Oracle® Banking Base

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Contents

Pr	eface		v
	Audie	nce	v
	Docun	nentation Accessibility	v
	Related Documents		v
	Conve	entions	vi
1	Overview		
	1.1	Core Functionality	1-1
2	Key Features		
	2.1	Core Entity Services	2-1
	2.2	Calendar Services	2-2
	2.3	Currency Services	2-2
	2.4	Party Information	2-3
	2.5	Multi Entity Multi Branding	2-4
	2.6	Product Manufacturing Unit	2-5
	2.7	Eligibility Framework	2-8
	2.8	Alerts	2-9
	2.9	Document Management System (DMS)	2-9
	2.9.1	Document Type Definition	2-10
	2.9.2	Document Policy	2-10
	2.9.3	Interface with Third-Party Systems	2-10
	2.9.4	Document Scrutiny	2-10
	2.9.5	Document Checklists	2-10
	2.9.6	Acceptance and Execution of Documents	2-10
	2.9.7	Document Search and Upload	2-11
	2.10	Remittances and Collections	2-11
	2.10.1	Core Functionality	2-11
	2.10.2	Maintenances	2-12
	2.10.3	Clearing	2-14
	2.10.4	Payments and Collections	2-15
	2.10.5	Business Payments / Business Collections	2-16
	2.10.6	Mandate Registration	2-17
	2.10.7	Counterparty Maintenance	2-17
	2.10.8	Exception Handling	2-18

Preface

Oracle Banking is a one-stop solution for a bank for its core banking operations, across retail offerings. It is designed to help banks respond strategically to today's business challenges, while also transforming their business models and processes to reduce operating costs and improve productivity across both front and back offices.

Oracle Banking provides a unified yet scalable IT solution for a bank to manage its data and end-to-end business operations with an enriched user experience. It is a composed set of different modules wherein each of the modules is serviced by a set of services and other subsystems.

This preface contains the following topics:

- Audience
- Documentation Accessibility
- Related Documents
- Conventions

Audience

This guide is intended for the users of Oracle Banking Base.

Documentation Accessibility

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

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documents

For more information, see the following documentation:

- For installation and configuration information, see the Oracle Banking Installation Guide - Silent Installation
- For a comprehensive overview of security for Oracle Banking, see the Oracle Banking Security Guide

- For the complete list of Oracle Banking licensed products and the Third Party licenses included with the license, see the Oracle Banking Licensing Guide
- For information related to setting up a bank or a branch, and other operational and administrative functions, see the Oracle Banking Administrator's Guide
- For information related to customization and extension of Oracle Banking, see the Oracle Banking Extensibility Guide

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.
italic	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.

• Overview

Oracle Banking is built on a modular architecture, where each application manages the functionalities required in the different business areas like Current Accounts and Savings Accounts (CASA), Term Deposits, Loans, and so on. Oracle Banking Base offers a plethora of common services which are required for the other applications under Oracle Banking, thereby providing a strong foundation for existing suite of Oracle Banking products. Oracle Banking Base reduces proliferation of data and services in multiple products and helps banks to avoid redundancy of data and processes.

1.1 Core Functionality

The Oracle Banking Base provides the following core functionalities:

- The Core Entity Services are composed of different maintenances and different 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 the various products under Oracle Banking.
- The Calendar Services can be used to define different calendar types and serve to mark and record the weekly holidays, the annual list of holidays and the ad-hoc holidays of each of the calendar types. These calendars are used, for various purposes by the various modules.
- The Currency services provides for maintaining attributes of various currencies which can be used for various purposes by different products under Oracle Banking suite.
- Party Module provides a placeholder and data store for all information related to all parties that bank or financial institution deals with as part of its business.
- Multi Entity Multi Branch concept supports Banking groups which may prefer to market their products under various brand names so as to get increased shelf space in the banking market.
- Product Manufacturing Unit provides the ability to define new products with desired features and publish them for use.
- Eligibility Framework enables banks to impose specific restrictions on certain transaction types or entities like Branch, Currency or Party, in order to ensure implementation of bank policies and comply with applicable regulations.
- Alerts can be generated on occurrence of any activity or events to inform customer as well as internal users of the bank.

2

Key Features

This chapter describes the key features of Oracle Banking Base.

2.1 Core Entity Services

The Core Entity Services in Oracle Banking Base is a common service, which enables Bank to define the broad parameters within which the rest of all applications functions. The services cater to the typical functionality that is needed by any Financial Institution to support its day-to-day primary operations. These are the most important common services like definition of bank setup, the various geographical locations (countries, regions, states, cities, and so on), languages and the different time zones the bank operates in.

The maintenances also include various transactions, payment modes, financial cycles and accounting periods followed by bank and the core parameters and structure of the Bank through maintaining Regional offices, Lines of Business and various Branches along with unique identification codes.

