Credit Risk Management System (CRMS)

Exposure Management Module (EMM)

Bankers Serving Bankers

DEMO Presentation

EMM

Exposure Management Module, EMM is an integrated module to manage, document and evaluate exposures. It is where facilities can be created for obligors and groups and where Collateral, Repayment and Pricing can be captured. It is also where Credit Admin can control the approval and release of lines and allow for the capture of draw-downs.

Description

6σ

Exposure Management Module

Version 1.4.0

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Please login here using your assigned username and password.

Institution ID

User Name

Password

☐ Remember me

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The EMM

Features

FACILITY STRUCTURING
1. Facility Status
2. Adding New Facilities
3. Adding Sub-Limits
4. Approving Facilities
5. Releasing Facilities
6. Matured Facilities
7. Freezing Facilities
8. Adding Draw-Downs
9. Confirming Drawdowns
10. Capturing Aggregate Outstandings
11. Accrued Interest
12. Repayments of Drawdowns
13. Expired Facilities or Draw-Downs
14. Excess and Available amount
15. Facility Pricing
16. Islamic
17. Upfront Charge and Discount Rates
18. Singular Collateral
19. Shared Collateral:
20. Repayment Schedule

TERM SHEET per Facility
1. Conditions Precedent
2. Mechanics
3. Reps & Warranties
4. Covenants
5. Financial Covenants
6. Events of Default
7. Other

CREDIT ADMINISTRATION
1. Check and Approve
2. Check Adherence to Terms and Conditions (T&C)
3. Confirm Release of Draw Downs
4. Confirm Repayment of Draw Downs
5. Monitor covenant adherence
6. Diarize and Advise Pending Actions
7. Managing Credit Approvals
8. Produce Reports
9. Notify Clients of Pending Actions
10. Generate Decline Letters
11. Generate Marketing Letters
12. Generate Offer Letters
13. Generate Facility Contracts
14. Day-to-Day Management of Exposures

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EMM

Features

ADMIN SECTION
1. Assign Privileges
2. Assign Conditions Precedent for each Type of Facility (DD CPs)
3. Assign Confirmers and Recipients of Notifications for Repayments of Drawdowns (DD Repayments)
4. Assign Recipients of Notifications
5. Assign Islamic Parameters
6. Assign Data set for each Type of Collateral (Collateral Data)
7. List Beneficiaries
8. Enter Swift Codes
9. List Purchase of Payment (POPs)
10. List Nostro Accounts
11. Update Cost Bases
12. Update FX Rates

COLLATERAL MANAGEMENT
Editing Collateral Data

RAROC
Producing Profitability by:
1. Single Facility
2. Obligor
3. Group
4. Portfolio

PORTFOLIO EXPOSURE
1. Country
2. Industry
3. Collateral Security
4. Single Risk Name
5. Obligor
6. Business
7. Facility Type
8. Collateral Type

DASHBOARDS
1. IFRS 9
2. Risk Management
3. Operations
4. Executive

Portfolio Limits
Administration
Documentation
Relationship Mgt

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Seamless Exposure Management
- Captures and manages Counterparty and group limits.
- Outlines consolidated exposures and drills down to individual facility details.
- Allows full control over utilization of lines at all levels, up to Industry and Country portfolio limits.
- Manages draw-downs within pre-set criteria.

Electronic Notifications and Reporting
- Provides Notifications to all concerned in the processing of transactions.
- Provides pre-defined contracts, letters of offer and letters of rejections to obligors.
- Provides MIS including concentration risk limit warnings by product, tenor, industry, and obligors.

Full Administrative Functions
- Allocates Maker-Checker privileges by sets of users.
- Provides dynamic management of users, terms and conditions, and all associated documentation.
- KYC/AML integration - links with core banking systems and credit bureaus where available.

Advantages

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EMM

Sections

The user can create (a) several facilities for each obligor,(b) create several sub-limits for each facility, and (b) create draw-downs for each facility and sublimit. The facilities created by the user will be numbered using Red buttons, and the sub-limits will be numbered using Yellow squares as shown opposite.

Number	Facility Type Facility ID
8	Factoring/Discounted Bills without Re 555
8a	Ijara - Fixed Asset 494599549
8b	Factoring/Discounted Bills without Re 6

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Facility Structuring Section

Facility Status

There are five states for each facility, each denoted by a color:

- For new facilities being Prepared by the user, the color is Red
- For facilities that have been Approved, the color is **Orange**
- For those that were Released, the color is Green
- For those that have Matured, the color is **Black**
- For those that were Frozen, the color Light Blue
- For new facilities being Prepared For Approval, the color is **Lilac**

For all facilities, sub-limits are shown in yellow.

