valuation agencies. The process of valuation may be either automatic or manual. There is a collateral category level flag to configure the default valuation mode (automatic or manual) for a collateral category.

The rules to determine the number of valuations required for given collateral and valuation agency can be defined based on various attributes of collateral such as Collateral Value, Location of Collateral, Loan Value, Valuation Type, and so on.

After initiation of the request for valuation, the banker may send an amendment or cancellation request to the valuation agency for any reason.

The banker can also raise the enquiry or questions in relation to a completed valuation report if any by initiating a separate request to the valuation agency.

3.17.5.2 Valuation Process for Market Based Collaterals

The customers can offer marketable securities as collateral to back the credit facilities offered by the bank. The collateral value is derived based on the number and the price of the securities provided by the customers.

The latest prices for the market based collateral or securities can be obtained periodically from various sources such as Stock Exchanges, Bloomberg or Reuters, and so on and can be updated against the securities. Issuer based limits can also be maintained to limit the exposure to the securities issued by a certain issuer.

The valuation process for market based collaterals can be categorized in two types:

- **Schedule Valuation**

In this case, the valuation of securities is carried out based on the frequency defined for the collaterals to which the securities are linked.

- **Ad hoc Valuation**

Under this method, the banker can perform the valuation of a particular security at any point in time, if the banker feels that a particular security is very volatile and an ad hoc valuation is necessary to correctly reflect the collateral value. This ad hoc valuation is conducted over and above the Schedule Valuation. This ad hoc valuation can also be termed as a Forced Revaluation.

Other features related to valuation include:

- Workflow enabled valuation process (even from standalone LCM page). Separate sequential tasks to be created for request details, report capture, verification, and so on.
- Ability to set minimum number of valuations required for the collateral rule.
- Ability to manually select valuers, in addition to existing capability of system derived valuers (based on valuer preference).

- Ability to check receipt of mandatory documents required for valuation or availability of contact details of person related to property (such as real estate agent, broker and so on) to automate a valuation request task.
- Ability to re-trigger valuation requests for cases where ordering of valuation has failed.
- Ability to amend valuation report. Verification is made mandatory even for online valuation report.
- Ability to automatically cancel a valuation request to ensure that valuation costs are minimized because of various events such as:
 - Withdrawal of submission
 - Removal of collaterals attached to a submission
- Ability to report overdue revaluations and revalue collaterals based on predefined tolerance.
- Initiate valuation of proposed subdivided or consolidated collaterals.
- Ad hoc revaluation of a single or group of collaterals through a single page.
- Ability to collect preconfigured fees from customer, as a part of standalone valuation request capture.
- A valuation report can be shared with the customer.
- Ability to configure a rule as part of Valuer Preferences (Fast Path: LCM037) page, to maintain the list of documents required to perform a particular valuation type.
- Ability to display reason code and description for various valuation statuses such as Delayed, Cancelled, and Failed received from valuation vendor.
- Ability to raise valuation query and receive response from an external interface for both Approved and Rejected reports.
- Ability to default a valuation type (for example, Appraisal or Evaluation) for a Property collateral which is offered as security by linking a rule using the Global Parameter Details (Fast Path: LCM48) page. The rule will get evaluated in the Collateral Valuation Process (Fast Path: LCM063) page, if there no valuation type provided by the external interface.
- Ability to ignore the valuation report for specific valuation type by not updating the collateral market value.
- Ability to send updated collateral details to external credit decision system against each of the valuation records based on the valuation type used for the respective valuation record.

The above functionalities are addressed in the following pages:

- Valuation Process (Fast Path: LCM063)
- Valuer Preference (Fast Path: LCM037)
- Adhoc Collateral Revaluation (Fast Path: LCM065)
- Adhoc Security Revaluation (Fast Path: LCM35)

3.17.6 Title Search

Title search is a process of establishing the rightful or legal owner of the collateral offered by the borrower. It is also expected to reveal any existing encumbrance or lien on the collateral. It is usually carried out for Property type of collateral. Title search is carried out by an attorney, specialized agency or a title insurance company. Lending institutions usually ensure that the title search process on the collateral submitted by the borrower is duly completed before the disbursement of any funds.

Maintenance of empanelled title search agencies is supported. The user can choose the specific agent while initiating title search.

Initiation, amendment and cancelation, capture of report and its verification is supported as part of the Title Search process.

The solution offers the bank to maintain title search agencies empanelled to carry out the title search and allows the user to choose specific agents to complete the process.

The application supports the user to initiate a request for title search, amend an initiated request or cancel an initiated request capturing the search reports and verification.

Other features related to title search include:

- Workflow enabled title search process (even from standalone LCM page). Separate sequential tasks to be created for request details, report capture, verification, and so on.
- Ability to manually select title search agents, in addition to existing capability of system derived agents (based on title search agent preference).
- Ability to amend the title search report. Verification is made mandatory even for online title search report.
- Ability to order automated online title search as part of collateral capture during origination process.
- Ability to reorder subsequent title search based on the report details captured as part of the initial title search.
- Ability to automate title verification process based on title verification rules written as part of Rule Author framework.

The above functionality is addressed in the following pages:

- Title Search Process (Fast Path: LCM064)
- Title Search Agent Preference (Fast Path: LCM040)

3.17.7 Collateral Discharge and Release

Oracle Limits and Collateral Management provides the functionality to discharge the charge on a collateral and to release the collateral to the owner or owner-designated third party. The documents taken and held in-custody are handed over and a customer acknowledgement is captured at the time of release. The solution validates whether the collateral release happens only after the collateral is delinked from all facilities and there are no active charges on the collateral.

Bank can collect preconfigured fees as a part of discharge collateral and release collateral.

The above functionality is addressed in the Release Collateral (Fast Path: LCM066) page.

3.17.8 Collateral Consolidation and Subdivision

Division, readjustment and rearrangement of land for rationalization of land holdings or for purposes of contracting residences or units which can be sold individually, is a common practice. Collateral consolidation is the process of merging adjoining land parcels into a single unit for larger land holdings. Subdivision, on the contrary is the process of dividing a land holding into multiple units. The solution supports consolidation and subdivision of collaterals. As part of consolidation, multiple collaterals residing in the system can be consolidated into a single collateral. Likewise, as part of subdivision a single collateral can be subdivided to

more than one collateral. The existing conditions, covenants and Insurance of the parent collateral are inherited by the subdivided collaterals.

The above functionality is addressed in the following pages:

- Collateral Consolidation (Fast Path: LCM41)
- Collateral Sub-Division (Fast Path: LCM40)

3.17.9 Conditions or Covenants

Conditions are stipulations and constraints, recorded in a contract, to restrict the usage of funds, in order to ensure proper utilization of funds for the specified purpose and to adhere to a stipulated schedule.

Conditions are categorized as follows, based on the point of time at which these conditions are to be complied with:

- Preliminary Conditions
- Precedent Conditions
- Subsequent Conditions

A **Preliminary Condition** is the one that must be satisfied before an account can be created. If the condition is not complied with, the workflow is to be stopped before an account can be created. The tracking of compliance to Preliminary Condition is to be handled manually. Example: License or permission for starting a business.

A **Condition Precedent** is the one that must occur after account creation but before the loan funds can be disbursed. Example: Disbursement of the loan at multiple stages of construction.

A **Condition Subsequent** is the one that must occur post loan disbursement, but only once in the life time of the loan. The start date and the end date of the event can be defined in the system while defining a condition subsequent. Example: Physical verification of stocks, inspection of Plant and Machinery or progress of work.

Covenants are clauses or stipulations in an agreement that requires one party, to do or refrain from doing certain things. The purpose of a covenant is to assist the lender to ensure that the health of loan facilities does not deteriorate suddenly or unexpectedly before maturity.

Banks usually add covenants to a loan contract in order to accomplish the following objectives:

- Maintain acceptable loan quality
- Keep adequate cash flow
- Preserve equity in a borrowing entity with a known weakness in its capital structure as a measure to overcome this weakness
- Keep an updated picture of the borrower's financial performance and status

The application allows the user to capture the following types of covenants:

- **Financial:** This refers to a level that a borrower is required to maintain in key financial ratios such as, minimum quick and current ratios (liquidity), minimum return on assets and return on equity (profitability), minimum equity, minimum working capital and maximum debt to worth (leverage).
- **Reporting:** Covenants of reporting type, for example, periodic financial reports every quarter or change in key management personnel.

- **Undertaking:** Covenants of undertaking type, for example, will not enter into new businesses without the consent of the bank.

Conditions or Covenants can be created and stored in a central repository which can be used as a template while capturing conditions or covenants for combinations of Borrowing entity and one of the other entities. Conditions or Covenants are to be linked to Borrowing entity as a primary linkage and secondary linkages can be with any of the other entities namely, Party, Credit Facility or Collateral. Multiple Conditions or Covenants can be linked to a combination of Borrowing Entity and any other Entity.

Conditions or Covenants can be grouped together through definition of Condition or Covenant Category. This is not mandatory. However, it will be mandatory only when the bank wants to administer a Condition or Covenant Policy and then attach conditions returned from the condition policy to a Lending submission.

