Oracle Financial Services Liquidity Risk Management Regulatory Calculations

User Guide

Release 8.0.5.0.0

Financial Services

Oracle Financial Services Liquidity Risk Management User Guide, Release 8.0.5.0.0

Primary Author: Vineeta Mishra

Contributors: Januelle Pinto, Ankur Barmecha, Rishi Anand, Sindhurika Kalkunte

TABLE OF CONTENTS

DOCUMENT CONTROL

Version Number	Revision Date	Changes Done
1.0	Created December 2017	Captured updates for 8.0.5.0.0 release Updates are available in sections: ▪ Regulatory Calculations as Per Reserve Bank of India - RBI Liquidity Coverage Ratio (Identification of Asset Levels) - RBI Net Stable Funding Ratio Calculation ▪ Liquidity Coverage Ratio Calculation as Per Delegated Act

This document provides a comprehensive knowledge about the regulatory calculations in Oracle Financial Services Liquidity Risk Management, Release 8.0.5.0.0. The latest copy of this guide can be accessed from OHC Documentation Library.

About the Guide

This section provides a brief description of the scope, the audience, the references, the organization of the user guide and conventions incorporated into the user guide. The topics in this section are organized as follows:

- Scope of the guide
- Intended Audience
- Documentation Accessibility
- Access to Oracle Support
- Related Information Sources

Scope of the Guide

The objective of this user guide is to provide a comprehensive knowledge about the regulatory calculations supported in the Oracle Financial Services Liquidity Risk Management, Release 8.0.5.0.0. This document is intended to help you understand the methodologies involved in computation of LCR and NSFR ratio and other regulatory metrics and computations. The application supports four jurisdictions, BIS, US Federal Reserve, RBI and EBA, from the perspective of regulatory calculations.

This User Guide should be used in conjunction with the documents listed in the section Related Information Sources in order to get a complete view of how the general capabilities of LRM have been leveraged and the configurations required for the purposes of addressing the regulatory requirements.

Intended Audience

Welcome to release 8.0.5.0.0 of the Oracle Financial Services Liquidity Risk Management user guide. This manual is intended for the following audience:

- Business User: This user reviews the functional requirements and information sources, like reports.
- Strategists: This user identifies strategies to maintain an ideal liquidity ratio and liquidity gap based on the estimated inflow and outflow of cash.
- Data Analyst: This user would be involved with cleaning, validation, and importing of data into the OFSAA Download Specification Format.

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 Information Sources

- OFS Treasury Risk 8.0.5.0.0 Release Notes on OHC Documentation Library
- OFS Treasury Risk 8.0.5.0.0 Installation Guide on OHC Documentation Library
- OFS Liquidity Risk Management Release V8.0.5.0.0 User Guide on OHC Documentation Library
- OFS Liquidity Risk Management Release V8.0.5.0.0 Analytics User Guide on OHC Documentation Library
- OFS Analytical Applications Infrastructure User Guide on OHC Documentation Library

What's New in this Release

The Oracle Financial Services Liquidity Risk Management Release 8.0.5.0.0 is an enhancement of the existing Oracle Financial Services Liquidity Risk Management Release 8.0.4.0.0 which has the following enhanced features:

- Net Stable Funding Ratio calculation as per the Reserve Bank of India Master Circular DBR.BP.BC. XX/21.04.098/2014-15 Basel III Framework on Liquidity Standards – Net Stable Funding Ratio (NSFR) – Draft Guidelines dated May 28, 2015.
- RBI NSFR scenario with pre-configured available and required stable funding factors as per RBI guidelines.
- Amendment to classification of central bank reserves as Level 1 assets issued by RBI as part of DBR.BP.BC.No. 81/21.04.098/2017-18 dated August 2, 2017.
- Dashboard reports for analyzing net stable funding ratio and its components.
- Enhancements to Liquidity Coverage Ratio calculations as per European Banking Authority LCR Delegated Act

1 Bank for International Settlements Basel III Liquidity Ratio Calculation

1.1 Liquidity Coverage Ratio Calculation

1.1.1 Overview

Various parameters in Liquidity Risk Management help in analyzing the liquidity status of the bank. Liquidity ratios are one such parameter prescribed in the Basel III Guidelines. There are two types of ratios which are calculated by the LRM Application as follows:

- **Liquidity Coverage Ratio:** Liquidity coverage ratio addresses the short-term liquidity needs of an institution during a stress situation. It estimates whether the stock of high quality liquid assets is sufficient to cover the net cash outflows under stress situations over a specified future period, in general, lasting 30 calendar days (or LCR horizon). Liquidity coverage ratio is calculated at the legal entity level, on a standalone and consolidated basis.
- **Net Stable Funding Ratio:** This addresses the medium and long-term liquidity needs of a bank during a stress situation. It specifies the minimum amount of stable funding required to be maintained in order to promote stable long term funding.

1.1.2 Inputs

Inputs required for Liquidity Coverage Ratio calculated by the LRM Application are as follows:

- Liquidity haircut for each asset level should be provided through business assumption with assumption category as valuation change and assumption sub category as haircut.
- Business assumption which defines the outflow percentage should be defined through appropriate business assumptions. For example, retail deposit Run off is defined through business assumption with category as incremental cash flow and sub category as Run-off.
- Business assumption which defines the inflow percentage should be defined through appropriate business assumptions. For example, Roll over reverse repo is defined through business assumption with category as cash flow movement and sub category as roll over.
- Liquidity Horizon is specified as the Run time parameter

1.1.3 Liquidity Ratio Calculation Process Flow

This section aims to explain the procedure of calculating the Liquidity Coverage Ratio (LCR).

- Asset Level Identification
- Identification of Eligible HQLA
- Calculation of Stock of High Quality Liquid Asset (SHQLA)

- Determination of the Maturity of Cash Flows
- Deposit Stability Identification
- Classifying Operational Account
- Calculation of Net Cash Outflows
- Consolidation
- Alternative Liquidity Approaches
- Calculation of Liquidity Coverage Ratio

  The application supports an out-of-the-box BIS Basel III LCR which has the regulatory scenario with associated HQLA haircuts, inflow and outflow rates pre-configured in the form of business assumptions.

1.1.3.1 Asset Level Identification

All assets, whether owned by the bank or received from counterparties as collateral, that meet the high quality liquid asset criteria specified by BIS, are classified as follows:

- Level 1 Assets
- Level 2A Assets
- Level 2B RMBS Assets
- Level 2B Non-RMBS Assets

Level 1 assets can be included in the stock of HQLA without limit and Level 2 assets can only comprise 40% of the stock of HQLA. Of this, Level 2B assets can only comprise of 15% of stock of HQLA. Any asset not classified as an HQLA is considered an Other Asset.