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Facility Structuring

Adding New Facilities

a) Users add facilities by simply clicking "New Facility"
b) Users can always Edit all the fields entered as long as the facility is Red.

Sub-Limits can also be created for Red facilities, can be offered in currencies other than that of the Parent, and have the following features:

Adding Sub-Limits

(a) Sub-limits are not counted in total limits for all facilities per Obligor or Group,
(b) each of the sub-limits cannot exceed the total limit for the main Parent Facility, and
(c) their total outstandings are captured in the total outstanding for the Parent facility

Facility Structuring

Approving Facilities

An "**Approve**" button is provided for Red Facilities.
- Once confirmed, all the facilities for that Obligor will be approved (turn **Orange**).
- For Approved facilities, no more editing can be done by the user.
- The Credit Administrator can (a) Edit only the Facility Limit and Outstanding, with all other fields cannot be modified, and (b) can Release the facility(ies).

A "**Release**" button is provided for Orange (Approved) Facilities only.

Releasing Facilities

- On pressing the Release button, the Credit Administrator is then guided to the Part 2 of the Credit Administration section.
- In this Part, the Administrator has to confirm that all the documentation and conditions associated with the facility were met.
- Once done, the facility color turns **Green**.
- Once Released, the facility details cannot be edited except for entering outstandings and confirming repayments of outstandings.

Facility Structuring

Matured Facilities

a) Each facility has a Maturity Date.
b) Once a facility matures its color changes to **Black.**
c) If the facility matures and outstandings remain present, then a red flag is created, and a notification is emailed to the Credit Administrator and the relationship officer.
d) An expired facility with no Outstanding can be archived and all its amounts are not captured in any of the totals or reports

Number	Facility Type Facility ID	Currency	Limit Outstanding	Excess Available	Spread	Collateral Currency Amount	Maturity Date	Action
1	Hedging Facilities 1	USD	10,000 5,000	0 0	2.00 %	Multiple USD 7,681	01 May 2020	

Freezing Facilities

- As per the bank's Credit Risk Policy, if a user believes that a change in the obligor's circumstances may impact its ability to honor its dues on time (e.g. a cross-default event), then that user can Freeze the facility; and can Unfreeze the facility if the situation improves.
- This feature is not meant to be automatic across all the obligor's facilities as some facilities may require other formal processes prior to freezing them (such as in syndications).
- Once frozen the facility color turns **light blue**.
- Frozen facilities cannot be utilized.

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Facility Structuring

Adding Draw-Downs

a) Draw-downs can be created for any facility or sub-limit; but only if they are already Released (Green Facility).
b) Draw-downs can be in any currency, and their amounts are converted automatically to the Facility Currency.

Confirming Drawdowns

- When a drawdown is created, a © Confirmation button appears to allow the Checker(s) to check its validity and all its associated documentation and procedures.
- On selecting the © button in the Credit Admin section, the system will send emails to all those preselected in the Admin section who are responsible for checking documentary requirements associated with this drawdown.
- The system will also calculate Available balances as the difference between the Facility (or Sub-limits) limits and Outstandings. These are used to assess how much room remains for more draw-downs in the Facility currency.

Facility Structuring

Capturing Aggregate Outstanding

As draw-downs are created, the current outstanding of each draw-down will be added to the previously created draw-downs to create the Cumulative Outstanding balance in the Facility Currency. Obviously excesses to Facility Limits are not allowed.

Accrued Interest

- The system will calculate Accrued Interest on a daily basis for each drawdown. The calculation is based on the Cost Base (e.g. Libor), Spread (in %) and Methodology (30/365, Actual/360 etc.).
- The cumulative interest for each drawdown in the draw-down currency will be shown in the Accrued Interest/Profit column.
- The system will also show Interest to Maturity, which is an estimate of the interest accrued to maturity of the Draw Down using the Methodology, based on current outstanding and cost base.

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Facility Structuring

Repayments and Drawdowns

- The Credit Administrator (Maker) can EDIT a draw-down and change its outstanding to reflect full or partial repayments. However, for each repayment, a Checker(s) needs to acknowledge it.

- The system allocates repayments first to Penalties, then Fees, Interest and then to Principal.

- The Checker(s) has the ability to Edit these entries depending on the Classification of the account (Classified Substandard or Stage 3 and above, Repayment are normally applied to Principal first).

- If a Drawn-Down is fully or partially repaid, its current outstanding reduces accordingly along with the Cumulative and Main Facility Outstandings by the same amount, allowing room for more draw-downs to be created, unless the account is on Liquidation.