The core entity services are used by all other products in Oracle Banking suite, and provides a variety of support functions to them.

The core entity services provide information on the following to all other products under Oracle Banking suite:

- Current working date
- Previous working date
- Next working date
- Financial cycle for a given date
- Accounting period code
- Check last day of financial year
- Check Accounting period end date
- Branch type and other details
- Automatically update daylight saving date
- Automatically update city code, state code and country code from the given zip code
- Common Processing Services
- Maintain and enquire bank policy deviations

For all the core entity service maintenances, the application supports various action functions like 'Create', 'Update', 'Re-open', 'Close', 'Approve', 'Delete', 'Save as draft', 'Cancel', 'Fetch', and 'Copy' for ease and operational efficiency in maintaining the crucial data.

Audit Trail function of the application enables the users to track all the changes done in any of the maintenances at any time.

2.2 Calendar Services

Calendar services are also a common service, which can be used by all products under Oracle Banking suite.

The Calendar Services offers definition of different calendar types and will serve to define and record the weekly holidays, annual list of holidays and ad-hoc holidays for each calendar type defined by the bank. The Calendar services serve to record and retrieve the various holidays of the bank in a calendar year.

- Maintenance of holidays for a bank and all its branches for a calendar year.
- Maintenance of holidays for the various payment types (Clearing house or Networks) in which the bank is a member.
- Maintenance of holidays for various currencies that the bank seeks to deal with.
- Ad-hoc holiday maintenance for branch holiday calendar
- Ad-hoc holiday maintenance for payment type holiday calendar.

These calendar types are used, for various purposes by the various modules in day-to-day operations.

2.3 Currency Services

The Currency services is also common service, which provides support functions to all products under Oracle Banking for day-to-day operations. Any module that requires currency related service for its operations refers to the Currency Service.

The Currency Services enable the Bank to record and retrieve the various currency related information. The various maintenances and services that are supported by currency services are as follows:

Maintenances

- Currency Definition
- Description of Currency Amount in Text
- Denominations for each Currency
- Currency and Branch Parameters
- Currency Pairs Maintenance
- Currency Rate Types like Spot rate, Forward rate, and so on.
- Exchange Rates for different Currency Rate Types
- Historical Rates Maintenance
- Forward Rates Maintenance for combination of currencies and periods

Processing Services

- Amount Rounding off Rule and Rounding off unit for each currency
- Amount Format for each currency
- Get Rate for each currency pair
- Get Rate and Spread
- Calculation of Exchange Rate based on Through Currency
- Spot Rate for each currency
- History Rate for each currency
- Forward Rate Computation
- Last Rate Date
- Currency Rates Purge

2.4 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 in Oracle Banking Base 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 country/countries in which the bank operates. Usually the following information is captured:

- Customer Name
- Correspondence details, such as Residence address, Business address, preferred means of communication, preferred language, preferred times and modes
- Type of Party, that is, Customer, Broker, Organization, or Trust and so on.
- Nationality
- Details of the Party's identification document like Social Security Number
- The maximum exposure the bank is prepared to assume for the Party
- Credit rating of the Party
- KYC, AML, SDN Statuses, Party financial details, Employment history
- Party's Signature and Photo Image

Party On-boarding

Addition of a party to the system is referred as Party On-boarding. The user has a facility to onboard a party by inputting the bare minimum details and also a detailed on-boarding (Party General Information Maintenance) where the user can capture additional details for the party. Every party is associated with a role such as Customer, Broker, and Vendor, and so on. Based on the party role certain on-boarding fields may vary. Customer can be on-boarded on a standalone basis. Service provider on-boarding functionality enables onboarding of broker and introducer.

Relationship Management

Relationship Management has been introduced in the solution to enable banks to maintain business relationships for large organization and SME customers and 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.

System allows creation of Multiple business relationships between the same parties.

KYC

KYC solution enables banks to maintain rules by which KYC can be carried out. System also provides a view of KYC History of a party.

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 de dupe to prevent creation of multiple party IDs. There can also be cases where due to error in data entry the de dupe fails, or the user may override the de dupe 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.

A mechanism has been built in the system where the parties IDs are merged and system can have a single party ID. The party ID on the accounts are also be replaced.

Party Financials

Oracle Banking supports capture of multiple financial information in definable format for party type - Individual.

System allows the bank to define multiple templates for capture of party financials. 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.

Party Bank Policy

Oracle Banking supports maintenance of Bank policy for parameters related to Party like Stability, Minor and KYC related.

2.5 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 Oracle Banking. The Banking Companies can make use of the MEMB framework to save costs in IT infrastructure and achieve operational efficiency.