1.1.3.1.1 Identification and Treatment of Level 1 Assets

Level 1 assets are the assets which qualify to be fully included as part of the stock of high quality liquid assets computing LCR:

1. Cash which includes coins and bank notes. The value included in the stock of HQLA is the cash balance.
2. Central bank reserves (including required reserves), to the extent that the central bank policies allow them to be drawn down in times of stress. These include,
   a. Banks' overnight deposits with the central bank
   b. Term deposits with the central bank that satisfy the following conditions:
      - They are explicitly and contractually repayable on notice from the depositing bank
      - They constitute a loan against which the bank can borrow on a term basis or on an overnight but automatically renewable basis (only where the bank has an existing deposit with the relevant central bank)

Central bank reserves include the balance held by a bank at the central bank directly or through a correspondent bank less any minimum reserve requirement. The value of eligible term deposits that is included is the amount net of any withdrawal penalty.

3. Marketable securities which satisfy the following conditions:
   - Issuer type or Guarantor Type is one of the following:
     - Sovereign
     - Central Bank
     - Public Sector Entity
     - Multi-lateral Development Bank
     - The Bank For International Settlements (BIS)
     - The International Monetary Fund
     - The European Central Bank and European Commission
   - They are assigned a 0% risk-weight under the standardized Approach of Basel II
   - Not an obligation of a financial institution or any of its affiliated entities
4. Debt securities issued in domestic currencies in the country in which the liquidity risk is being taken or in the bank's home country where the issuer type is sovereign or central bank and the risk weight assigned to the sovereign is greater than 0%.
5. Debt securities issued in foreign currencies are eligible up to the amount of the bank's stressed net cash outflows in that specific foreign currency stemming from the bank's operations in the jurisdiction where the bank's liquidity risk is being taken, where the issuer type is domestic sovereign or central bank and the risk weight assigned to the sovereign is greater than 0%.

1.1.3.1.2 Identification and Treatment of Level 2A Assets

The application identifies the following assets as HQLA Level 2A assets.

1. Marketable securities which satisfy the following conditions:
   - Issuer type or Guarantor Type is one of the following:
     - Sovereign
     - Central Bank
     - Public Sector Entity
     - Multi-lateral Development Bank
   - They are assigned a 20% risk-weight under the standardized Approach of Basel II.
   - Price has not decreased, or haircut has not increased by more than 10% over a 30-day period during a relevant period of significant liquidity stress which is specified by the bank.

  - Not an obligation of a financial institution or any of its affiliated entities.

2. Corporate debt securities (including commercial paper) and covered bonds which satisfy the following conditions:
   - Issuer type is not a financial institution or its affiliated entities.
   - Issuer type is not the bank itself for which the computations are being carried out or any of its affiliated entities (in case of covered bonds)
   - Either has
     - A long-term credit rating by a recognized External Credit Assessment Institution (ECAI) equal to or greater than AA- or,
     - If long-term rating is not available, then a short-term credit rating by a recognized ECAI which is equal to or greater than AA- or,
     - If it does not have assessment by a recognized ECAI, the probability of default as per the internal rating corresponding to a rating which is equal to or greater than AA-
   - Price has not decreased or haircut has not increased by more than 10% over a 30-day period during a relevant period of significant liquidity stress which is specified by the bank.

1.1.3.1.3 Identification and Treatment of Level 2B RMBS Assets

The application identifies the Residential Mortgage Backed Securities (RMBS) which satisfy the conditions listed below as HQLA Level 2B RMBS assets:

- Issuer type is not the bank itself for which the computations are being carried out or any of its affiliated entities.
- Issuer type of the underlying assets is not the bank itself for which the computations are being carried out or any of its affiliated entities.
- Either has
  - A long-term credit rating by a recognized External Credit Assessment Institution (ECAI) equal to or greater than AA or,
  - If long-term rating is not available, then a short-term credit rating by a recognized ECAI which is equal to or greater than AA
- Price has not decreased or haircut has not increased by more than 20% over a 30-day period during a relevant period of significant liquidity stress which is specified by the bank.
- The underlying asset pool consists of residential mortgages only and does not contain any structured products.
- The underlying mortgages are “full recourse’’ loans and have a maximum Loan-To-Value ratio (LTV) of 80% on average at issuance.

- The securitizations are subject to "risk retention" regulations which require issuers to retain an interest in the assets they securitize.

1.1.3.1.4 Identification and Treatment of Level 2B Non-RMBS Assets

The application identifies the following assets as HQLA Level 2B Non-RMBS assets:

1. Corporate debt securities (including commercial paper) which satisfy the following conditions:
   - Issuer type is not a financial institution or its affiliated entities.
   - Either has
     - A long-term credit rating by a recognized External Credit Assessment Institution (ECAI) between A+ and BBB- or,
     - If long-term rating is not available, then a short-term credit rating by a recognized ECAI which is between A+ and BBB- or,
     - If it does not have assessment by a recognized ECAI, the probability of default as per the internal rating corresponding to a rating which is between A+ and BBB-
   - Price has not decreased or haircut has not increased by more than 20% over a 30-day period during a relevant period of significant liquidity stress which is specified by the bank.
2. Common equities which satisfy the following conditions:
   - Issuer type is not a financial institution or its affiliated entities.
   - Are exchange traded and centrally cleared.
   - Are a constituent of the major stock index in the legal entity's home jurisdiction or where the liquidity risk is taken, as decided by the supervisor in the jurisdiction where the index is located.
   - Are denominated in the domestic currency of the legal entity's home jurisdiction or in the currency of the jurisdiction where the liquidity risk is taken.
   - Price has not decreased or haircut has not increased by more than 40% over a 30-day period during a relevant period of significant liquidity stress which is specified by the bank.

NOTE: The value of eligible securities included in the HQLA is the market value less hedge termination cost, if any.

1.1.3.2 Identification of Eligible HQLA

The application identifies whether a bank's asset, or a mitigant received under re-hypothecation rights meets all the operational requirements prescribed by BIS. If an asset classified as HQLA meets all the relevant operational criteria it is identified as eligible HQLA and included in the stock of HQLA.