Condition or Covenant Policy Definition can be used by the bank to determine which Condition or Covenant Categories can be applied on the basis of pre defined business rules. The Condition or Covenant policy is linked to one of the Entity linkage levels (Party, Collateral, and Facility). All required business rules are configured under a single Condition or Covenant Policy for each of the entity linkage level. Based on the pre-defined business rules, bank can administer its condition or covenant policy to apply conditions or covenants on a lending submission. This need not be mandatory maintenance but is provided as part of the core functionality of the product.

All conditions or covenants applicable for a lending submission are resolved by solution automatically through administering a condition or covenant policy, during credit assessment. The resolution of applicable conditions or covenants is done at Loan submission level. The conditions or covenants thus returned are discussed with the customer and documented in the Lending Submission for approval. When condition or covenant policy is not administered, user can also link conditions or covenants manually to entities in a Lending submission.

Conditions or Covenants can also be defined as Internal or External to restrict the visibility.

External means that the conditions or covenants view to be made available to the customer and also to be printed on the Term sheet which is sent to the customer. If the Condition or Covenant is not complied by due date (including grace days), the compliance status is marked as overdue and the Condition or Covenant is treated as Breached. The count of days of overdue will start from the due date. If the Condition or Covenant is waived subsequently, a letter of waiver can be sent to the customer.

Internal means that the condition or covenant is only for the bank's internal consumption and not to be printed on the Term sheet. These conditions or covenants can also be referred as Silent Conditions or Covenants. If the silent Condition or Covenant is not complied by due date (including grace days), the compliance status is marked as overdue but the Condition or Covenant is not treated as Breached. However, the count of days of overdue will start from the due date. If the Condition or Covenant is waived subsequently, letter of waiver will not be generated.

The linkage of conditions or covenants can be done through the following modes:

- **External:** The External Condition or Covenant mode is used only when the condition or covenant is populated through an external system input.
- **Derived:** The Derived Condition or Covenant mode is used when derived through an inbuilt logic maintained.
- **Manual:** The Manual Condition or Covenant mode is used when the user captures a condition or covenant manually during Lending Submission.

The following maintenances are supported:

- Setup of Condition or Covenant
- Setup of Condition or Covenant Category
- Setup of Condition or Covenant Policy
- Linkage of applicable conditions or covenants for a combination of Borrowing Entity and any one of the Entities namely, Party, Credit Facility, and Collateral
- Creation of Non Standard Conditions or Covenants
- Waiver of Conditions or Covenants record (All the future Instances are waived)
- Editing of Variable text for Standard Conditions or Covenants
- Condition or Covenant Status can be monitored using Monitor or Update Condition or Covenant Status. Compliance details, extension of due dates, capture of action plan for the breached conditions or covenant instances and exemption of condition or covenant instance can be recorded.

The above functionality is addressed in the following pages:

- Condition\Covenant Code Definition (Fast Path: LCMS03)
- Condition\Covenant Linkage Summary (Fast Path: LCMCD)
- Condition\Covenant Status Update (Fast Path: LCM27)
- Define Conditions\Covenants Category (Fast Path: LCM15)
- Define Conditions\Covenants Policy (Fast Path: LCM12)

3.17.10 Data Privacy and Security

The following features are supported as part of data privacy and security:

- Ability to purge the following details of a customer's record from Collateral perspective:
 - For Property type of Collateral:
 - Information on the title of the property is deleted.
 - Information on the Property Contact Details, Builder Contact Details (for under construction property) and Valuer Agent Details (which are part of valuation of collateral) is deleted.
 - For Automobile type of Collateral: The following fields are deleted:
 - Chassis Number
 - Engine Number
 - Registration Number
 - Vehicle Identification Number
- Ability to mask the following Personally Identifiable Information (PII) from Collateral perspective based on configuration:
 - Property Contact Information: Email ID
 - Builder Contact Information: Email ID
 - Lessor and Lessee Details: Email ID and Date of Birth

3.17.11 Insurance

Insurance refers to an arrangement by which a company undertakes to provide a guarantee of compensation for specified loss, damage, illness, or death in return for payment of a specified premium.

Insurance is a special type of contract between an Insurance company and its client in which the insurance company agrees that on the happening of certain events the Insurance Company will either make a payment to its client or meet certain costs.

For example, in a car insurance policy, the insurance company agrees that if the car is damaged, the insurance company will pay the cost of repairing it. Under an Income protection policy, the insurance company agrees that if its client is unable to work, the insurance company will pay its client an agreed amount.

There are various types of Insurance available in the market, such as Life Insurance, Property Insurance, Health Insurance, Auto Insurance, Consumer Credit Insurance, Lenders Mortgage Insurance, and so on.

The following types of Insurances are supported.

- **Debt Insurance:** Debt Insurance refers to the Insurance taken to cover the default on the loans or advances taken by the borrower. Debt Insurance is of two types:
 - **Lenders Mortgage Insurance:** Lenders Mortgage Insurance (LMI) is insurance that protects the lender in the event that the borrower defaults on the home loan. It is paid as a one off insurance premium or fee when the loan is advanced. LMI is only applicable if the loan poses a high risk to the bank. This is generally because the bank lends the borrower a very high percentage of the value of the Collateral.

LMI insurance offsets losses in the case where the mortgagor is not able to repay the loan and the lender is not able to recover its costs after foreclosure and sale of the mortgaged property. LMI is essential particularly where the loan to value ratio is high (the bank has taken additional risk as part of such lending).

Lender mortgage insurance start date is updated as account opening date in the case of OD and the first disbursement date in the case of loan. The start date of the LMI policy is updated only when the start date does not come from the insurance provider or manually captured.

LVR percentage of the facility at the time of creation of LMI policy is stored in insurance and displayed in the origination when the LMI data is retrieved.

LMI protects the bank against loss when:

- A customer defaults on his or her loan.
- The sale of collateral provided by the customer does not fully clear the amount owed to the bank.

LMI is insisted mandatorily by the banks when the loan to value ratio increases beyond the prescribed percentage.

- **Consumer Credit Insurance:** Consumer Credit Insurance (CCI) is designed to protect a consumer's ability to meet their credit product repayments in the event of their death, permanent disablement, or loss of income through injury, illness or involuntary unemployment.

Illustration:

- Jane takes out a Principal and Interest Loan for \$350,000 and a ANZ Mortgage Protect Policy at the same time. A few years later, she is killed in a car accident and her estate makes a claim. The amount on the Policy Schedule is \$284,626. However, the Loan Amount is only \$264,582. ANZ is paid \$264,582 to cover the Loan and \$20,044 is paid to Jane's estate.
- Barry takes out a Line of Credit for \$350,000 and a Common Wealth Bank's Mortgage Protect policy. He dies of a heart attack and his estate makes a claim. The Life Cover amount on the Policy Schedule is \$350,000 but the Loan Amount is less - \$264,582. Common Wealth Bank is paid \$264,582 against the Loan and \$85,418 to Barry's estate.

The lender may offer the borrower, the opportunity to take out CCI at the time they approve the loan, and the premium may be included in the amount that is being borrowed. The borrower is expected to pay the premium and the interest thereon as part of the regular loan installments.

Issuing the policy during Origination amend only when the facility amount is increased and single borrower has not opted policy before.

- **Asset Insurance:** The bank may also require that the collaterals provided by the borrower be adequately insured against loss or damage of any kind. This is called Asset Insurance. For example, in case of a loan secured by a mortgage on the residential property, insurance may be taken on the property. Similarly, if stock or inventory has been provided as security for a facility, the insurance can cover the goods (and in some cases the warehouse as well). If there is a default by the customer and at the same time there is a loss or damage to the property or stock, the bank can recover the money from the insurance proceeds. There are four types of asset insurance:
 - **Flood Disaster Protection Insurance:** It is generally used to protect the Property type of collateral which is located in flood area.
 - **Asset Insurance Others:** It can be linked to any type of collateral for insuring it.
 - **Home and Content Insurance:** It protects the items in homes with the Home and Contents Insurance policy. It can only be viewed and cannot be linked in Insurance Linkage (Fast Path: LCM09) page.
 - **Landlord Insurance:** It is an insurance policy that covers a property owner from financial losses connected with rental properties. The policy covers the building with the option of insuring any contents that belong to the landlord that are inside. It can only be viewed and cannot be linked in Insurance Linkage Details (Fast Path: LCM09) page.

The following functionality is supported as part of Insurance Management:

- **Linkage of Insurance Policy to Facility, Collateral, or Party:** The solution supports linkage of Insurance Policy primarily to the Borrowing Entity and secondary linkage to Facility or Collateral. All the linked policies (LMI, CCI, or Asset insurance) can be viewed from the Insurance Linkage Details (Fast Path: LCM09) page.
- **Support to Origination:** The solution supports Origination through services for issuing Insurance Policy (LMI or CCI).
- **CCI Policy Servicing:** The solution supports issuance and servicing of CCI Policy from the standalone Insurance Module. The functionality like Issuance, Opt-in, Opt-out, Change of Nominated Account, Cancellation, Suspension and amendments to the CCI Policies are supported.