- Facilities with Repayment Schedules are covered through a single draw down that is repaid in regular intervals.

Expired Facilities or Draw-Downs

Expired Facility or Draw-Down that are not repaid are considered Past Due, raising a red flag along with email notifications.
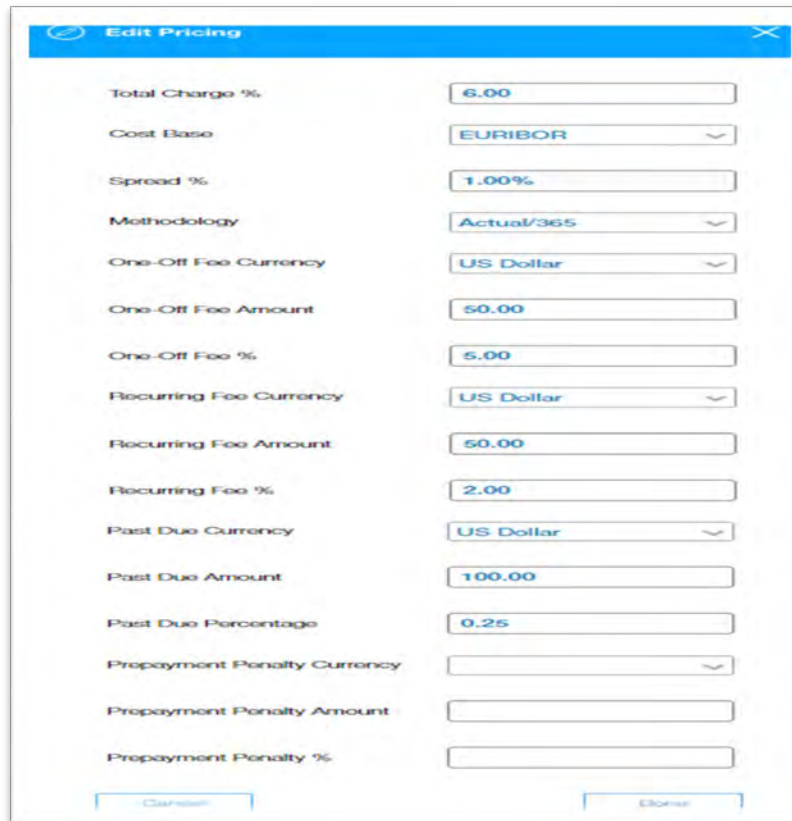
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Facility Structuring

Facility Pricing

Capture the Facility Pricing is through the ⊕ button below "Spread"

Number	Facility Type Facility ID	Currency	Limit Outstanding	Excess Available	Spread	Collateral Currency Amount	Maturity Date	Action
1	Factoring/Discounted Bills without Re 2	USD	100,000 74,000	0 26,000	1.00 % ⊕	Multiple USD 1 843 ⊕	29 Feb 2020 ⊕	

The Facility Pricing page displays the details such as Cost Base, Past Due and Prepayment Penalties, and Fee percentage and amounts.

Edit Pricing

Total Charge %	6.00
Cost Base	EURIBOR
Spread %	1.00%
Methodology	Actual/365
One-Off Fee Currency	US Dollar
One-Off Fee Amount	50.00
One-Off Fee %	5.00
Recurring Fee Currency	US Dollar
Recurring Fee Amount	50.00
Recurring Fee %	2.00
Past Due Currency	US Dollar
Past Due Amount	100.00
Past Due Percentage	0.25
Prepayment Penalty Currency	
Prepayment Penalty Amount	
Prepayment Penalty %	

Facility Structuring

Singular Collateral

Shared Collateral

Singular Collateral is accessed using the ⊕ under "Collateral"

Number	Facility Type Facility ID	Currency	Limit Outstanding	Excess Available	Spread	Collateral Currency Amount	Maturity Date	Action
1	BB Description 1	AFA	10,000 1,000	0 9,000	9.00 % ⊕	N/A AFA ⊕	27 Mar 2020 ⊕	

Collateral Data includes:
a) Collateral Risk Rating (CRR) and Loss Given Default (LGD) that is used in Weighted Average (WA) LGD calculation (PRR and IFRS 9 purposes)
b) Collateral Value columns includes Valuation MTM, and reminders for both singular and Shared.
c) Total Collateral Value for any facility is the sum of all Total of Collaterals Values in Facility Currency.
d) Weighted Average calculations are made for LGD and EPL. LTV is also calculated for each facility.