The application checks for the following operational criteria:

a. Operational Capability to Monetize HQLA

An asset is considered HQLA only if the bank has demonstrated the operational capability to monetize such an asset and has periodically monetized such an asset. The application captures this information for each asset as a flag.

b. Unencumbered

The application looks at the encumbrance status and includes only those assets in the stock which are unencumbered. If partially encumbered, then the portion of the asset that is unencumbered is considered as HQLA and included in the stock. If an asset is pledged to the central bank or a PSE, but is not used, the unused portion of such an asset is included in the stock. The application assigns the usage of a pledged asset in the ascending order of asset quality i.e. the lowest quality collateral is marked as used first.

c. HQLA Under the Control of the Liquidity Management Function

To be considered eligible HQLA the asset are under the control of the management function of the bank that manages liquidity. The application captures this information for each asset as a flag.

d. Termination of Transaction Hedging HQLA

If a HQLA is hedged by a specific transaction, then the application considers the impact of closing out the hedge to liquidate the asset that is, the cost of terminating the hedge while computing the stock of HQLA. The hedge termination cost is deducted from the market value of the asset and the difference is included in the stock of HQLA.

e. Transferability Restriction during Consolidation

Surplus HQLA held by a subsidiary can be included in the stock of the parent company only if it is freely available to the parent during times of stress. The assets that have transfer restrictions are identified through a flag. The application only includes the restricted assets to the extent required to cover the subsidiary’s own net cash outflows while including the unrestricted assets fully into the consolidated stock of HQLA.

f. Exclusion of Certain Re-hypothecated Assets

Any asset that a bank receives under a re-hypothecation right is not considered eligible HQLA if the counterparty or beneficial owner of the asset has a contractual right to withdraw the asset at any time within 30 calendar days.

g. Unsegregated Assets

The application includes unsegregated assets, received as collateral under re-hypothecation rights, for derivative transactions, in the stock of HQLA. Conversely, it excludes all segregated assets from the stock of HQLA.

1.1.3.3 Calculation of Stock of High Quality Liquid Asset

SHQLA is calculated at legal entity and currency granularity. This is performed by the rule **LRM - BIS SHQLA Computation**.

All unencumbered assets classified as Level 1, 2A or 2B, which meet the HQLA eligibility criteria, are included in the stock of high quality liquid assets (SHQLA). The formula for calculating SHQLA is as follows:

$$\begin{aligned}\boldsymbol{Stock\ of\ HQLA} = {} & \boldsymbol{Post\ Haircut\ Stock\ of\ Level\ 1\ Assets} \\ & + \boldsymbol{Post\ Haircut\ Stock\ of\ Level\ 2A\ Assets} \\ & + \boldsymbol{Post\ Haircut\ Stock\ of\ Level\ 2B\ RMBS\ Assets} \\ & + \boldsymbol{Post\ Haircut\ Stock\ of\ Level\ 2B\ non\ RMBS\ Assets} \\ & - \boldsymbol{Adjustment\ due\ to\ Cap\ on\ Level\ 2B\ Assets} \\ & - \boldsymbol{Adjustment\ due\ to\ Cap\ on\ Level\ 2\ Assets}\end{aligned}$$

The application applies the relevant liquidity haircuts to the market value of each eligible HQLA based on the haircuts specified as part of a business assumption. The sum of haircut adjusted market value of all assets which are not ‘other assets’ and which are classified as ‘eligible HQLA’ comprises of the stock of HQLA. The stock includes bank’s own assets which are unencumbered, i.e. not placed as collateral; as well assets received from counterparties where the bank has a re-hypothecation right and where such assets are not re-hypothecated.

NOTE: All calculations are based on the market value of assets.

1.1.3.3.1 Calculation of Stock of Liquid Assets

1. Calculation of Stock of Level 1 Assets

   The stock of level 1 assets equals the market value of all level 1 liquid assets held by the bank as of the calculation date that are eligible HQLA, less the amount of the minimum reserves less hedge termination costs (if any), less withdrawal penalty on time deposits (if any).
2. Calculation of Stock of Level 2A Assets

   The stock of level 2A liquid assets equals 85 percent of the market value of all level 2A liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).
3. Calculation of Stock of Level 2B RMBS Assets

   The stock of level 2B RMBS liquid asset amount equals 75 percent of the market value of all level 2B RMBS liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).
4. Calculation of Stock of Level 2B Non-RMBS Assets

   The stock of level 2B liquid assets equals 50 percent of the market value of all level 2B non-RMBS liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).

1.1.3.3.2 Identification of Eligible HQLA on Unwind

The application identifies the assets that are placed as collateral which are eligible HQLA if they are not encumbered. Placed collateral is marked as eligible HQLA on unwind if it fulfills all of the following criteria:

- Asset Level is level 1, 2A, 2B RMBS or 2B non-RMBS asset
- Meets HQLA Operational Requirements on Unwind

1.1.3.3.3 Unwinding of Transactions Involving Eligible HQLA

The application identifies all transactions maturing within the LCR horizon where HQLA is placed or received. These transactions include repos, reverse repos, secured lending transactions, collateral swaps and so on. Such transactions are to be unwound that is, the original position is to be reversed and the cash or stock of HQLA is adjusted accordingly. This is done to avoid inclusion of any asset in the stock that may have to be returned to its owner before the end of the LCR horizon. The unwinding of transactions results in adjustments to the stock of HQLA, i.e. additions to or deductions from the stock of HQLA.

1.1.3.3.4 Calculation of Adjusted Stock of HQLA

1. Adjusted Stock of Level 1 Assets

   The formula for calculating adjusted stock of level 1 assets is as follows:

$$\begin{aligned}&\boldsymbol{Adjusted\ Stock\ of\ Level\ 1\ Assets}\\&\quad = \boldsymbol{Post\ Haircut\ Stock\ of\ Level\ 1\ Assets}\\&\quad + \boldsymbol{Post\ Haircut\ Adjustments\ to\ Stock\ of\ Level\ 1\ Assets}\end{aligned}$$

   Note: Adjustments relate to the cash received or paid and the eligible level 1 assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

2. Adjusted Stock of Level 2A Assets

   The formula for calculating adjusted stock of level 2A assets is as follows:

$$\begin{aligned}&\boldsymbol{Adjusted\ Stock\ of\ Level\ 2A\ Assets}\\&\quad = \boldsymbol{Post - Haircut\ Level\ 2A\ Assets}\\&\quad + \boldsymbol{Post\ Haircut\ Adjustments\ to\ Stock\ of\ Level\ 2A\ Assets}\end{aligned}$$

   Note: Adjustments relate to eligible level 2A assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

3. Adjusted Stock of Level 2B RMBS Assets

   The formula for calculating adjusted stock of level 2B RMBS assets is as follows:

$$\begin{aligned}&\textbf{Adjusted Stock of Level 2B RMBS Assets}\\&\quad= \textbf{Post} - \textbf{Haircut Stock of Level 2B RMBS Assets}\\&\quad+ \textbf{Post Haircut Adjustments to Stock of Level 2B RMBS Assets}\end{aligned}$$

Note: Adjustments relate to eligible level 2B RMBS assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