The above functionality is addressed in the following pages:

- Service Provider Onboarding (Fast Path: PI028)
- Insurance Linkage Details (Fast Path: LCM09)
- Define Insurance Offer (Fast Path: PM057)

3.18 Pricing

The following features are offered as part of Pricing.

3.18.1 Setting up of Price Policy Chart

A Price Policy Chart allows the banker to create price plan for interest and fees. It facilitates setting up conditions and action using various facts. Condition columns have evaluation rules and action columns have output values like Interest Rate Chart, Margin Rate Chart, fees and so on.

The above functionality is addressed in the Price Policy Chart Maintenance (Fast Path: PR007) page.

3.18.1.1 Price Policy Chart for Interest

Price Policy Chart for Interest can be defined at bank, product offering, product group, and account level.

3.18.1.1.1 Bank Level

Individual Price Policy Chart is defined for each domain (for example, Retail Banking is a domain), domain category (for example, Current Accounts and Savings Accounts (CASA) is a domain category) and price element (for example, Regular interest, Penalty interest).

- Bank level Price Policy Charts are defined for such domain categories where products groups are not defined (for example, Bank Drafts).

3.18.1.1.2 Product Group Level

A price policy can be set up for the bank as a whole, for each domain and domain category. Price policy can also be set up for a product group or for a specific offer in a product group.

- Price Policy Chart is defined for domain categories where product groups are defined.
- Price Policy Chart is defined interest stage wise and currency wise for each product group.
- Accounting template is defined once Price Policy Chart is defined for Interest.

3.18.1.1.3 Account Level Pricing Plan

Based on the Price Policy Charts set up at bank or product group level, the system automatically evaluates a price plan for interest and fees.

- Pricing Plan is created for the account during account opening. It contains the details of base Interest rates and applicable Margins rates to be applied on an account.
- Fees applicable for various events on the account.
- The Price Policy Chart for Interest and Fees and Price Benefit charts for Bundles or Campaigns are evaluated while evaluating the account level pricing plan.
- Account level pricing is displayed during Account Origination showing the Interest and event level fees applicable on an account. The same can be negotiated during Origination.

-
- Interest rates can be negotiated by way of providing User Discretionary Margin. Fees can be negotiated by way of providing discounts or replacing the fee by an absolute amount.
 - Interest and Fees can also be negotiated any time during the life of an account.

3.18.1.2 Price Policy Chart for Fees

Similarly, Price Policy Chart for Fees can be defined event wise as well. Multiple fees can be linked to an event and each fee shall consist of a base fee and multiple additional fees applied on the base fee.

3.18.2 Event Definition

Banks normally levy fee on customer accounts for financial or non-financial transactions. For example, periodic account maintenance fee, cheque book issue fee, fee for closure of account, and so on. Such transactions or circumstances are recognized as Events in Oracle Banking suite of products. One or more Price Definitions can be maintained in Pricing which is then linked to the respective events by defining a Price Policy Chart.

3.18.3 Fact Definition

A fact is an attribute or parameter of an entity that can be recognized in the Oracle Banking suite of products, which can hold values either as static or evaluated during run time, while performing a transaction. These attributes can be used as a basis to define fees for various events. The solution supports storing attributes (facts) related entities like Party, Transaction or Financial Terms. Facts such as LVR, customer credit score, state code, region code, and so on can be used to define pricing.

3.18.4 Interest Index Definition

Index can be defined for Interest and Margins. Index can be:

- Fixed Index
- Benchmark Index
- Derived Index

Interest Index has positive value and Margin Index can have positive or negative value.

Currency wise interest set up can be done through definition of indices for various bank products. Maintenance of such indices for base interest as well as margins us supported.

An Interest index can be a simple index having a constant rate or a derived index rate based on a benchmark rate such as LIBOR, MIBOR, and so on.

- Rate charts can be defined for Interest and Margins separately.
- Different tier structures can be defined for Fixed Period and Variable periods in a rate chart.
- Margin Validity period can be defined.
- Interest indices have a refresh frequency. As per the maintained frequency, the change in index value is applied to the corresponding accounts. In case of billing accounts, the refresh frequency can also be aligned to the respective account's billing date, which will override the refresh frequency maintained at the interest indices level.

The above functionality is addressed in the Interest/Margin Index Code Definition (Fast Path: PR005) page.

3.18.5 Rules and Expressions

Various Rules and Expressions can be created through the Rules framework. Banks can create simple as well as complex rules to be defined in interest indices. This framework is also used to create Interest rate chart and price definitions for fees.

The above functionality is addressed in the following pages:

- Rule Author (Fast Path: RL001)
- Expression Builder (Fast Path: RL004)

3.18.6 Tier Criteria and Rate Chart Definition

Simple as well as complex tier structures can be created to define the interest pricing. Such tiers can be term based or amount based or a combination of both term and amount. The interest rates so defined can be attached with cumulative effect or incremental effect on tiers.

- Rates can be tiered based on Period, Amount or Both.
- Tiers can be Incremental or Cumulative.
- Rate charts can be maintained separately for Interest and Margins.
- Rate charts can also be maintained separately for fixed and variable term periods.
- Different tier structures can be defined for Fixed Period and Variable periods in a rate chart.
- Different index can be attached to different tiers in a rate chart.
- Margin Validity period can be defined to restrict applicability of a margin.

The interest index and the tiers are put together in the rate chart and interest pricing is created. The above features of Index Definition, Tier Criteria Definition and Rate Chart Definition are specific to interest pricing definition. These definitions can also be used to define interest sensitivity rate which is used in origination to determine the customer's debt service capability.

Apart from fixed, benchmark and derived index, Pricing also supports customized rates. Customized rates are taken directly from the treasury desk for an account or deposit. These are generally applicable for large value transactions or deals for which rate cannot be pre-determined. Hence, the bank prefers providing a tailored rate based on account or deposit details rather than using the card rates. Customized rate is a base rate and is defined through Rate Chart definition.

Pricing also supports step-up rates for TD by the way of a step-up margin. At a defined frequency (defined at offer level), the step up margin gets applied and net rates change accordingly.

The above functionality is addressed in the following pages:

- Tier Criteria Definition (Fast Path: PR009)
- Rate Chart Maintenance (Fast Path: PR004)

3.18.7 Price Definition

Price Definition enables setup for Fees and Rewards.

Fees:

Fee consists of a base fee, multiple additional fees and discounts. It can be defined either, as an absolute amount/value or as a percentage based upon a particular amount fact. Additional fees such as Tax or Cess, are applied on the base fee (as per regulatory norms) and are payable to the regulatory authorities.

Fees defined through Price Definition can be either tiered, non-tiered, simple, rule based or expression based. The bank can define the branch in which the fee income will be recognized. Bank can choose between the Transaction branch and the Account Branch to recognize the fee. Banks can also maintain fees for the purpose of Annual Percentage Rate (APR) calculation.

Discounts are concessions applied on the base fee. Price Definition also allows the bank to define additional fees either on the base fee (gross) or on the base fee less discounts (net).

Base fees can be set up as Negotiable, Negotiable- Waive Full Fee, or Non Negotiable. If set as Negotiable- Waive Full Fee, then the price type of such a fee should be set as Fixed only, else system give an error message on validation.

Reward:

Rewards are incentives provided by the bank to customer in the form of cash back. Rewards can be set up as Negotiable or Non Negotiable.

The above functionality is addressed in the Price Definition (Fast Path: PR006) page.

3.18.8 Charge Attribute Definition

Various attributes that may require to be linked to a Price Definition can be defined. This definition decides the behavior of the fee deduction such as frequency to compute and apply the fee, whether to compute online and apply online or end of period, whether such application is calendar or anniversary based, duration for levy of fees, and so on.

- Online fee can be charged:
 - Compute online and charge online
 - Compute online and charge end of day
 - Compute online and charge end of a period
- Charging frequency of periodic fees can be defined.
- Collection of periodic fee either in advance (start date of each period) or in arrears (end date of each period).
- Periodicity of periodic fees can also be aligned to the account statement cycle or billing cycle.
- Non Sufficiency of Funds (NSF) treatment can be defined:
 - Force Debit
 - Reject Transaction
 - Part Waive Part Debit
 - Mark Hold

The above definitions of Price Definition and Charge attributes are specific to Pricing Fees definition.

The above functionality is addressed in the Charge Attribute Definition (Fast Path: PR008) page.

3.18.9 Modifications to the Price Policy Chart

Versioning of the price policy chart is a unique feature which enables linkage of an earlier version of the price policy chart to a product group or account.

Modification of the price policy chart is allowed in addition to modification of the rate chart, index and the price definition. Applicability of the modification can be maintained for all accounts or new accounts.

Whenever there is a modification in the price policy chart, the accounts will get re-priced and the interest and fee for the account may change. Pricing will trigger the re-pricing only for those accounts which will be impacted by the modification in the price policy.

3.18.10 Negotiations

Interest rates, fees and rewards can be negotiated at account level. Such negotiation is enabled during account opening process and at any servicing event during the life cycle of an account.

Interest negotiation:

Interest rate negotiation is done by setting up User Discretionary Margins (UDMs). UDMs so defined, are segregated as active, expired or future, based on their expiry date and displayed. System validates and provides a caution message, if UDMs are not beneficial to customers. UDMs once provided for an account can be deleted or modified restrictively, any time during the tenure of an account. Deletion and modification of existing, new, approved, and unapproved UDMs are allowed with certain restrictions. System also supports to capture of interest rate quotes provided by competitors (other financial institutions) to support interest negotiations.