The user can add one or more Collaterals that are shared by several facilities:

1. The entry of all the collaterals that are shared amongst the various facilities
2. The breakdown of collaterals by priority amongst all the facilities

Facility Structuring

Repayment Schedule

Access to the Repayment Schedule is by selecting ⊕ under "Maturity Date"

After entering the required fields and clicking "Done", the system will generate and provide the full repayment schedule.

The selection criteria for repayments is as follows:

1. Repayment Type (Amortized, Bullet, Customized etc.)

2. Frequency of Repayments (monthly quarterly, semi-annual or annual)

3. Starting Period (date on which the repayments start)

4. Grace Period (in years or months)

5. Total Period (in years or months)

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Collateral Management Section

Collateral Management Section

Collateral Management

- Where Singular and Shared Collateral can be entered and edited.
- The selection of collateral security can be done through Collateral, Facility or Obligor IDs.

Data can be configured by the Administrator and include:

1. Description
2. Currency & Amount
3. Effective Date
4. Valuation MTM and Date
5. Forced Sale Value and Date
6. Registered Owner
7. Location & District
8. Postal Code
9. Country
10. Jurisdiction/Registry
11. Assessor
12. Account/Serial/Policy No
13. Issuers/Insurer
14. Reference Number
15. Diary for Policy
16. Identification Markers 1,2, and 3
17. Status
18. Diary for Re-Evaluation
19. Diary for Review/Expiry
20. Terms for Release
21. Notes
22. Document Link

Credit Administration Section

Credit Administration

The Credit Administration section is where the controls over Facility Utilization are exercised. This section is reached either directly from the main screen in which case the Facility or Obligor ID need to be entered, or from pressing the Approve or Release buttons when reviewing a specific facility. The Approve Button would be present when Editing Red facilities, and the Release Button when Editing Orange facilities. The Approve and Release functions can apply to a singular Facility or to all the facilities of a singular Obligor

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Credit Administration Section

Check and Approve

a) For confirming approval of facilities after the credit application is approved.
b) Credit Admin to confirm or otherwise that the facilities in the system are as per the approval without super-imposed conditions.
c) If such conditions are imposed, then Credit Admin to ensure that these conditions are entered into the system before confirming the Approval.

Check Adherence to Terms and Conditions (T&C)

To ensure that all T&Cs associated with facilities are adhered to before Releasing them by confirming:

1. Receipt of Account Opening forms, Board Resolutions, and Indemnities
2. ISDA Agreement
3. Verification of Signatures
4. Attested copies of original
5. Updated Collateral Data
6. Lodgment of Collateral
7. Sign-off on Conditions Precedent
8. Receipt of Signed Offer Letter and Contract
9. KYC/AML/ATF procedures followed

Confirm Release of Draw Downs

a) Where all drawdowns that were created and are ready for Confirmation/Release are listed.
b) The Credit Administrator (Checker) can choose which to confirm by pressing the © button.
c) Once pressed, email notifications will be sent to those responsible for checking each Condition associated with that drawdown.

Confirm Repayment of Draw Downs

- Where all the drawdowns for which repayments (partial or full) were registered are listed for confirmation.
- The Credit Administrator (Checker) can choose which to confirm by selecting the Confirm button.
- Once pressed, email notifications will be sent to those listed as recipients of such notifications (in the System Admin section).

Monitor Covenant Adherence

a) Monitor covenant adherence, in which the Credit Administrator checks on each covenant that was present in the original Facility then approved in the Credit Application, and confirms adherence.

b) If there is a breach in any of the covenants, then a red flag is raised and emails are issued.

Diarize and Advise Pending Actions where pending actions can be diarized for:

a) Account Reviews
b) Covenant Reviews
c) Credit Reviews
d) Other Reviews

Diarize and Advise Pending Actions

Each of these will have a specific date on which the review is to be conducted. Once a review is done, the review date would have to be reset for a proceeding period.

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Produce Reports

- Which covers an extensive list of reports that can be produced by the system for all concerned.

- The reports are produced as pdfs and can be forwarded by the user who produces them.

- For customization of individual reports please contact your account officer at 6 Sigma.