4. Adjusted Stock of Level 2B Non-RMBS Assets

   The formula for calculating adjusted stock of level 2B non-RMBS assets is as follows:

$$\begin{aligned}&\textbf{Adjusted Stock of Level 2B Non} - \textbf{RMBS Assets}\\&\quad= \textbf{Post} - \textbf{Haircut Stock of Level 2B Non} - \textbf{RMBS Assets}\\&\quad+ \textbf{Post Haircut Adjustments to Stock of Level 2B Non} - \textbf{RMBS Assets}\end{aligned}$$

Note: Adjustments relate to eligible level 2B Non-RMBS assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

1.1.3.3.5 Calculation of Adjustments to Stock of HQLA Due to Cap on Level 2 Assets

1. Adjustment Due to Cap on Level 2B Assets

Level 2B assets can only constitute up to 15% of the stock of HQLA after taking into account the impact of unwinding transactions maturing within the LCR horizon. Adjustment to stock of HQLA due to cap on Level 2B assets is calculated as follows:

$$\begin{aligned}&\textbf{Adjustment due to Cap on Level 2B Assets}\\&\quad= \textbf{Maximum}\left[\left\{\textbf{Adjusted Level 2B Assets} - \left(\frac{\mathbf{15}}{\mathbf{85}} \times (\textbf{Adjusted Level 1 Assets} + \textbf{Adjusted Level 2A Assets})\right)\right\}, \left\{\textbf{Adjusted Level 2B Assets} - \left(\frac{\mathbf{15}}{\mathbf{60}} \times \textbf{Adjusted Level 1 Assets}\right)\right\}, \mathbf{0}\right]\end{aligned}$$

2. Adjustment Due to Cap on Level 2 Assets

Level 2 assets can only constitute up to 40% of the stock of HQLA after taking into account the impact of unwinding transactions maturing within the LCR horizon. Adjustment to Stock of HQLA due to cap on Level 2 assets is calculated as follows:

$$\begin{aligned}&\boldsymbol{Adjustment\ due\ to\ Cap\ on\ Level\ 2\ Assets}\\&\quad = \boldsymbol{Maximum}\left[\left\{\boldsymbol{Adjusted\ Level\ 2A\ Assets} + \boldsymbol{Adjusted\ Level\ 2B\ Assets}\right.\right.\\&\quad - \boldsymbol{Adjustment\ due\ to\ Cap\ on\ Level\ 2B\ Assets}\\&\quad \left.\left. - \left(\frac{\mathbf{2}}{\mathbf{3}} \times \boldsymbol{Adjusted\ Level\ 1\ Assets}\right)\right\}, \mathbf{0}\right]\end{aligned}$$

1.1.3.4 Determination of the Maturity of Cash Flows

For the purposes of calculating the Liquidity Coverage Ratio, the application identified the maturity of certain transactions as follows:

1. For liabilities having embedded optionality, such as callable features, that reduces the maturity of the account, the application considers the earliest date, i.e. the first call date, as the revised maturity date.
2. For assets having embedded optionality that reduces the maturity of the account, where the collateral received is not re-hypothecated, the application considers the earliest date, i.e. the first call date, plus notice period as the revised maturity date.
3. For derivatives having embedded optionality that reduces the maturity of the account, where the collateral received is not re-hypothecated, the application considers the earliest date, i.e. the first call date, as the revised maturity date.
4. For assets or derivatives, where the collateral received has been re-hypothecated for a period greater than the maturity of the asset itself, the application considers the maturity date of the liability, against which the collateral received is re-hypothecated, as the revised maturity of the asset.
5. For assets or derivatives having embedded optionality that reduces the maturity of the account, where the collateral received has been re-hypothecated for a period greater than the first call date plus notice period but less than the original maturity of the asset itself, the application considers the maturity date of the liability, against which the collateral received is re-hypothecated, as the revised maturity of the asset.
6. For derivatives having embedded optionality that reduces the maturity of the account, where the collateral received has been re-hypothecated for a period greater than the first call date but less than the original maturity of the asset itself, the application considers the maturity date of the liability, against which the collateral received is re-hypothecated, as the revised maturity of the asset.
7. For assets having embedded optionality that reduces the maturity of the account, where the collateral received has been re-hypothecated for a period less than the first call date plus notice period, the application considers the first call date plus notice period as the revised maturity of the asset.

8. For derivatives having embedded optionality that reduces the maturity of the account, where the collateral received has been re-hypothecated for a period less than the first call date plus notice period, the application considers the first call date as the revised maturity of the asset.
9. For assets and derivatives which do not have embedded optionality that reduces the maturity of the account, where the collateral received has been re-hypothecated for a period less than the maturity of the asset itself, the application considers the original maturity date of the asset, as the revised maturity of the asset.
10. For assets and derivatives which do not have embedded optionality that reduces the maturity of the account, where the collateral received has not been re-hypothecated, the application considers the original maturity date of the asset, as the revised maturity of the asset.

NOTE: The revised maturity is computed by the application as per regulatory expectation and is used for the calculation of LCR.

1.1.3.5 Deposit Stability Identification

The first step in identifying deposit stability is to allocate deposit insurance limit at an account level. Deposit insurance limit is typically available at a legal entity-customer combination and sometimes at a legal entity-customer-ownership category combination. The application requires users to provide the following parameters for the purposes of allocating insurance at an account level:

1. Ownership Category

   OFS LRM assumes the insurance limit for each customer per ownership category level as download. Ownership categories include single accounts, joint accounts, trusts etc. Some jurisdictions provide for a separate limit to a customer based on the ownership category of accounts. If a particular customer gets a single limit irrespective of whether the accounts are held as single, joint or a combination, the ownership category should have a single default value.
2. Customer Type

   This is a list of customer types who are eligible to be covered under the respective jurisdiction’s deposit insurance scheme. The insurance limit is assigned to each customer whose customer type matches one of the types that are covered by the deposit insurance.
3. Product Type

   This is a list of product types that are covered under the respective jurisdiction’s deposit insurance scheme. The insurance limit is allocated on priority basis or proportionately to only those accounts of a customer whose product types matches those that are covered by the deposit insurance.
4. Product Type Prioritization

   The sequence in which the insured amount is to be allocated to each product type is captured. For instance, the product prioritization may be specified as current account, savings account and term deposit. This means that the insured amount is allocated first to current account held by the customer. After current accounts have been fully covered, the remaining amount is allocated to savings accounts and finally to term deposits.

Note: In case product type prioritization is not specified, the default allocation will be proportionate to the EOP balance of each account irrespective of the product type.