Fee and Reward negotiation:

Fee negotiations can be done either during transaction or at account level, if such negotiation is allowed at price definition level. The behavior varies as follows based on the type of negotiation set for a fee:

- Negotiable: Negotiation is enabled for fees and rewards.
- Negotiable-Waive Full Fee: The Negotiate option is defaulted to Replace and the amount is defaulted to 0. Both these fields are disabled for any modification.
- Non-Negotiable: Negotiation is not allowed for fees and rewards.

3.18.11 Price Benefit Chart

Benefits can be defined for interest by way of margins and for fees by way of variance to an applicable fee or by way of replacing an applicable fee with an absolute value. This feature is very useful in promotion of campaigns and offer bundles by banks to capture market. Bank user can define all interest margins and fee benefits through maintaining details in price benefit chart. Fee benefits can be provided either as a discount in absolute terms or in percentage terms. Interest benefits are provided by linking margin rate charts. The banker can also set campaign benefit application periods (start and end durations at offer level).

The above functionality is addressed in the Price Benefit Chart (Fast Path: PR015) page.

3.18.12 Benefit Priority Maintenance

Priority can be defined in application of bundle and campaign benefits. This helps the banker provide all benefits, best of the benefits or least of the benefits.

The above functionality is addressed in the Benefit Priority Maintenance (Fast Path: PR027) page.

3.18.13 Entity Level Price Benefit Chart

A pricing plan is created for interest and fees for an account during account opening. This chart also displays the Net Interest Rate applicable for an account along with its break-up (base rate and margins).

The above functionality is addressed in the Entity Level Price Benefit Chart (Fast Path: PR011) page.

3.18.14 Re-pricing

Re-pricing of an account is supported. Such re-pricing may be required due to changes in the customer attributes or account attributes or due to events in the account such as restructure, facility amendment, reschedule of a loan account or changes in the relationship of customer with bank.

3.18.15 Transaction Level Fee

A fee is defined for a particular transaction or event. While performing the transaction or event, the solution has the capability to display the applicable fee and allows bank user to negotiate the fee manually to facilitate negotiation of fee. Banker can negotiate the fees during the transaction by giving a discount. The fee negotiated during the transaction will be the final fee applicable on the account for that transaction.

3.18.16 Definition of Fee Groups for Free Transactions

Bank can group fee for different events and define the number of transactions in the group that can be free. The free transactions evaluation can be based on Occurrence, Cheapest or Costliest. Pricing evaluates the fees across all the events defined in the group and will apply the free transactions. At the end of the period, it applies the fees only for those transactions which are chargeable.

The above functionality is addressed in the following pages:

- Fee Group Maintenance (Fast Path: PR019)
- Map Fee Group to Offer (Fast Path: PR020)

3.18.17 Support For Fees at Facility Level

Banks normally charge fee at account level. Banks can open multiple accounts under a facility and may charge a fee at the facility level that is debited to an account nominated for the fee. Pricing can be set up to charge a periodic fee at the facility level.

The above functionality is addressed in the Entity Level Price Benefit Chart (Fast Path: PR011) page.

3.18.18 Fees Inquiry

The Fees Inquiry (Fast path: PR022) page allows the bank user to inquire event wise for a particular account, the fees that are computed but are not charged to the account and the number of transactions for which fees is charged and not charged. As part of the fees inquiry, the following details are displayed for an account:

- The transaction events for which fees are not collected
- The computation date and the charge date for each fees associated with each event
- The net fee amount to be charged along with its break-up details (Base fee, Additional fee details and Discount details)
- Total number of transactions for which fee is charged and total number of transactions for which fee is not charged

3.18.19 Interest Inquiry

The Interest Rate Derivation Analysis (Fast Path: PR017) page allows a bank user to inquire on the pricing interest plan linked for an account. The user can further drill down to the level of indices linked to the account from account opening date. The page gives a vivid picture of the used facts and its value pertinent to the account inquired, while deriving the net interest rate.

The Account Interest Rate Inquiry (Fast Path: PR018) page allows a bank user to inquire for a given period the Net Interest Rate applicable on an account. This page also displays the Net Interest Rate applicable for each pricing element (regular and penalty) along with the break-up of Net Interest Rate (base interest rate and various applicable margins).

3.18.20 Price Control Policy

The following features are supported for price control policy:

3.18.20.1 Floor and Ceiling Interest Rates

The financial institutions operating in a country are bound by the legal interest rate specified by the regulators. Maintenance of Floor and Ceiling interest rates for an account is supported. The Ceiling Net Interest Rate is the maximum interest rate that can be applied on an account. The Floor Net Interest Rate is the minimum interest rate that should at least be applied on an account. During pricing or re-pricing an account, the system evaluates the applicable interest rate and then compares the same with the floor and ceiling interest rate that has been maintained for the account. If the evaluated interest rate is greater than the ceiling interest rate, then the ceiling interest rate will be applied on the account and if the evaluated interest rate for the account is less than the floor interest rate, then the floor interest rate will be applied for the account. The system will automatically trigger a re-pricing on the account when the existing floor and ceiling interest rates applicable for an accounts are modified.

The above functionality is addressed in the Pricing Control Policy Maintenance (Fast Path: PR025) page.

3.18.20.2 Rate Refresh

Generally, the financial regulators of a country provide necessary protection to borrowers against arbitrary increase in interest rates on credits offered by financial institutions. As a result, the financial institutions offering credit to borrowers should specifically state the maximum and minimum increase or decrease in net interest rate for a particular credit, as disclosures in the offer document provided to the borrowers.

To support such regulations, the maximum and minimum interest rates can be maintained and can be either increased or decreased during rate refresh on an account. During rate refresh, if the new interest rate breaches any of these parameters set for an account, then the bank also has an option to continue with the old rate (ignore the rate refresh) or apply the interest rate within the prescribed limit set by the bank.

The above functionality is addressed in the Pricing Control Policy Maintenance (Fast Path: PR025) page.

3.18.21 Special Interest Rate Maintenance

Banks often introduce promotional offers targeting borrowers who have underutilized their sanctioned credit. In such cases, banks charge lesser rate of interest as compared to the sanctioned terms. The purpose of such promotional offers is to provoke the borrowers to utilize the unutilized sanctioned limit.

To support such requirement, special interest rates can be maintained for every promotional offer given to its borrowers.

The above functionality is addressed in the Special Interest Rate Maintenance (Fast Path: PR028) page.

4 Australia Localization Features

This chapter describes the key features of Oracle Banking Loans Servicing for Australia localization.

4.1 ANZSIC Codes Capture at Account Level

As part of loan account configuration, ANZSIC codes can be captured. These are industry codes and are specific to Australia. These can be inquired from the loan account preferences page during life cycle of a loan.

4.2 Define NCCP Loans as Regulated or Unregulated

As part of the new account configuration, required facts are sent to the Common Accounts for evaluating the rule to define National Consumer Credit Protection (NCCP) loans as Regulated or Unregulated.

5 Australia Localization Features of Core Components

This chapter describes the core components of Oracle Banking Loans Servicing for Australia localization. These components include functionalities that are used to perform primary operations and define the broad parameters within which the application functions.

5.1 Common Services

The features are as follows:

- The common address taskflow has the capability to integrate with external address verification systems. The address taskflow also presents the Australian address fields to the users for capturing a structured address or unstructured address or a PO Box type of address. The address is shown as a single line in View mode.
- Support for capture of Australian date format and telephone number format is provided.

5.2 Party Information

The features are as follows:

- Ability to interface with the external interfaces to complete the KYC Verification for a party.
- Ability to stop displaying the document type in the list for reinitiating Active KYC whenever KYC is received as Unconfirmed for Active KYC.
- Ability to perform a passive KYC verification for a party and also to perform an active verification using identification documents on failure of passive verification. System has the ability to interface with external systems for both the verifications.
- Ability to search a party using ABN and ACN parameters
- Ability to initiate a bureau request for a customer after choosing the respective credit bureau provider and respective service code from the View Bureau Reports page.
- Ability to capture the following details while onboarding a party:
 - ABN number for all party types (Individual, Organization and Trust)
 - TFN number and Tax Exemption codes
 - Other Identification types such as Australian Registered Body Number (ARBN) and Australian Company Number (ACN)
 - ANSZIC and ASCO codes (optional for party type Individual)
 - ANSZIC code (mandatory for party type Organization and Trust)
 - MFAA License, MFAA Expiry, FBAA License and FBAA Expiry for broker
- Hooks are provided for interfacing with external systems to verify ABN and TFN that have been captured for a party.

5.2.1 Personally Identifiable Information (PII)

The capture of the following list of Personally Identifiable Information (PII) elements for a party is supported.