Reporting

Obligor ID: SNP   Obligor Name: Ramzi Petrom
Facility ID: Facility Type:

1. Annual review list report
2. Expired Facilities
3. Checking over-dues (excess days) in the accounts by 30, 60 or 90 etc days
4. Checking excesses in all facilities on a daily basis and reporting these to RMs of affected obligors and others
5. Risk Rating distribution
6. Covenant violations
7. TMRAC lists
8. Others as specified by each bank from time to time.
9. Alert on change (Any Edit)
10. Alerts on Rating Change
11. Sovereigns Rating
12. Country Exposure Limits (see Portfolio Exposure)
13. Industry Exposure Limits (see Portfolio Exposure)
14. Total by Country
15. Total by Industry Range
16. Total by Facility Type (select the Facility Type and print the obligors and facilities with their total limits along with overal total)
17. Total by Collateral Security (select the Collateral Type and print total values, obligors, facilities and limits associated with that collateral)
18. Total by Group (see Portfolio Exposure)
19. Total by Obligor (see Portfolio Exposure)
20. Total by Financial Institution (see Portfolio Exposure)
21. Listing of Archived facilities

Notify Clients of Pending Actions which covers an extensive list of issues:

1- Pending Rollovers	05 Oct 2020	Print	Notify Client
2- Pending settlement of Draw Downs	05 Oct 2020	Print	Notify Client
3- Overdue payments on Draw Downs	05 Oct 2020	Print	Notify Client
4- Collateral Valuation Notices	05 Oct 2020	Print	Notify Client
5- Insurance Policy renewal Notices	05 Oct 2020	Print	Notify Client
6- Other Collateral Notices	05 Oct 2020	Print	Notify Client
7- Facility Letters of Offer that were provided and not yet signed	05 Oct 2020	Print	Notify Client
8- Facility Contracts that were provided and not yet signed	05 Oct 2020	Print	Notify Client
9- Conditions Precedent that were agreed to and not yet met	05 Oct 2020	Print	Notify Client
10- Draw-downs that were not yet made	05 Oct 2020	Print	Notify Client
11- Covenants that are in breach of contract	05 Oct 2020	Print	Notify Client

The user simply indicates how far forward the system needs to check pending actions and dues, and the report is either Printed in pdf, or sent by email to the RM for onwards distribution to the Client

Generate
Client Letters

Generate Decline Letters

In this section, the Credit Administrator can generate a Decline Letter advising clients of the lack of bank appetite for their business.

Generate Marketing Letters

In this section, the Relationship Officer can generate Marketing Letters using templates, which will include all the terms and conditions associated with Proposed (Red) facilities.

Generate Offer Letters

Generate Offer Letters based on approved limits. In this section, the Credit Administrator can generate Offer Letters using templates, which will include all the terms and conditions associated with Approved facilities.

Generate Contracts

Generate Contracts based on approved Facilities. In this section, the Credit Administrator can generate Facility Contracts using templates, which will include all the terms and conditions associated with the Approved facilities. The contract will have be customized to the bank's requirements

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Other Sections

RAROC Section

RAROC

- Where the Risk Adjusted Return on Capital (RAROC) is calculated by facility, obligor or group.
- This section can be accessed directly from the screen or through a particular facility.
- If accessed directly from the screen, the user would have to select the Facility ID or Obligor ID to run it.
- The user does not need to enter any other data as the system will capture all the necessary information from the database. The output includes:
  1. Total Revenues
  2. Total Expenses
  3. Total ECL
  4. ROA/RORA/RORAC
  5. PRR of the set of facilities

Term Sheet Section

Term Sheet

This Term Sheet section is where the terms and conditions associated with each facility can be entered. These include the following:

1. **General Data** on the Obligor and all its Facilities.

2. **Conditions Precedent** (CP) associated with this Facility.

3. **Mechanics** of Drawdowns (how the funds are drawn and repaid).

4. **Representation and Warranties** (R&Ws).

5. **Covenants** (non-financial).

6. **Financial Covenants**. These are related to the financials of the obligor and are numeric in nature.

7. **Events of Default**.

8. **Other** (on a case by case basis), which is essentially a free text

Portfolio Exposure Section

In this section, the Credit Administrator can manage limits at portfolio levels that include the following totals:

1. by Country
2. by Industry
3. by Facility Type
4. by Collateral Security
5. by Single Risk Names
6. by Obligors
7. by Business
8. by Facility Type

There are set as the minimum of % Equity, % Exposure or a Specific Total.

Once set, the limits will be used to check on Facilities created by users to ensure that the limits are not exceeded. Approval for setting these limits are (currently) done outside the system.

Data Exchange Section

Data Exchange

In this section, the rules for transferring data in and out of the system are set. These include rules for Imports and Exports to third party systems such as SWIFT, Accounting Systems, and Core Banking Systems.

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System Admin Section

Admin Section

**Admin/
Assign Groups**

**Assign CPs for
Each Facility
Type (DD CPs)**

**Notifications for
Repayments of
Drawdowns (DD
Repayments)**

Assign Groups

a) Creating Groups of users who access the system. The assignment is done by User ID.
b) Assign which parts of the system these groups are entitled to access.