5. Currency Eligibility for Insurance

   This is a list of currencies in which the accounts are denominated that are eligible for insurance coverage under a deposit insurance scheme. Some jurisdictions cover foreign currency deposits under their deposit insurance schemes. If eligible currencies are specified for the purpose of insurance, then the insured balance is allocated to all accounts belonging to the particular legal entity which have the associated attributes required for assigning the insured balance.

6. Insurance Limit

   This is the deposit balance of a given customer that is covered under the deposit insurance scheme. Customers having account in multiple legal entities get a separate deposit insurance limit per legal entity.

Once the insurance parameters are provided, the application allocates the insurance limit to all eligible accounts for a particular customer under a given ownership category in the proportion of the EOP balance of the eligible accounts. An illustration of the deposit allocation is provided below. Suppose a customer has 10 insurance eligible accounts, the total value of which amounts to € 150000. The insurance limit for the customer is € 100000. The ratio of insurance limit to balance is 1:1.5 which means that 66.67% of the deposit value is covered by insurance. This is allocated to each account in the same proportion as illustrated below:

Account Number	EOP Balance	Insured Amount	Uninsured Amount
1	5000	3333	1667
2	20000	13333	6667
3	7000	4667	2333
4	12000	8000	4000
5	106000	70667	35333

In case of joint accounts, the EOP balance is either allocated equally to all account holders or allocated to the primary account holder only based on user selection. This amount is then used to determine total balance eligible for insurance allocation.

Once the insurance limit is allocated at an account level, the application determines the deposit stability as follows:

1. Stable Deposits

   A stable deposit is that portion of a deposit which is fully covered by deposit insurance provided by an effective deposit insurance scheme or a public guarantee that provides equivalent protection and which satisfies one of the following conditions:

   a. It is held in a transactional account by the depositor

      Or,

   b. The depositor has an established relationship with the reporting legal entity.

   In case of BIS, if a deposit is partially covered by insurance and meets the other criteria, the insured portion of such deposits is considered stable while the uninsured portion is considered less stable.

   Stable deposits receive a 5% run-off rate unless they meet additional deposit criteria.

2. Highly Stable Deposits

   All “stable” deposits identified as per the criteria specified in point 1 above are classified as meeting additional insurance criteria if the insurance scheme under which they are covered satisfies the following conditions:

   i. Is based on a system of prefunding via the periodic collection of levies on banks with insured deposits.
   ii. Has adequate means of ensuring ready access to additional funding in the event of a large call on its reserves, for example, an explicit and legally binding guarantee from the government, or a standing authority to borrow from the government.
   iii. Access to insured deposits is available to depositors in a short period of time once the deposit insurance scheme is triggered.

   Such deposits receive a 3% run-off rate.

3. Less Stable Deposits

   All insured and uninsured deposit or funding balances that do not meet the stable deposits criteria specified earlier are classified as less stable deposits: This includes:

   - Insured balance of deposits meeting stable deposits criteria but denominated in ineligible foreign currencies.
   - Uninsured balance of deposits meeting stable deposits criteria.
   - Insured balance of deposits which are not transactional account and the customer has no established relationship with the bank.
   - Deposit balance where the insurance coverage status is Uninsured.

   Such deposits receive a 10% run-off rate.

4. High Run-off Category Deposits

   Three additional stability criteria are supported for uninsured deposit balances. This is optional for a bank.

   - High Run-off Deposits Category 1
   - High Run-off Deposits Category 2
   - High Run-off Deposits Category 3

   This classification is dependent on the aggregated funding received from each customer. The steps involved are as follows:

   i. Identify all accounts of a given customer which are liabilities of the bank

   ii. Calculate the aggregated funding from a customer as follows:

$$\boldsymbol{Aggregated\ Funding_{Customer}} = \sum_{i=1}^{n} \boldsymbol{Uninsured\ Balance_{Account,Customer}}$$

   Where, I = Accounts of a given customer which are liabilities of the bank

   iii. Assign the uninsured balance to one of the high Run-off categories as follows:

   - If aggregated funding from a customer <= EUR 500,000, the uninsured amount from each relevant account is assigned to High Run-off Deposits Category 1
   - If aggregated funding from a customer > EUR 500,000 < EUR 1,000,000, the uninsured amount from each relevant account is classified as High Run-off Deposits Category 2
   - If aggregated funding from a customer >= EUR 1,000,000, the uninsured amount from each relevant account is classified as High Run-off Deposits Category 3

Customer	Account	Insured Balance (Account)	Uninsured Balance (Account)
Customer 1	Account 1	450000	550000
Customer 2	Account 2	1000000	200000
Customer 2	Account 3	800000	300000

Deposits	Uninsured Amount
High Run-off Deposits Category 1	500,000 (200000 + 300000)
High Run-off Deposits Category 2	550,000

NOTE: The High Run-off category is defined at Customer level. The Uninsured balance of each account falling under a customer will be directly moved to High-Run off category 1, 2, 3.

1.1.3.6 Classifying Operational Account

Operational deposits are those deposits placed by customers with a bank in order to meet their payment and settlement needs and make other payments. The application classifies accounts as operational if they meet the following criteria:

1. They are held in specifically designated accounts, i.e. held as operational accounts, by the customers at the bank.
2. They arise out clearing, custody or cash management relationship with the bank.
3. They do not arise out of correspondent banking services or in the context of prime brokerage services.
4. The termination of such agreements requires a minimum notice period of 30 days.
5. If the agreement can be terminated within 30 days, the customer has to pay significant switching or termination costs to the bank.

1.1.3.7 Calculation of Net Cash Outflows

1. **Calculation of Total Cash Inflows**

   The application applies the business assumptions, specified on products involving cash inflows, selected as part of the Run. The regulatory assumptions specified in the section named Regulation Addressed through Business Assumptions are pre-defined and packaged as part of the out-of-the-box Run to determine the inflows over the liquidity horizon. The business assumption adjusted cash inflows occurring over the liquidity horizon are summed up to obtain the total cash inflow. These include inflows from earning assets such as loans, assets that are not eligible for inclusion in the stock of HQLA, derivatives inflows etc.

2. **Calculation of Total Cash Outflows**

   The application applies the business assumptions, specified on products involving cash outflows, selected as part of the Run. The regulatory assumptions specified in the section named Regulation Addressed through Business Assumptions are pre-defined and packaged as part of the out-of-the-box Run to determine the outflows over the liquidity horizon. The business assumption adjusted cash outflows occurring over the liquidity horizon are summed up to obtain the total cash outflow. These include outflows from liabilities, derivatives outflows, outflows due to changes in financial conditions such as ratings downgrade and valuation changes and so on.