Table 5–1 List of Personally Identifiable Information (PII) elements

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
1	Full Name	Full name of a party (derived field) Multiple name types can be maintained for a party.	M	N
2	Date of Birth	Date of birth of a party	M	Y
3	Birthplace	Place of birth of a party	O	N
4	Address	Current, past and future address details of a party for multiple address types such as home, work, postal and more. Includes address types (Work, Residential, Postal, Seasonal, Holiday), Line 1 to Line 12, City, State, Country and Pin Code	M	N
5	Gender	Gender of a party	O	Y
6	Country of Citizenship	Country of citizenship of a party	C	N
7	Nationality	Nationality of a party (same as Country of Citizenship) This is a backend field and not available in UI.	O	N
8	Party Identification	Tax and Other identification details of a party	M	Y
9	Other Tax Residency Details	All FATCA (US)/CRS (Non US) details of a party	O	Y
10	First Name	First name of a party	M	N
11	Second Name	Second name of a party	O	N
12	Middle Name	Middle name of a party	O	N
13	Last Name	Last name of a party	O	N
14	Photographic Images	Images of party's photograph and signature	O	N
15	Login Name	Email ID or User ID or Customer ID of a party	C	Y
16	Marital Status	Marital status of a party	O	N
17	Mother's Maiden Name	Maiden name of a party's mother	O	Y
18	Religion	Religion of a party	O	Y

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
19	Ethnicity	Ethnicity details of a party	O	Y
20	Race	Race details of a party	O	Y
21	Blood Group	Blood group of a party	O	N
22	ANZSIC	Type of industry in which a party is employed	O	N
23	ASCO	Occupation of a party	O	N
24	Languages	Preferred language of a party	O	N
25	Emergency Contacts	Name and contact number of emergency contact person for a party	O	N
26	All Telephone Numbers	Contact details such as phone numbers, email addresses, fax numbers and so on, of a party along with preferences. Includes Fixed Landline Office, Fixed Landline Work, Fixed Landline Others, Fixed Landline Seasonal, Mobile Work, Mobile Personal, Mobile Seasonal, and Mobile Others	O	N
27	All Email Address	Email ID details of a party. Multiple email IDs can be maintained with any one ID set as preferred. Includes Work, Personal, Seasonal, Others (including the one captured in Basic details tab)	C	Y
28	All Social Network User ID	Social Network details of a party such as Linked In, Facebook, Twitter, and Hi5	O	Y
29	All Messenger User ID	Social Network Messenger details of a party such as GTalk, Yahoo, MSN, and Skype	O	Y
30	Education History	Educational details of a party such as qualification, grade, university, and so on	O	N
31	Employer Name	Name of party's employer in the party's past and current employments	O	N
32	Employee ID	Employee ID of a party in the party's past and current employments	O	N
33	Job Title / Designation	Designation of a party in the party's past and current employments	O	N
34	Gross Annual Salary	Gross annual salary of a party in the party's past and current employments	O	Y
35	Smoker	Indicator to denote that a party is a smoker or non smoker	O	N
36	Height	Height in centimeters (cms) of a party	O	N

5.2 Party Information

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
37	Weight	Weight in kilograms (kgs) of a party	O	N
38	Hobbies	Hobbies and interests of a party	O	N
39	Disabled	Risk indicator to denote that a party is disabled	O	N
40	Deceased	Risk indicator to denote that a party is deceased	O	N
41	Bankruptcy	Risk indicator to denote that a party is bankrupt	O	N
42	Title Reference Number	Title reference related details for a collateral (applicable for Property type of collateral where party is collateral owner)	O	N
43	Property Contact Details	Property Contact Details for a collateral (applicable for Property type of collateral where party is collateral owner)	O	N
44	Builder Contact Details	Builder Contact Detail for a collateral (applicable for Under Construction Property type of collateral where party is collateral owner)	O	N
45	Valuer Agent Details	Valuer Agent Details for a collateral (applicable for Property type of collateral where party is collateral owner and valuation of collateral is applicable)	O	N
46	Vehicle Identification Number	Vehicle Identification Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
47	Chassis Number	Chassis Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
48	Registration Number	Registration Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
49	Engine Number	Engine Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
50	Financial Information	Complete financial details captured for a party	C	N
51	Bank Account Information	All bank accounts (account ID, account type and amount) where a party is an account owner.	C	N
52	Shareholder of	List of organization names where a party is a shareholder	O	N
53	Marketing Consent	All marketing consents (including text and value)	O	N
54	Electronic	Consents given by a party to receive notices and	O	N

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
	Communication Consent	documents through electronic means of communication. If selected, it is mandatory to capture at least one preferred email address for the party.		
55	All Other Consents	All consents at party level (including text and value)	M	N

5.2.2 Personally Identifiable Information (PII) Shared with Third Party Systems

The application shares the Party PII details with the following third party systems:

■ Due Diligence System

- Due Diligence solution enables banks to perform Know Your Customer (KYC) checks for all the customers in the bank.
- The Party module shares the customer details (including PII details) with the third party system for checking due diligence status of a party.
- Based on the checks run in the third party system, the party status is updated and maintained in the application.

■ Business Number (BN) Search

- Business number of a party is captured for all the types of party such as organization, trust or individual (self-employed) as part of customer onboarding or maintenance in Party module.
- The application shares the party information (including PII details) with the third party system as part of business number verification process.

■ Credit Decision System

- The application shares the loan, collateral and party information (including PII details) with the external credit decision system for credit approval processing as part of lending application origination.

■ Fraud Assessment System

- The application shares the party information (including PII details) with the external fraud assessment system for fraud check of all the parties in submission.

■ Digital Settlement System

- Digital settlement process handles property and funds settlement as part of lending applications origination process.
- The application shares the party (including PII details), collateral information with the external digital settlement system to complete the digital settlement lodgement and processing

■ Property Valuation System

- Oracle Banking Limits and Collateral Management interacts with the third party valuation system to determine the valuation type and valuation amount for the collaterals linked to the facility to determine the valuation sufficiency.
- The application shares the facility, collateral and party information (including PII details) with the external valuation system for determining the collateral value.

■ Property Title Search Vendor

- Oracle Banking Limits and Collateral Management interacts with the third party title search vendor to trigger a new or retrieve an existing title search report for the collaterals linked to the facility for establishing the rightful or legal owner of the collateral offered by the borrower and reveal any existing encumbrance or lien on the collateral.
- The application shares the collateral and party information (including PII details) with the external title search vendor for title search processing.

■ Quick Refinance System

- The application shares the account and party information (including PII details) with the external quick refinance system to complete fund settlement faster.

The list of Party PII details that are shared with these third party systems is as follows:

Table 5–2 List of PII's shared with third party systems

S r. N o.	Party PII Details	Third Party Systems							
		Due Diligen ce	Busine ss Numbe r Search	Credit Decisi on	Fraud Assessm ent	Digital Settleme nt	Propert y Valuati on	Proper ty Title Search	Fast Refinan ce
1	Full Name	N	N	N	Y	Y	Y	Y	Y
2	Date of Birth	Y	N	Y	Y	N	N	N	N
3	Birthplace	N	N	N	N	N	N	N	N
4	Address	Y	N	Y	Y	N	Y	N	N
5	Gender	Y	N	N	Y	N	N	N	N
6	Country of Citizenship	Y	N	Y	Y	N	N	N	N
7	Nationality	N	N	N	Y	N	N	N	N
8	Party Identification	N	N	N	Y	N	N	N	N
9	Other Tax Residency Details	N	N	N	N	N	N	N	N
10	First Name	Y	N	N	Y	N	Y	N	N
11	Second Name	N	N	N	N	N	N	N	N

S r. N o.	Party PII Details	Third Party Systems							
		Due Diligen ce	Busine ss Numbe r Search	Credit Decisi on	Fraud Assessm ent	Digital Settleme nt	Propert y Valuati on	Proper ty Title Search	Fast Refinan ce
12	Middle Name	Y	N	N	Y	N	N	N	N
13	Last Name	Y	N	N	Y	N	Y	N	N
14	Photographic Images	N	N	N	N	N	N	N	N
15	Login Name	N	N	N	Y	N	N	N	N
16	Marital Status	N	N	Y	Y	N	N	N	N
17	Mother's Maiden Name	N	N	N	N	N	N	N	N
18	Religion	N	N	N	N	N	N	N	N
19	Ethnicity	N	N	N	N	N	N	N	N
20	Race	N	N	N	N	N	N	N	N
21	Blood Group	N	N	N	N	N	N	N	N
22	ANZSIC	N	N	N	Y	N	N	N	N
23	ASCO	Y	N	Y	Y	N	N	N	N
24	Languages	N	N	N	N	N	N	N	N
25	Emergency Contacts	N	N	N	N	N	N	N	N
26	All Telephone Numbers	Y	N	N	Y	N	Y	N	N
27	All Email Address	Y	N	N	Y	N	Y	N	N
28	All Social Network User ID	N	N	N	N	N	N	N	N
29	All Messenger User ID	N	N	N	N	N	N	N	N
30	Education History	N	N	N	Y	N	N	N	N
31	Employer Name	Y	N	Y	Y	N	N	N	N