- To confirm draw-downs, the Checker has to ensure that all the documents and procedures associated with the drawdown were completed. These are referred to as DD CPs.
- Each list can carry up to 20 CPs, each CP can have an individual user responsible for its confirmation, and each set of CPs is attached to a specific facility type.

a) When a repayment is received, a Checker has to confirm it, and an acknowledgement has to be sent by email to a specific users.
b) To assign Checkers and Recipients for confirmed drawdown repayments, the Administrator selects the Users, and whether they are Confirmers or Recipient of Notices.

Admin Section

Assign Recipients of Notifications

When any of the following events take place, a specific assigned user is notified:

1. Creation of Facility
2. Approval of Facilities
3. Release of Facilities
4. Maturing Facilities
5. Frozen Facilities
6. Confirmation of Drawdowns Creation
7. Confirmation of Repayment of Drawdowns
8. Covenant Due Dates
9. Diarized Events
10. Change in Collateral Details
11. Change in Portfolio Limits
12. Raising of a Red Flag

Admin Section

a) For every type of collateral, a list of up to 40 associated data can be entered.
b) The list is created by the Admin (first 11 are universal).
c) Once the list is created, then every time the user selects a collateral type, the list associated with that collateral type will appear to be filled out

Assign Data set for each Type of Collateral (Collateral Data)

1. Description
2. Currency & Amount
3. Effective Date
4. Valuation MTM and Date
5. Forced Sale Value and Date
6. Registered Owner
7. Location & District
8. Postal Code
9. Country
10. Jurisdiction/Registry
11. Assessor

12. Account/Serial/Policy No
13. Issuers/Insurer
14. Reference Number
15. Diary for Policy
16. Identification Markers 1,2, and 3
17. Status
18. Diary for Re-Evaluation
19. Diary for Review/Expiry
20. Terms for Release
21. Notes
22. Document Link

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Admin Section

List Beneficiaries

a) Listing of Beneficiaries by Obligor so that when payments are made, they are selected automatically.
b) Capturing their SWIFT details including Bank Accounts, validating the SWIFT codes and IBANs, and ensuring cross references are done across the system.

Enter SWIFT Codes

- Capturing Bank SWIFT codes from the Swift site.
- These are used in the Listing of Beneficiaries above
- These should be updated regularly.

List Purchase of Payment (POPs)

a) Creating a list of POPs the bank uses and places in SWIFT messages as reasons for transfer.
b) The list is updated from the Central Bank's directories.

List Nostro Accounts

a) Creating a list of the Bank's Nostro account with their details.
b) These are used in the creation of transfer messages.

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Admin Section

Update Cost Base

a) Creating a list of all the Cost Bases used in the system when capturing Pricing (under Facility Structuring).
b) Each Cost Base has a specific **Rollover Period**, which is the period that locks in the interest rate in days. For example: Libor 1M carries a rollover period of 30 days.
c) The list should be updated by Treasury on a frequent basis.

Update FX Rates

a) Selecting the Base Currency for all reports in the system.
b) Creating a list of all the most used FX Rates in the system and all the modules.
c) The rates that are most used with appear at the top of the list.
d) The list should be updated by Treasury on a frequent basis.

Dashboards

Several

Executive

Provides an overview of the bank's credit portfolio, market indicators, and operational aspects of processes and procedures.

Risk Management

Provides a detailed breakdown of the Portfolio Risk Rating, broken down by Industry and Stress Testing Results

Portfolio Limits

Provides a snap-shot of limit utilization by Industry, Country, Single Name, Government, Financial Institutions, Facility Types and Collateral

IFRS 9

Provides detailed listing by EAR, ECL, RAROC along with ORR and FRR distributions

Operations

Provides a detailed picture of all pending matters, including Approved and Released Lines, Review Dates, Past Dues, and Accrued Interest/Profit