3. **Calculation of Net Cash Outflow**

   Net cash outflow is computed as follows:

$$\begin{aligned}\boldsymbol{Net\ Cash\ Outflows}_{\boldsymbol{LCR\ Horizon}} &= \boldsymbol{Total\ Cash\ Outflows}_{\boldsymbol{LCR\ Horizon}} \\ &- \boldsymbol{Minimum}\{\boldsymbol{Total\ Cash\ Inflows}_{\boldsymbol{LCR\ Horizon}}, (75\% \times \boldsymbol{Total\ Cash\ Outflows}_{\boldsymbol{LCR\ Horizon}})\end{aligned}$$

1.1.3.8 Consolidation

The approach to consolidation as per LCR approach followed by OFS Liquidity Risk Management is detailed below:

a. Identification and Treatment of Unconsolidated Subsidiary

The application assesses whether a subsidiary is a consolidated subsidiary or not by checking the regulatory entity indicator against each legal entity. The application consolidates the cash inflows and outflows of a subsidiary and computes the consolidated LCR, only if the subsidiary is a regulatory consolidated subsidiary. If the entity is an unconsolidated subsidiary, the cash inflows and outflows from the operations of such subsidiaries are ignored (unless otherwise specifically included in the denominator of LCR per regulations) and only the equity investment in such subsidiaries is considered as the bank's asset and appropriately taken into the numerator or denominator based on the asset level classification.

For instance, legal entity 1 has 3 subsidiaries, legal entity 2, legal entity 3 and legal entity 4. The regulatory consolidated flag for legal entity 4 is 'No'. In such a case, legal entity 4 is treated as a third party for the purpose of consolidation and its assets and cash flows are completely excluded from calculations. Legal entity 1's interest in legal entity 4 including common equity of legal entity 4 and assets and liabilities where legal entity 4 is the counterparty will not be eliminated as legal entity 4 is considered a third party during consolidation.

b. HQLA Consolidation by Subsidiary Type

The process of consolidating HQLA differs slightly based on whether the subsidiary is a material entity that is expected to report LCR separately from the parent or not. This is done to ensure consistency in the results when consolidating at a parent level and when calculating the LCR at the material subsidiary level as well. Broadly 2 methods of consolidating HQLA are followed, which are detailed below:

i. In case of a material subsidiaries subject to individual LCR requirements, consolidation is done as follows:

- The application identifies whether the subsidiary is a consolidated subsidiary.
- If condition (a) is fulfilled, it identifies whether the consolidated subsidiary is subject to LCR requirement that is, whether the subsidiary in question is a regulated entity.
- If condition (b) is fulfilled, then it calculates the net cash outflow by eliminating inter-company transactions at the level of the consolidated subsidiary.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow that is, to the extent required to satisfy minimum LCR requirements of that subsidiary as part of the covered company's HQLA.
- It consolidates the entire amount of post-haircut unrestricted HQLA held at the consolidated subsidiary as part of the covered company's HQLA.

- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

ii. In case of subsidiaries not subject to individual LCR requirements, consolidation is done as follows:

- The application identifies whether the subsidiary is a consolidated subsidiary.
- If condition (a) is fulfilled, it identifies whether the consolidated subsidiary is subject to minimum LCR requirement that is, whether the subsidiary in question is a regulated entity.
- If condition (b) is not fulfilled, it eliminates all inter-company transactions till the level of the immediate parent of the consolidated subsidiary and then calculates the net cash outflow.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow and the entire amount of post-haircut unrestricted HQLA as part of the covered company's HQLA.
- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

c. **Consolidated LCR Calculation**

Consolidation is done on a step by step basis based on each level of the organization structure starting from the most granular level. This means that intercompany transactions are eliminated at each sub-consolidation level till the final level of the consolidation (generally BHC) is reached. The Consolidated HQLA calculated at the level of the immediate subsidiary of the BHC is added to the HQLA held by the BHC. All intercompany cash flows are eliminated and the LCR is calculated in accordance with the LCR approach.

For instance a bank's organization structure is as follows:

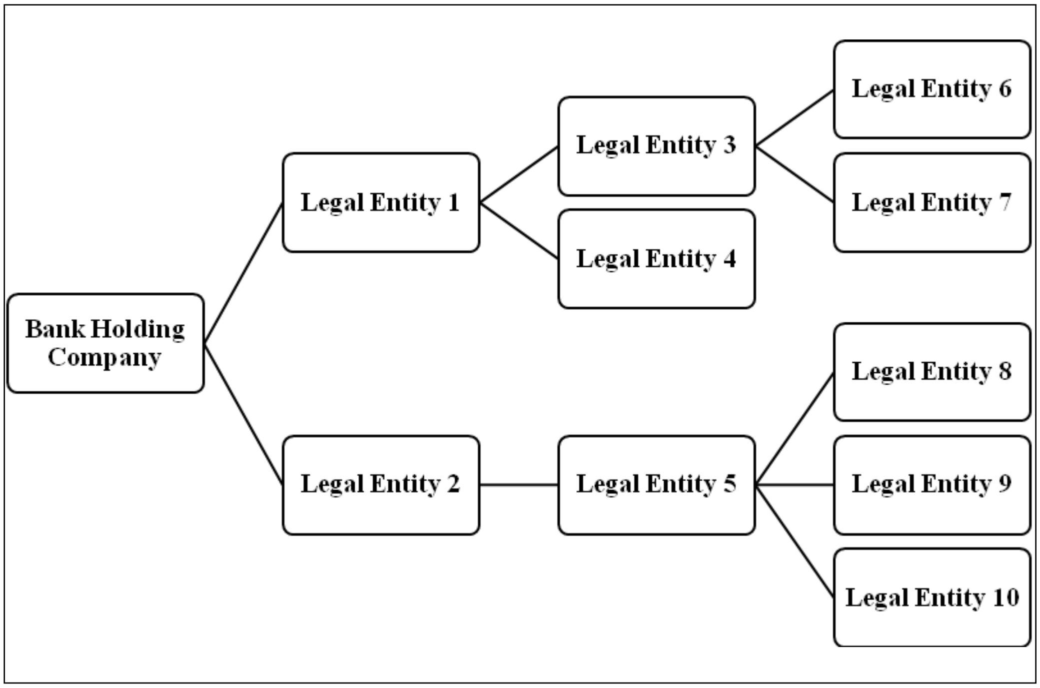


Figure 1 Organization Structure

In this case, at the first level of consolidation, calculation of net cash outflows and HQLA is done on a solo basis for legal entities 6, 7, 8, 9 and 10 as they do not have any subsidiaries. In case of regulated entities i.e. material entities, intercompany transactions are not eliminated; whereas in case of non-regulated entities, intercompany transactions are eliminated to the next level of consolidation that is, legal entities 3 and 5. The restricted HQLA from entities 6 and 7 are consolidated to the extent of their net cash outflows, while the unrestricted HQLA is transferred fully to legal entity 3. The cash inflows and outflows are consolidated to the full extent.