Now-a-days 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 with in 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. Banks 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 viz. 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.

2.6 Product Manufacturing Unit

Product manufacturing unit offers rich functionality to define variety of products to suit varied requirements of customers. In order to maintain high level segregation, the solution provides for creation of Product classes like Loans, Checking Accounts, Term deposits, and so on. All Products created will belong to one of the Product classes defined by bank. Products can also be grouped together under Product Groups. The parameters maintained at Product Groups will be propagated to Products created under it there by avoiding same maintenances for each product.

The important features in PMU are as follows:

Bank Policy Definition

The system facilitates the Product Manager to define discrete and distinct policies for specialized modules or functions namely Party, Bundle, CASA, Loan, TD, Statement, Hardship Relief, Credit and Dormancy. This provides Product Manager ease and

control of bank level parameters for specialized modules/functions. This definition will be a onetime activity.

Following are the different bank level policies available in the system:

- Define Bundle Bank Policy
- Define CASA Bank Policy
- Define Credit Policy
- Define Dormancy Policy
- Define Hardship Relief Policy
- Define Loan Bank Policy
- Define Statement Policy
- Define TD Bank Policy

The system provides a hierarchical definition for the product groups:

- Product Class
- Product Group(s)
- Product(s)
- Offer(s)

The application provides an option to group different product(s) and create 'Product Groups'. 'Product Groups' are created for a particular 'Product Class'. Further the application provides an option to define different 'Offer(s)' under a particular 'Product'.

Product Class

Product Class is a list of values that defines the high level need of the Customer. For example Loan, Current or Checking, Savings, Term Deposit. The Interest Rules defined for a Product Class will be associated to a product.

Product Group Creation

The fundamental features are as follows:

- One Product can be linked to single Product Group
- A Product Group can be Group of products or Group of Product groups also

The system will allow the user to capture purpose of the product group.

Product Creation

A product is defined under a Product Group. A single Product can be offered in multiple currencies. There is a list of Tasks to be performed as a part of Define New Product. The Product Definition is complete only if all the tasks are complete. The List of tasks to be completed are:

- Capture Product Details. (CASA/Loans/Term Deposits/Credit Card)
- Define Product Branch Restriction
- Define Product Preferences
- Enable Set ID for a Product (for 'Multi-Entity Multi Branding' concept)
- Define Interest Rule

- Define Product Interest Linkage
- Add Product to Interest Rate Price Policy Chart for a Product Group
- Add Product to Fees Price Policy Chart for a Product Group

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.

Product Offers

The solution provides ability to have multiple offers for a Single product. The Offer will have facilities, Brand Association, Eligibility rule and pricing.

Copy a Product / Offer

The solution also provides a feature to copy an existing product or offer and create a new product or offer. The user also has an option to change few of the products or offer specific parameters of the copied product or offer and define a new product or offer.

Validate and Publish a Product Group / Product / Offer to Origination

There are a sequence of maintenances (that is, Day 0 setups and configurations) in PMU that a Product Manager or Bank user needs to perform in order to publish a product group/product/offer for further consumption and usage in Oracle Banking Originations.

System validates if all the necessary and mandatory setups or maintenances have been performed by the bank user before publishing the product group/product/offer to Origination.

Definition of Allowed Currencies

The system provides an option to the Product Manager to define allowed currencies at the Product Group level and further override them at the Product and Offer levels.

Definition of Allowed Term

The system provides an option to the Product Manager to define allowed term (that is, minimum and maximum term) for 'Asset' at the Product Group level and further override them at the Product level. This provides the Product Manager more flexibility in defining asset products.

Option to link different Interest Rule per Currency for a Product

The system provides an option to link different Interest Rule per currency for a Product. This reduces un-necessary product proliferation in PMU.

Offer Bundling

The solution provides a feature to the bank to group products across different lines of business (For example, Home Loan, Transaction account and Credit Card).

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.

Bundle recommendation in servicing: Oracle Banking provides an option to open new account in servicing typically in two cases:

Split Loan functionality: Using this functionality in loans, the customer may opt to split a parent loan account and create a new child account under it.

Manage Facility within Arrangement: As part of this functionality, the user can create a new account under an existing facility to utilize the un-utilized facility amount.

Thus, whenever a new account is opened in servicing using the above avenues, the system provides recommendation of bundle(s), so that the customer may opt to include the new account to a bundle. As a result, the new account will receive bundle benefits (that is, in terms of additional interest margins and discounts/waivers in fees) once the same is opened in servicing.

As part of bundle recommendation, the system recommends new as well as existing bundles to the user. The customer may opt to include the new account to any of the bundle.

Define Offer Eligibility (Eligibility framework)

The Bank can decide the Offer Eligibility/restriction based on attributes like:

- 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

2.7 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, payment services, and so on. 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.