5.2 Party Information

S r. N o.	Party PII Details	Third Party Systems							
		Due Diligen ce	Busine ss Numbe r Search	Credit Decisi on	Fraud Assessm ent	Digital Settleme nt	Propert y Valuati on	Proper ty Title Search	Fast Refinan ce
32	Employee ID	N	N	Y	N	N	N	N	N
33	Designation	N	N	N	Y	N	N	N	N
34	Gross Annual Salary	N	N	N	Y	N	N	N	N
35	Smoker	N	N	N	N	N	N	N	N
36	Height	N	N	N	N	N	N	N	N
37	Weight	N	N	N	N	N	N	N	N
38	Hobbies	N	N	N	N	N	N	N	N
39	Disabled	N	N	N	N	N	N	N	N
40	Deceased	N	N	N	N	N	N	N	N
41	Bankruptcy	N	N	N	Y	N	N	N	N
42	Title Reference Number	N	N	N	Y	Y	Y	Y	Y
43	Property Contact Details	N	N	N	N	N	Y	N	Y
44	Builder Contact Detail	N	N	N	N	N	Y	N	N
45	Valuer Agent Details	N	N	N	N	N	Y	N	N
46	Vehicle Identification Number	N	N	N	N	N	N	N	N
47	Chassis Number	N	N	N	N	N	N	N	N
48	Registration Number	N	N	N	N	N	N	N	N
49	Engine Number	N	N	N	N	N	N	N	N
50	Financial Information	N	N	Y	Y	N	N	N	Y
51	Bank Account	N	N	N	Y	N	N	N	Y

S r. N o.	Party PII Details	Third Party Systems							
		Due Diligen ce	Busine ss Numbe r Search	Credit Decisi on	Fraud Assessm ent	Digital Settleme nt	Propert y Valuati on	Proper ty Title Search	Fast Refinan ce
	Information								
52	Shareholder of	N	N	N	N	N	N	N	N
53	Marketing Consent	N	N	N	Y	N	N	N	N
54	Electronic Communicat ion Consent	N	N	N	Y	N	N	N	N
55	All Other Consents	N	N	Y	Y	N	N	N	N

6 US Localization Features

This chapter describes the key features of Oracle Banking Loans Servicing for US localization.

6.1 Parameterization

This section explains the parameterization available in Oracle Banking Loans Servicing specifically for localization release.

6.1.1 Define Loan Product

The product parameter Military Lending Act Applicable can be configured. This field specifies whether the Military Lending Act is applicable to the account created under the selected product.

6.1.2 Define Loan Offer

The offer parameter Cancellation Period (in days) can be configured. This field specifies the number of days before disbursement till the loan can be cancelled.

6.2 US Market Features

Oracle Banking Loans Servicing provides the ability to:

- Provide account level disclosures like Truth in Lending Act and Private Education loans.
- Capture Community Reinvestment Act related address details (party, collateral, and ad hoc address).
- Identify loans as military lending accounts, compute and display military APR for such loans, and validate Max MAPR for military lending accounts.
- Capture multiple disbursement schedule for private education loans and generate repayment schedule accordingly.
- Capture and disclose itemization of amount financed details.
- Capture of Internal Risk Grade.
- Capture of Troubled Debt Restructure indicator.
- Control number of deferments in a loan account during a calendar year and during the loan lifecycle and display the same.

6.3 Servicemember Civil Relief Act (SCRA)

Oracle Banking Loans Servicing provides service member benefits to loan accounts where the borrower is service member, service member with spouse, and service member with any other borrower and spouse of the service member.

- Oracle Banking Loans Servicing offers the ability to provide SCRA benefit automatically or manually for eligible accounts based on the bank level preference parameter.

- The maximum interest and fees charged to the loan account is capped at 6% for the duration of the active duty service period, if the disbursement of the loan is done before or after the start of the active service duty.
- The SCRA relief is applicable for request made before the start of the active duty period, during the active duty period, or within 180 days of active duty expiry date. SCRA benefit is applicable for multiple active duty period within the tenure of the loan.
- The loan account is rescheduled at 6% for the SCRA active duty period. The active duty can be either backdated, current dated, or future dated.
- Discounted fees are applicable for the loan account for the SCRA active duty period.
- A different grace period for SCRA benefit can be maintained based on Product parameter. Grace Period maintained for the product is added to the Active Duty End Date to mark the end date of the SCRA benefit period.
- If the parameter is maintained as Automatic, the system automatically applies the benefit to all the eligible accounts once the active duty details are captured in Party module. If the parameter is maintained as Manual, user has to select the application benefit at each account level.
- SCRA benefits can also be provided when the active duty start date falls on a holiday.
- SCRA active duty record can be deleted and the interest benefit can be revoked. This is applicable for cases where the active duty period is current dated, back dated, and future dated.
- SCRA benefits can be applied after modifying, extending, and editing the repayment date.
- After SCRA benefit is stamped on the account, modifying, extending, and editing the repayment date is supported.

6.4 Calculate Interest on Bank Float Balance

Oracle Banking Loans Servicing provides the ability to calculate interest on bank float days. As per this functionality, interest is computed on balance base from the day on which the amount is settled to the bank, and not on the posting date or the value date.

6.5 Loan Payments

Oracle Banking Loans Servicing provides the ability to support the following types of payments.

6.5.1 Regular Payment

Oracle Banking Loans Servicing provides the ability to:

- Make regular payments towards loan account. As per this functionality, till date accrued interest is charged to the account and the payment is appropriated as per the appropriation sequence maintained as part of the product parameters. The balance amount after appropriation of arrears is adjusted towards the principal balance.
- Advance the due date in case full installment payment is received before the due date.
- Charge the balance installment amount on the charging date, where part of the payment is received before the due date.

Current dated payments, backdated regular payments, and backdated reversal of regular payments are supported.

6.5.2 Advance Payment

Oracle Banking Loans Servicing provides the ability to:

- Make advance payments towards the loan account. As per this functionality, till date interest is charged on the account and the payment is appropriated as per the appropriation sequence maintained as part of the product parameters. The balance amount after appropriation of arrears is adjusted towards the principal balance.
- Advance the due date to the extent of the advance payment received.

Current dated payments, backdated advance payments and backdated reversal of advance payments are supported. Arrears are not raised for the loan installment during the advance payment period and hence the account is not tracked for delinquency.

6.5.3 Principal Only Payment

Oracle Banking Loans Servicing provides the ability to make Principal Only Payments towards loan account. The payment is appropriated towards the principal overriding the appropriation sequence maintained as part of the product parameters. The due date is not advanced and the borrower is expected to make the scheduled installment payment on the due date.

Current dated payments, backdated payments and backdated reversal of Principal Only Payments (POP) are supported. Principal Only Payment is allowed in accounts with and without arrears. It is allowed to the extent of the principal balance outstanding.

6.5.4 Allocated Payment

Oracle Banking Loans Servicing provides the ability to make allocated payment towards principal, interest, and fees to the extent of arrears in the arrear component. Payment received towards allocated payment is appropriated to the specific arrear components, overriding the appropriation sequence maintained in the loan product. Allocated payments are treated as installment payments while updating the payment tracker, and the delinquency counter is updated accordingly. Allocated payment can be made towards specific fee arrears raised on particular date.

6.6 Loan Extension

Oracle Banking Loans Servicing supports extension for past and future periods. The loan dues are not tracked for delinquency during the extension period. In case there are past unpaid installments when an extension is granted, these are considered paid from a delinquency tracking perspective.

Oracle Banking Loans Servicing provides the ability to:

- Extend the maturity with interest accrued for the extended period.
- Control the maximum number of installments that can be extended.
- Control the maximum number of extensions allowed in a year.
- Control the maximum number of extensions during the life cycle of the loan.

Backdated payment beyond an extension date or extension period can be performed for the following payment types:

- Regular Payment
- Advance Payment
- Principal Only Payment
- Allocated Payment

Oracle Banking Loans Servicing supports extension of installments in Accrual status and Non Accrual status. It also supports extension functionality wherein the number of installments captured exceed the remaining future installments. Account is rescheduled and loan term is extended by the installments captured for extension.

6.7 Edit Repayment Date

Oracle Banking Loans Servicing allows the customer to edit the repayment date of a loan account, without changing the installment amount due. The modification of repayment date is ignored for the immediate next cycle. The new repayment date is applicable from the second charging cycle after the modification.

6.8 Cost Recovery Method of Accounting for Delinquent Loans

Oracle Banking Loans Servicing performs Cost Recovery Method of accounting when an account becomes delinquent due to non-payment of dues. The account is moved to Suspended status and interest accruals are stopped. Any payment made by the customer thereafter, reduces the principal balance of the account. Once the account moves to Regular status, interest is accrued on the account at the Effective Interest Rate based on the future cash flows.

6.9 Loan Modification

Oracle Banking Loans Servicing enables restructuring of loan accounts. The modifications can be either a current dated or even a backdated modification. On successful modification, the account is marked as a TDR account, irrespective of whether the installment amount or the loan term was revised.

6.10 Waiver and Refund of Fee

Oracle Banking Loans Servicing enables refund of fees for paid fees and waiver of fees, if the fee is unpaid.

- If the fee is unpaid, refund is posted to fee arrears, thus removing the fee arrears on the account.
- If the fee is paid, refund is posted to the Settlement account.

Reversal of the refund or waiver of fee transaction is also supported.