At the second level of consolidation that is, legal entity 3, intercompany transactions are eliminated till legal entity 1, if LE 3 is a non-regulated entity. The HQLA is calculated as a sum of the consolidated restricted and unrestricted HQLA of entities 6 and 7 and the HQLA of legal entity 3. The net cash outflow is calculated based on the cash flows of entities 3, 6 and 7, post elimination of intercompany transactions if applicable. The consolidated HQLA is calculated based on the procedure detailed in point 2 above.

This process continues in a step-by-step manner till the highest parent level i.e. the bank holding company in this example.

1.1.3.9 Alternative Liquidity Approaches

Some jurisdictions may have insufficient supply of Level 1 assets or Level 1 and Level 2 assets. In such a case, banks may not be able to purchase adequate HQLA in order to cover their net cash outflows. In case of such shortfall in HQLA, alternative liquidity approaches may be applied for the given jurisdiction in order to meet the minimum level of LCR. These alternative treatments include:

- Option 1 – Contractual committed liquidity facilities from the relevant central bank, with a fee
- Option 2 – Foreign currency HQLA to cover domestic currency liquidity needs
- Option 3 – Additional use of Level 2 assets with a higher haircut

An assessment is conducted by each jurisdiction to determine if each of the alternative liquidity approaches may be adopted by banks within that jurisdiction. Additionally, the maximum usage of the options is specified by regulators for each jurisdiction. This can be specified individually, at the level of each alternative approach, or collectively for all approaches.

In the current liquidity risk application this is captured at "Legal Entity" level.

Legal Entity	**Level 1 Asset (Required HQLA)**	**Alternative approaches**
LE 1	25%	75%
LE 2	40%	60%

Table 1 Level 1 HQLA Limit

The Level 1(HQLA) limit is specified for each legal entity and they have to adhere to it. Alternative liquidity approaches can only be used when they meet the Level 1 (HQLA) requirement.

1. **Option 1 – Contractual committed liquidity facilities from the relevant central bank, with a fee**

   Option 1 increases the Stock of HQLA. For currencies in which sufficient HQLA is not available, the bank can add the amount to Stock of HQLA from Product Type Contractual Committed Liquidity Facilities from the Central Bank. This computation happens in LRM LCR Option1 Computation Process.

   Data is first inserted in the table with Option Type as Option 1 and then a set of Rules are executed which updates the Option 1 Amount, the Stock of HQLA, and then recalculates the Liquidity Coverage Ratio post Options 1.

   Banks should adhere to the following criteria in order to able to adopt option 1. They should have drawdown facility that is, should be receiving lines of credit by central bank on committed liquidity facilities. This should fulfill the following conditions:

   a. Should not be regular central bank standing arrangements that is, these are contractual arrangements between the central bank and commercial bank.
   b. These contractual arrangements mature outside the 30 day LCR Horizon.
   c. These arrangements are irrevocable prior to maturity and involve no ex-post credit decision by the central bank.
   d. These facilities are charged for a fee irrespective of the amount, if any, drawn down and the fee is set so that banks which claim the facility line to meet the LCR, and banks which do not, have similar financial incentives to reduce their exposure to liquidity risk.

NOTE: The type of collateral that is acceptable for securing these facilities is indicated by the respective central bank

2. **Option 2– Foreign currency HQLA to cover domestic currency liquidity needs**

   Option 2 increases the Stock of HQLA. For currencies in which sufficient HQLA is not available, the bank can add the amount to Stock of HQLA from foreign currency. Stock of HQLA from foreign currencies can only be added if there is extra Stock of HQLA available in foreign currency. This computation happens in LRM LCR Option2 Computation Process.

   Data is first inserted in the table with Option Type as Option 2 and then a set of Rules are executed which brings in the extra Stock of HQLA from foreign Currency and adds it to the Stock of HQLA of the currency where the funds are insufficient. Once the Option amount and New Stock of HQLA is updated then Liquidity Coverage Ratio is recalculated.

   This option allows HQLA in foreign currencies to be used to cover the net cash outflows in domestic currency. These currencies are classified as Major currencies and Other Currencies.

   In order to account for the foreign exchange risk, banks are expected to apply a minimum haircut of 8% on the major currencies and higher on other currencies.

NOTE: Other Currencies haircut is considered at a minimum of 10%.

Haircuts are specified against each currency pair. Example: Haircut for USD and GBP 8%, Haircut for GBP and AUD 10% and so on. These haircuts are applicable only to that portion of the foreign currency HQLA that is in excess of a threshold specified by each regulator.

For every Legal Entity there would be a threshold for applying haircuts which is calculated by the following formula:

$$\frac{\boldsymbol{Max\ Amt\ of\ Total\ Net\ Cash\ Outflows\ in\ Domestic\ Ccy\ to\ be\ covered\ by\ Foreign\ Ccy\ HQLA}}{\boldsymbol{Amt\ of\ Total\ Net\ Cash\ Outflows\ in\ the\ Domestic\ Ccy}}$$

Where,

Domestic Ccy = Currency in which the HQLA is insufficient to cover net cash outflows

This threshold cannot exceed 25% for a given Legal Entity. The sequence of the currencies is specified by the concerned bank.

NOTE: While applying this threshold the first foreign currency is considered and then the threshold is applied.

3. **Option 3– Additional use of Level 2 assets with a higher haircut**

   Option 3 increases the Stock of HQLA for currencies in which sufficient HQLA is not available, banks can take the additional amount from Asset 2 if available. This computation happens in LRM LCR Option3 Computation process.

   Data is first inserted in the table with Option Type as Option 3 and then a set of Rules are executed which updates the Option 3 Amount, Stock of HQLA and then recalculates the Liquidity Coverage Ratio post Options 3.

   This option applies when Level 1 assets are insufficient to cover the liquidity needs of a bank in domestic currency, but there are sufficient level 2A assets. The level 2A assets used as part of this option must have a quality similar to that of Level 1 assets. In order to achieve this there are additional criteria imposed such as:

- Such Assets must have a minimum credit rating of AA or AA+ and,
- Additional level 2A assets used will be subject to a minimum of 20% haircut which is 5% more than that applied to the level 2A assets falling within the 40% cap.

Note:

a. Level 2B assets are not considered for this purpose
b. 15% Cap on level 2B assets remains unchanged regardless of additional level 2A assets used as part of this option
c. The Haircut can be different across jurisdictions and also across banks within a single jurisdiction depending on the level of usage.