Solution provides the ability to:

- Maintain predefined (static) list of allowable or disallowable values of a category for a given entity.
- Maintain the criteria that evaluates a list of allowable or disallowable values. The criteria should support any combination of AND and OR clauses.
- Maintain the eligibility definition at a group level (for example, Party Group).
- Maintain an exception list.

- Evaluate the eligibility criteria at the run time by MNT or OLTP services.
- Return a list of allowed values or disallowed values as requested by calling modules.
- Return list of allowable values, based on the key values of the restriction category.
- Return list of allowable values, based on any (key and non-key) attribute (fact) and its corresponding value of the restriction category.
- Link the same eligibility parameters to multiple products or entities.

2.8 Alerts

The Solution offers the following features:

 The Solution offers feature to generate alerts to Customers 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.

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 or application.
- Ability to send alerts to third parties: Earlier alerts were sent only to account holders. As part of the latest release alerts are also sent to third parties like solicitors, brokers and so on.
- Ability to send alerts to other related parties linked to the account apart from the account holders.
- Ability to send alerts to Secure Mailbox.

Enhancement is made to enable bank to set different 'From' email IDs and phone numbers, when alerts are to be sent by different market entities or business units.

2.9 Document Management System (DMS)

This section provides information on some of the key features offered by Document Management System in Oracle Banking Base.

Documents form an integral part of any bank without which they are not able to perform their day-to-day business activities. Content management in Oracle Banking is handled through Document Management System (DMS) module. DMS is designed to provide a uniform set of services for content management across Oracle Banking 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.

Some of the important features of DMS are as follows:

2.9.1 Document Type Definition

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

2.9.2 Document Policy

Various rules can be created to help associate a document type or document category with certain processes or events of Oracle Banking 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 Collateral, Product Group, Application, and Party level.

2.9.3 Interface with Third-Party Systems

For generation and dispatch of outbound documents, DMS has capability to interface with multiple external third party document management systems. Various document templates stored in these systems can be accessed from DMS. Oracle Banking framework enables triggering of different API's pertaining to different document generation systems.

2.9.4 Document Scrutiny

The documents collected by the banks normally are scrutinized for the correctness of the data or authenticity of the document itself. The bank may do this internally or can give to any specialized external agencies to scrutinize the documents. DMS module provides a mechanism to search and update the internal or external scrutiny status for an inbound document.

2.9.5 Document Checklists

Document Checklist is a task flow that can be invoked by various Oracle Banking 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 Oracle Banking event/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.

2.9.6 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 task flow is present for displaying documents which require acceptance /execution. User can manually update the status of documents once customer has accepted the document or a document execution has been completed.

2.9.7 Document Search and Upload

Soft copies of every inbound and outbound document are stored in an external system (not part of Oracle Banking) called Image Processing System (IPM) where versions of uploaded documents are also maintained. User can assess these soft copies anytime from DMS. Every uploaded document is given a unique index which helps in further processing of document.

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

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

2.10 Remittances and Collections

Oracle Banking is built on a modular architecture, where each application would manage the functionalities required in the different business areas like Current Accounts and Savings Accounts (CASA), Term Deposits, and Loans. 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 the various other applications under Oracle Banking, thereby providing a strong foundation for existing suite of Oracle Banking products. Remittances and Collections functions can be invoked as a part of Settlements by any of the other modules such as CASA, Term Deposits, or Loans.

2.10.1 Core Functionality

The Remittances and Collections provides the following core functionalities:

- The Payments/Clearing/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.
- 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.

2.10.2 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:

- **Zone Maintenance**: The various clearing zones and circles are maintained in Zone Maintenance screen. 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: 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: Float configuration is used to maintain the various combinations of float days involved in the resolution of the related value dates in the 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: Endpoint is the physical entity that the Bank would interact with for the clearing or payment transaction. 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: 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: 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**: 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 Oracle Banking 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. For Clearing transactions the instruments applicable for that transaction are linked in the Instrument Category Linkage section.

- Transaction Category Maintenance: 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.
- Instrument Category Maintenance: 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: 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: 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.

2.10.3 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:

• **Cheque deposit**: 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: 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: 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: 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: 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 or reject screen.

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**: 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.

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 page.

The refusal of returns are 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 vide SMS, email, and so on.

2.10.4 Payments and Collections

The features are:

- 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.

 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 process 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 page. User can search and inquire a transaction using various search options.

2.10.5 Business Payments / Business Collections

The features are:

 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.
- 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.

2.10.6 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.

2.10.7 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.

2.10.8 Exception Handling

All the transactions handled out of Clearing, Collections, or Payments are finally routed through two pages which are the Scan Pass page and Scan Reject 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.