6.11 Late Fees

Oracle Banking Loans Servicing enables charging of late fee as percentage of the installment amount as well as percentage of unpaid arrears in the account based on the payment status in payment tracker.

6.12 Processing of Periodic Credit and Payment Instructions through External Account

For periodic credit instructions and repayment instructions, if the settlement mode is external account, the instruction is initiated in advance by float days. The payment is credited to the account on the actual due date.

6.13 Charge off Account

Oracle Banking Loans Servicing provides the ability to charge off a loan account either partially or in full.

Full Charge Off:

- When full charge off is performed on a loan account, catch up accrual of interest and fees are calculated till date.
- Separate status as Charged Off is stamped to the loan account.
- All transactions on fully charged off accounts are stopped.
- Handoff of balances is given to Recovery module.

Partial Charge Off:

- When partial charge off is initiated on an account in Accrual status, the account is automatically updated to Non-Accrual status (Suspended).
- Bank Side Balance is created when the account moves to Non-Accrual status.
- Accounting entry for partial charge off are passed based on bank side balance.
- On bank side, separate buckets are maintained for Principal balance and Partial Charge Off balance.
- Partial charge off balance is displayed in the Make Payment and Inquiry widgets of the Manage Loan Account (Fast Path: LN100) page.
- Partial charge off can be followed by another partial charge off or full charge off.
- Payments are allowed to be made on partially charged off account.

6.14 Reversal of Charge Off Account

Oracle Banking Loans Servicing supports Reversal of Charge Off. This is applicable for Full Charge Off and Partial Charge Off and for both P&I and PMI stages.

6.15 Reversal of Accrual Status Change

Oracle Banking Loans Servicing supports the reversal of accrual status change as follows:

Normal to Suspended:

- When reversal of status change is performed, accrual status of the account becomes Normal.
- Accounting entries passed during the movement of the account from Normal to Suspended are reversed.
- Bank balance created on status change from Normal to Suspended is reversed and bank balance bucket is not visible after reversal.

- All transactions interest accrual, installment charging, charging of late fee and post accounting entry from the date of reversal of accrual status change till current posting date are replayed.

Back to Normal to Suspended:

- When reversal of status change is performed, accrual status of the account becomes Normal.
- Accounting entries passed during the movement of the account from Back to Normal to Suspended are reversed.
- Bank balance is restored to the position before the change of accrual status.
- All transactions for interest accrual, installment charging, and charging of late fee from the date of reversal of accrual status change till current posting date are replayed.
- Accounting from the reversal date till current posting date is posted on bank side. Regular interest is accrued using Effective Interest Rate from back value date till current posting date.

Suspended to Back to Normal:

- When reversal of status change is performed, accrual status of the account becomes Suspended.
- Accounting entries posted for regular interest accrual, installment charging and fee charging, which are posted on the bank side after the account has moved to Back to Normal status are reversed.
- Principal balance is displayed on the bank side after reversal of the change of accrual status.

6.16 Display of Military Lending Account (MLA) Indicator

Oracle Banking Loans Servicing provides the ability to view the Military Lending Account (MLA) indicator in the Indicator widget of Manage Loan Account (Fast Path: LN100) page. The Military Annual Percentage Rate (MAPR) computed as part of the account configuration in Origination is displayed in the Account Setup widget in the Manage Loan Account (Fast Path: LN100) page. This is applicable for accounts where the Military Lending Account (MLA) check box is selected.

7 US Localization Features of Core Components

This chapter describes the core components of Oracle Banking Loans Servicing for US localization. These components include functionalities that are used to perform primary operations and define the broad parameters within which the application functions.

7.1 Content

The following feature is supported in Content:

7.1.1 Interface with Third Party Systems

Interfaces have been built with Equifax as part of US localization to support the following:

- Getting debit bureau report and debit bureau decision
- Checking due diligence status of a party
- Getting employment and income report as part of electronic verification

7.2 Party Information

The following are the key features in Party:

7.2.1 Customer Onboarding

The following capabilities are supported:

- Capture of other details such as the party being a service member or service member dependent and capture of the percentage for voluntary backup withholding.
- Capture of US specific tax identification details and related documents.
- Identification of a party as disabled or not.
- Identification of whether COPPA consent is obtained from the parents for kids below age of 13.

7.2.2 Party Bank Policy

The ability to configure parameters for COPPA consent age, expiry of W8 BEN, and number of days to display the address change alert is supported.

7.2.3 Interface with Third Party Systems

The following capabilities are supported:

- **Due Diligence:**

Base capability to integrate with third party system to perform electronic verification of Due Diligence and Identity Verification Type extended in US localization to perform Identity Verification and OFAC

checks for a party post on-boarding process or significant events, such as Address Change. This integration is done through Equifax Inter Connect with data sources, such as eIDcompare and CDC OFAC, for KYC and OFAC respectively.

Capability to integrate with an address verification service provider for the address taskflow is also present.

■ **Standalone Credit Bureau Pull:**

Base capability to fetch credit bureau report for a party in standalone mode without context of Origination has been extended for Equifax integration. System will have the capability to initiate a request to Equifax, fetch the credit bureau report and store it in readable form within the Party module. Party module has the ability to pass data to generate various reports such as:

- Opt-in and opt-out status from receiving commercial communication, electronic communication, and fax communication.
- Parents' consent on behalf of minor child for sharing the personal information.

7.2.4 Personally Identifiable Information (PII)

The capture of the following list of Personally Identifiable Information (PII) elements for a party is supported.

Table 7-1 List of Personally Identifiable Information (PII) elements

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
1	Full Name	Full name of a party (derived field) Multiple name types can be maintained for a party.	M	N
2	Date of Birth	Date of birth of a party	M	Y
3	Birthplace	Place of birth of a party	O	N
4	Address	Current, past and future address details of a party for multiple address types such as home, work, postal and more. Includes address types (Work, Residential, Postal, Seasonal, Holiday), Line 1 to Line 12, City, State, Country and Pin Code	M	N
5	Gender	Gender of a party	O	Y
6	Country of Citizenship	Country of citizenship of a party	C	N
7	Nationality	Nationality of a party (same as Country of Citizenship) This is a backend field and not available in UI.	O	N
8	Party Identification	Tax and Other identification details of a party	M	Y
9	Other Tax Residency	All FATCA (US)/CRS (Non US) details of a party	O	Y

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
	Details			
10	First Name	First name of a party	M	N
11	Second Name	Second name of a party	O	N
12	Middle Name	Middle name of a party	O	N
13	Last Name	Last name of a party	O	N
14	Photographic Images	Images of party's photograph and signature	O	N
15	Login Name	Email ID or User ID or Customer ID of a party	C	Y
16	Marital Status	Marital status of a party	O	N
17	Mother's Maiden Name	Maiden name of a party's mother	O	Y
18	Religion	Religion of a party	O	Y
19	Ethnicity	Ethnicity details of a party	O	Y
20	Race	Race details of a party	O	Y
21	Blood Group	Blood group of a party	O	N
22	NAICS	Type of industry in which a party is employed	O	N
23	Occupation	Occupation of a party	O	N
24	Languages	Preferred language of a party	O	N
25	Emergency Contacts	Name and contact number of emergency contact person for a party	O	N
26	All Telephone Numbers	Contact details such as phone numbers, email addresses, fax numbers and so on, of a party along with preferences. Includes Fixed Landline Office, Fixed Landline Work, Fixed Landline Others, Fixed Landline Seasonal, Mobile Work, Mobile Personal, Mobile Seasonal, and Mobile Others	O	N
27	All Email Address	Email ID details of a party. Multiple email IDs can be maintained with any one ID set as preferred. Includes Work, Personal, Seasonal, Others (including the one captured in Basic details tab)	C	Y
28	All Social Network User ID	Social Network details of a party such as Linked In, Facebook, Twitter, and Hi5	O	Y
29	All Messenger	Social Network Messenger details of a party	O	Y

7.2 Party Information

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
	User ID	such as GTalk, Yahoo, MSN, and Skype		
30	Education History	Educational details of a party such as qualification, grade, university, and so on	O	N
31	Employer Name	Name of party's employer in the party's past and current employments	O	N
32	Employee ID	Employee ID of a party in the party's past and current employments	O	N
33	Job Title / Designation	Designation of a party in the party's past and current employments	O	N
34	Gross Annual Salary	Gross annual salary of a party in the party's past and current employments	O	Y
35	Smoker	Indicator to denote that a party is a smoker or non smoker	O	N
36	Height	Height in centimeters (cms) of a party	O	N
37	Weight	Weight in kilograms (kgs) of a party	O	N
38	Hobbies	Hobbies and interests of a party	O	N
39	Disabled	Risk indicator to denote that a party is disabled	O	N
40	Deceased	Risk indicator to denote that a party is deceased	O	N
41	Bankruptcy	Risk indicator to denote that a party is bankrupt	O	N
42	Title Reference Number	Title reference related details for a collateral (applicable for Property type of collateral where party is collateral owner)	O	N
43	Property Contact Details	Property Contact Details for a collateral (applicable for Property type of collateral where party is collateral owner)	O	N
44	Builder Contact Details	Builder Contact Detail for a collateral (applicable for Under Construction Property type of collateral where party is collateral owner)	O	N
45	Appraiser Agent Details	Appraiser Agent Details for a collateral (applicable for Property type of collateral where party is collateral owner and valuation of collateral is applicable)	O	N
46	Vehicle Identification Number	Vehicle Identification Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
47	Chassis Number	Chassis Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N