Notifications

Essentially all diarized dates in the system including Documentation, Collateral Reviews, Credit Reviews, and Rollovers
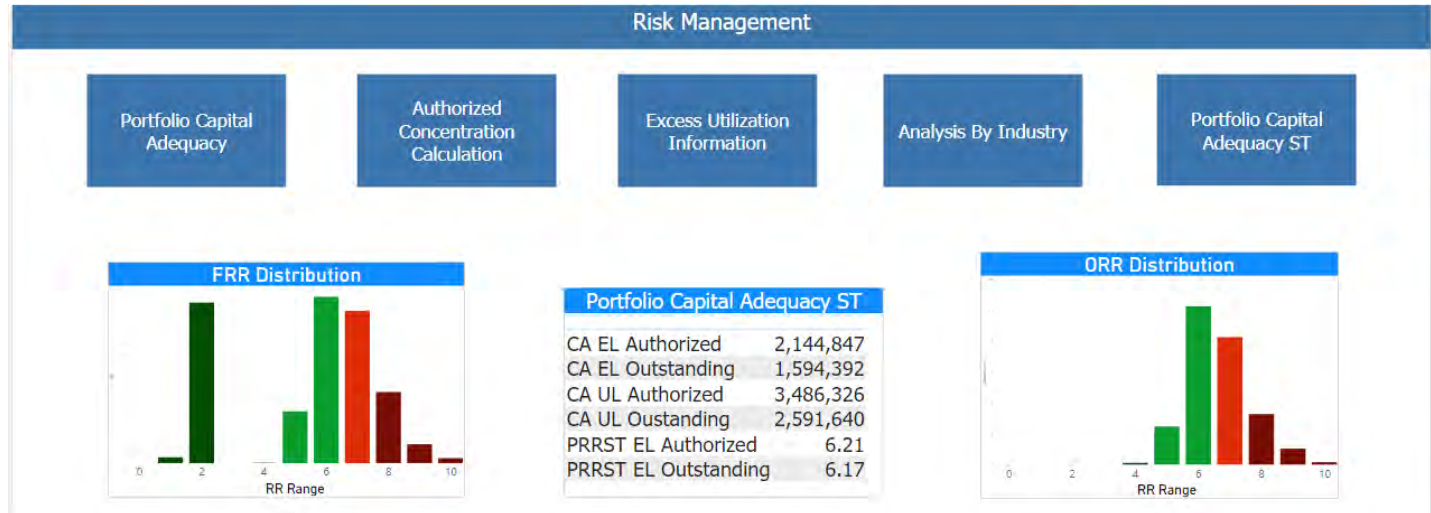
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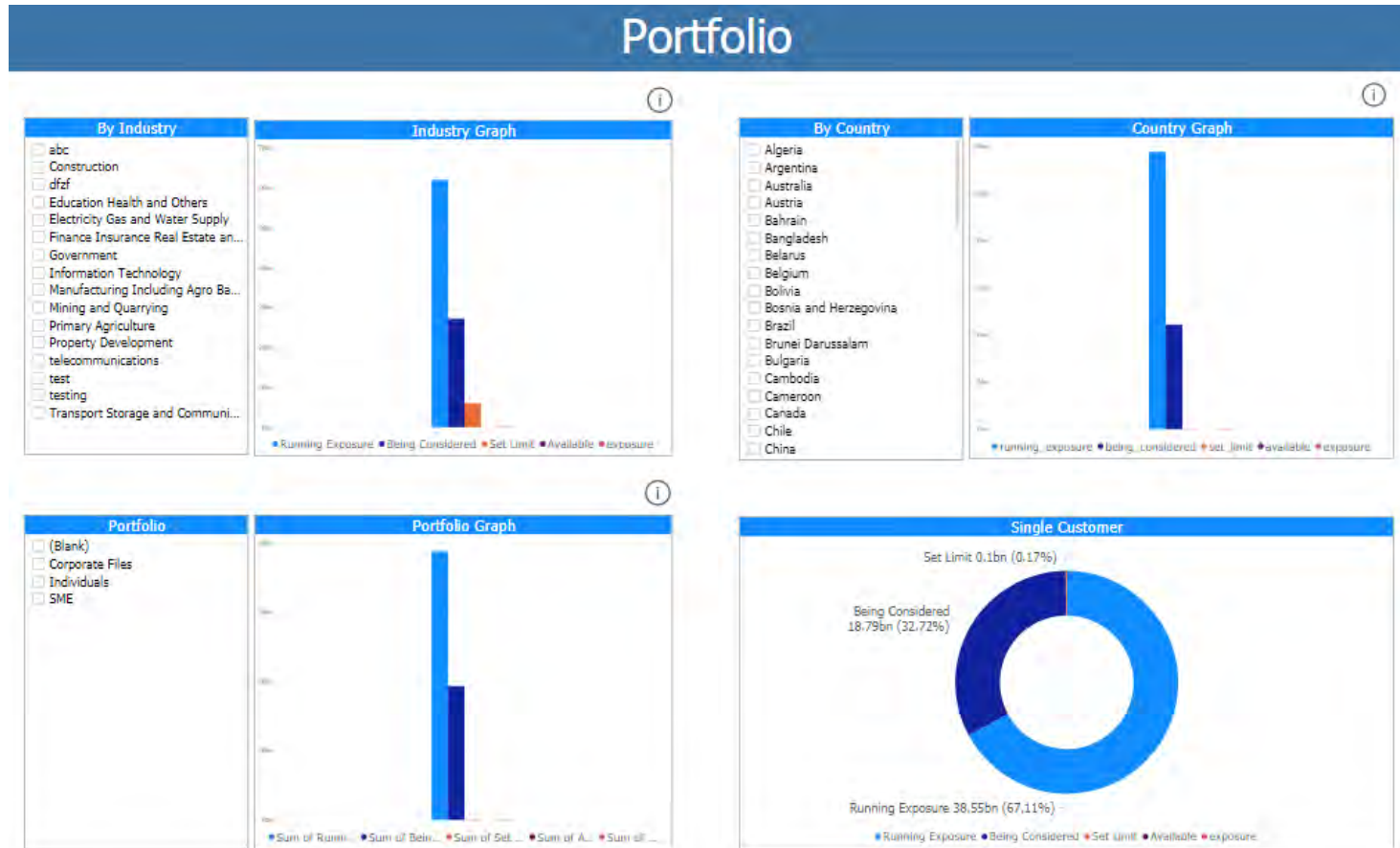
Dashboards

Executive
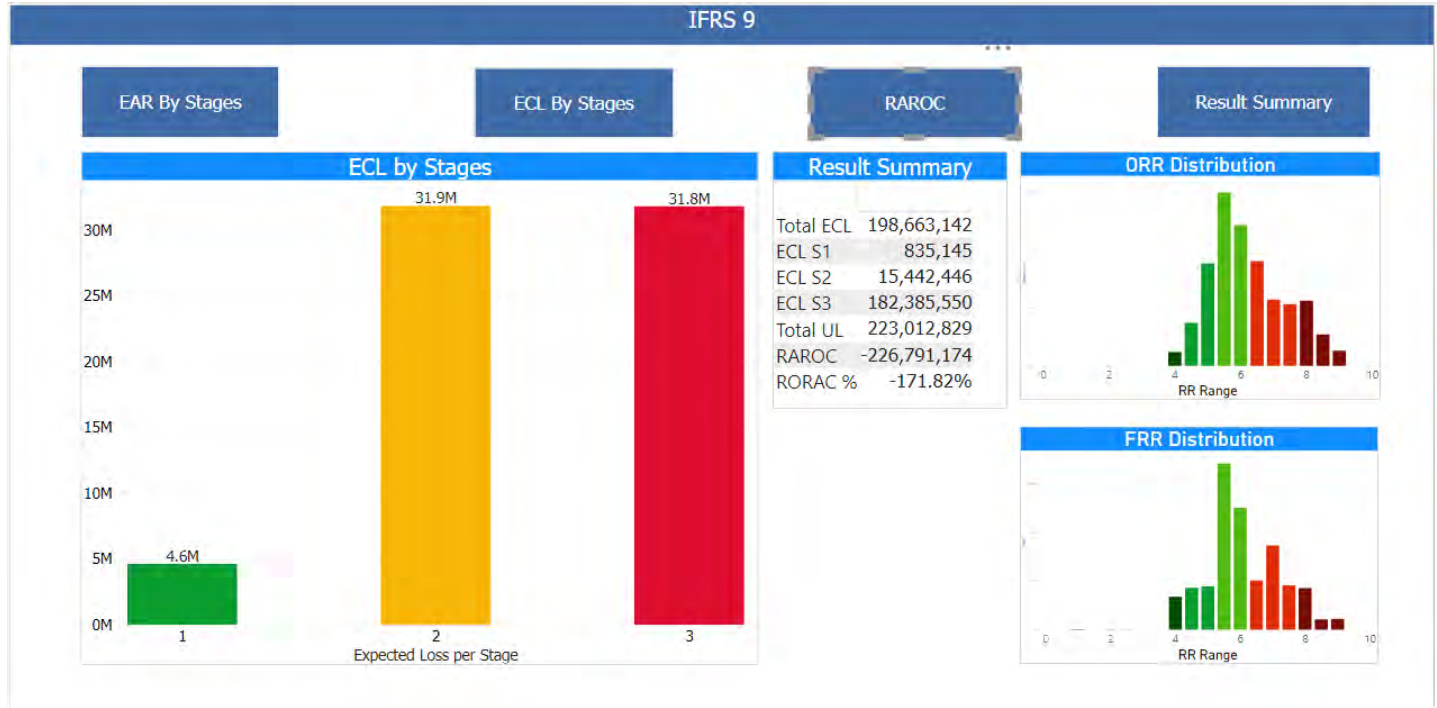
Dashboards

Risk Management

Dashboards

Portfolio

Dashboards

IFRS 9

Operations

Dashboards

Notifications