Sr. No.	Element Name	Description	Mandatory (M) / Optional (O) / Conditional / Configurable (C)	Masking
48	Registration Number	Registration Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
49	Engine Number	Engine Number for the collateral (applicable for Automobile type of collateral where party is collateral owner)	O	N
50	Financial Information	Complete financial details captured for a party	C	N
51	Bank Account Information	All bank accounts (account ID, account type and amount) where a party is an account owner.	C	N
52	Shareholder of	List of organization names where a party is a shareholder	O	N
53	Marketing Consent	All marketing consents (including text and value)	O	N
54	Electronic Communication Consent	Consents given by a party to receive notices and documents through electronic means of communication. If selected, it is mandatory to capture at least one preferred email address for the party.	O	N
55	All Other Consents	All consents at party level (including text and value)	M	N
56	Disability (for Retirement Accounts)	Indicator to denote if party is disabled or not	O	N
57	Disability By	Disability from birth or for a particular period	O	N
58	Start Date	Start date of the disability period	O	N
59	End Date	End date of the disability period	O	N

7.2.5 Personally Identifiable Information (PII) Shared with Third Party Systems

The application shares the Party PII details with the following third party systems:

■ Due Diligence System

- Due Diligence solution enables banks to perform Know Your Customer (KYC) and Office of Foreign Assets Control (OFAC) checks for all the customers in the bank.
- The Party module shares the customer details (including PII details) with the third party system for checking due diligence status of a party.

- **Credit Decision System**

- The application shares the loan, collateral and party information (including PII details) with the external credit decision system for credit approval processing as part of lending application origination.

- **Credit Bureau Check**

- The application shares the party information (including PII details) with the external credit bureau system to initiate/retrieve credit information, reports to support application decisioning for all the parties in submission.

- **Debit Bureau Check**

- The application shares the party information (including PII details) with the external debit bureau system to initiate/retrieve information, reports to support application decisioning for all the parties in submission.

- **Electronic Verification**

- The application shares the party information (including PII details) with the external verification system to perform employment verification for all the parties in application.

- **Property Valuation System**

- The application shares the facility, collateral and party information (including PII details) with the external valuation system for determining the collateral value.

The list of Party PII details that are shared with these third party systems is as follows:

Table 7–2 List of PII's shared with third party systems

Sr. No.	Party PII Details	Third Party Systems					
		Due Diligence	Credit Decision	Credit Bureau Check	Debit Bureau Check	Electronic Verification	Valuation
1	Full Name	N	N	N	N	N	N
2	Date of Birth	Y	Y	Y	Y	Y	N
3	Birthplace	N	N	N	N	N	N
4	Address	Y	Y	Y	Y	Y	Y
5	Gender	Y	Y	Y	Y	Y	N
6	Country of Citizenship	N	N	N	N	N	N
7	Nationality	N	N	N	N	N	N
8	Party Identification	Y	Y	Y	Y	Y	N
9	Other Tax Residency Details	N	N	N	N	N	N
10	First Name	Y	Y	Y	Y	Y	N
11	Second Name	N	N	N	N	N	N

Sr. No.	Party PII Details	Third Party Systems					
		Due Diligence	Credit Decision	Credit Bureau Check	Debit Bureau Check	Electronic Verification	Valuation
12	Middle Name	Y	Y	Y	Y	Y	N
13	Last Name	Y	Y	Y	Y	Y	N
14	Photographic Images	N	N	N	N	N	N
15	Login Name	N	N	N	N	N	N
16	Marital Status	Y	Y	Y	Y	Y	N
17	Mother's Maiden Name	N	N	N	N	N	N
18	Religion	N	N	N	N	N	N
19	Ethnicity	N	N	N	N	N	N
20	Race	N	N	N	N	N	N
21	Blood Group	N	N	N	N	N	N
22	NAICS	N	N	N	N	N	N
23	Occupation	N	N	N	N	N	N
24	Languages	N	N	N	N	N	N
25	Emergency Contacts	N	N	N	N	N	N
26	All Telephone Numbers	Y	Y	Y	Y	Y	N
27	All Email Address	Y	Y	Y	Y	Y	N
28	All Social Network User ID	N	N	N	N	N	N
29	All Messenger User ID	N	N	N	N	N	N
30	Education History	N	N	N	N	N	N
31	Employer Name	N	N	N	N	N	N
32	Employee ID	N	N	N	N	N	N
33	Job Title / Designation	N	N	N	N	N	N
34	Gross Annual Salary	N	Y	N	N	N	N
35	Smoker	N	N	N	N	N	N
36	Height	N	N	N	N	N	N

7.2 Party Information

Sr. No.	Party PII Details	Third Party Systems					
		Due Diligence	Credit Decision	Credit Bureau Check	Debit Bureau Check	Electronic Verification	Valuation
37	Weight	N	N	N	N	N	N
38	Hobbies	N	N	N	N	N	N
39	Disabled	N	N	N	N	N	N
40	Deceased	N	N	N	N	N	N
41	Bankruptcy	N	N	N	N	N	N
42	Title Reference Number	N	N	N	N	N	N
43	Property Contact Details	N	N	N	N	N	N
44	Builder Contact Detail	N	N	N	N	N	N
45	Valuer Agent Details	N	N	N	N	N	N
46	Vehicle Identification Number	N	N	N	N	N	Y
47	Chassis Number	N	N	N	N	N	N
48	Registration Number	N	N	N	N	N	N
49	Engine Number	N	N	N	N	N	N
50	Financial Information	N	N	N	N	N	N
51	Bank Account Information	N	N	N	N	N	N
52	Shareholder of	N	N	N	N	N	N
53	Marketing Consent	N	N	N	N	N	N
54	Electronic Communication Consent	N	N	N	N	N	N
55	All Other Consents	N	N	N	N	N	N
56	Disability (for Retirement Accounts)	N	N	N	N	N	N
57	Disability By	N	N	N	N	N	N
58	Start Date	N	N	N	N	N	N
59	End Date	N	N	N	N	N	N

7.3 Product Manufacturing

The following are the key features in Product Manufacturing:

- An Identifier at product group level can be configured to indicate if Mortgage Loan Originator information is required to be captured as part of Loan Application Form, in case of new and amend lending.
- Ability is provided to indicate whether the product is covered under the Military Lending Act, if the product and party qualify for the Military Lending Act.
- It can be configured whether capturing of CRA Address is applicable or not during Origination account configuration. When checked, the taskflow for capturing address type and selection of address is displayed during account configuration for Loans as part of Origination process. This address is used for CRA reporting and is maintained at account level along with other Regulatory Codes information.
- It can be configured whether Government Monitoring Information is required to be captured or not. If it is configured as Yes, then as part of Origination, the GMI reporting fields such as ethnicity, race, gender of the applicants need to be captured. This is applicable only for HELOC type of products.
- It can be configured whether the Annual Percentage Rate is applicable for the product or not. The annual percentage rate is a measure of the cost of credit, expressed as a yearly rate, which relates the amount and timing of value received by the consumer to the amount and timing of payments made. APR provides borrowers with a bottom-line number which they can easily compare to rates charged by other potential lenders.
- Cancellation period before the disbursement of the loan can be defined.
- Offer type can be defined and selected for creating a Loan offer.

7.4 Collateral Management

The following are the key features in Collateral Management:

- Interface with Automated Valuation Model (AVM): As part of integration with Equifax, the capability to interface with AVM is supported as part of the collateral management.
- The interfacing ability is available as part of collateral creation and collateral update, both as part of application capture the Collaterals stage in Origination module and the Collateral Details (Fast Path: LCMS08) page in Limits and Collateral Management module.
- As part of collateral creation or update, an interface call can be triggered to AVM to fetch the following collateral details:
 - AVM Value: It includes the market value, the range of the market value and the confidence score for the market value as quoted by AVM.
 - Lien details and collateral owners.
 - Property information.
- The details obtained from the AVM interface are available at the collateral level for manual reconciliation and reference.
- Ability to record payment and refund of fee under Government Guarantee collateral for Small Business Administration loans.
- Ability to capture Flood Determination as valuation type.

- Ability to record the Real Estate zone offered as collateral and validate whether the last updated zone is within the validity stated under the Collateral Category Preference (Fast Path: LCM07) page as per regulation.
- Ability to indicate whether a Residential Real Estate offered as collateral is Complex and decide its valuation type (Evaluation or Appraisal) to be carried out as per regulation.

7.5 Insurance Management

The following are the key features in Insurance Management:

- Ability to indicate availability of Force Placed Insurance in the Insurance Linkage Details (Fast Path: LCM09) page.
- Ability to record the Force Placed Insurance premium collection as either billed to customer or added to the loan balance.
- Ability to record the endorsement details in plan linkage page.

7.6 Common Services

The common address taskflow has the capability to integrate with external address verification systems. The address taskflow presents address fields to the users for capturing an address. The address is shown as a single line in View mode.