An Example to calculate option 3 amount: Say suppose the below mentioned information is available.

Legal Entity	Account	Level 2A Flag	Level2A Assets Used	Level2A Assets Unused	Credit Rating	Qualified Option 3 Asset	Haircut
LE1	ACCT1	Y	200000	500000	AA+	Y	25%
LE1	ACCT1	Y	0	250000	B	N	

Table 2 Example to calculate Option 3 HQLA Amount

Only ACCT1 fulfills additional criteria that is,

a) Credit rating of AA+ so we have to consider the amount which is unused and apply a higher haircut in this case its 25% .
So the option 3 amount will be calculated as Level 2A assets Unused *(1-haircut) that is, 500000*(1-.25) = 375000.

NOTE: Different processes have been created in the Run for all three Options. You are allowed to specify the sequence in which these options are to be executed. The sequence of execution is available as part of the Run.

1.1.3.10 Calculation of Liquidity Coverage Ratio

Liquidity coverage ratio is calculated at legal entity on both solo and consolidated basis. The formula for calculating liquidity coverage ratio is as follows:

$$\boldsymbol{Liquidity\ Coverage\ Ratio = \frac{Stock\ of\ High\ Quality\ Liquid\ Asset}{Net\ Cash\ Outflow}}$$

1.1.4 Significant Currency Liquidity Coverage Ratio Calculation

Liquidity coverage ratio is also calculated for each legal entity at the level of each significant currency in order to identify potential currency mismatches. This is done by first identifying significant currencies for a legal entity, at a solo or consolidated level as specified in the Run, as follows:

$$\boldsymbol{Significant\ Currency} = \left[\frac{\boldsymbol{Total\ Liabilities}_{\boldsymbol{Legal\ Entity,Currency}}}{\boldsymbol{Total\ Liabilities}_{\boldsymbol{Legal\ Entity}}} \times \mathbf{100}\right] > 5\%$$

The application further computes and reports the stock of HQLA, net cash outflows and LCR for each currency identified as significant in the manner detailed in the earlier sections. This calculation is done on both solo and consolidated basis.

1.1.5 Computation of Funding Concentrations

Wholesale funding from significant sources is calculated in order to monitor the liquidity risk arising from the withdrawal of such funds. Funding concentration is calculated on the basis of following dimensions:

- Concentration by Significant Counterparties
- Concentration by Significant Products
- Concentration by Significant Currencies

Ratio of each of the cash flow in the aggregate table is first calculated with respect to the concentration at legal entity level. Any counterparty or product is termed as significant if the sum of its concentration is greater than 1%. A currency is termed as a significant currency if the sum of its concentration is greater than 5% of the currency.

All the Concentration specified below are calculated at the following time horizons

- Period is < 1 Month
- Period is between 1 to 3 Months
- Period is between 3 to 6 Months
- Period is between 6 to 12 Months
- Period is > 12 Months

1.1.5.1 Funding Concentration by Significant Counterparties

Funding Concentration by significant Counterparties is to be calculated at Legal Entity or Entities and Counterparty Level.

For Solo Execution for each of the Legal Entities selected and for each of the above stated time horizons, Significant Counterparties are calculated; whereas for Consolidated Execution, Significant Counterparties are calculated at the Parent Level Legal Entity and for each of the above stated time horizons.

A Counterparty is stated as Significant if Sum of the Cash flows of that counterparty for a given Legal Entity is greater than or equal to 1% of the Sum of the Cash flows of the given Legal Entity.

Cash flows of all accounts are not considered, for this purpose Cash flows of Accounts which are having Product Type as Liabilities are the only accounts which are considered.

Funding concentration for significant counterparties is calculated as follows:

$$\boldsymbol{Concentration_{Significant\ Counterparty} = \frac{Funding\ Liabilities_{Significant\ Counterparty}}{Total\ Liabilities\ of\ Legal\ Entity}}$$

1.1.5.2 Funding Concentration by Significant Products

Funding Concentration by significant Products is calculated at Legal Entity or Entities and Product Level.

For Solo Execution for each of the Legal Entities selected and for each of the above stated time horizons, Significant Products are calculated; whereas for Consolidated Execution, Significant Products are calculated at the Parent Level Legal Entity and for each of the above stated time horizons.

A Product is stated as Significant if Sum of the Cash flows of that Product for a given Legal Entity is greater than or equal to 1% of the Sum of the Cash flows of the given Legal Entity.

Cash flows of all accounts are not considered, Accounts which are having Product Type as Liabilities are the only accounts which are considered. Funding concentration is calculated for significant product as follows:

$$\boldsymbol{Concentration_{Significant\ Product} = \frac{Funding\ Liabilities_{Significant\ Product}}{Total\ Liabilities\ of\ Legal\ Entity}}$$

1.1.5.3 Funding Concentration by Significant Currencies

Funding Concentration by significant Currencies is calculated at Legal Entity or Entities and Currency Level.

For Solo Execution for each of the Legal Entities selected and for each of the above stated time horizons, Significant Currencies are calculated; whereas for Consolidated Execution, Significant Currencies are calculated at the Parent Level Legal Entity and for each of the above stated time horizons.

A Currency is stated as Significant if Sum of the Cash flows of that Currency for a given Legal Entity is greater than or equal to 5% of the Sum of the Cash flows of the given Legal Entity.

Cash flows of all accounts are not considered, Accounts which are having Product Type as Liabilities are the only accounts which are considered. Funding concentration is calculated for significant product as follows:

$$Concentration_{Significant\ Currency} = \frac{Funding\ Liabilities_{Significant\ Currency}}{Total\ Liabilities\ of\ Legal\ Entity}$$

1.1.6 Pre-configured Regulatory LCR Scenario

OFS LRM supports pre-configured calculations, scenarios, and reporting templates to ensure full compliance with BIS Basel III guidelines.

This section explains the rules which support regulatory inflow, outflow rates and haircuts as per BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tool Reference.

NOTE:

This section gives only the contextual information about all the rules. For more detailed information refer OFS LRM application (UI).

For detailed Processes and Tasks, refer to the Run Chart.

1.1.6.1 Regulation Addressed through Rules

The application supports multiple pre-configured rules and scenarios based on regulator specified scenario parameters such as inflow rates, outflow rates, run-offs and haircuts and so on.

The list of pre-configured rules and the corresponding reference to the regulatory requirement that it addresses is provided in the following table:

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
1	LRM - BIS Classification Of Small Business Customers To Retail	This rule identifies whether a small business customer is treated as a retail customer for the purposes of liquidity ratio calculations as per BIS. By default small business customer are treated as wholesale customers.	The classification of a small business customer as eligible for retail treatment or not as per BIS is configured as part of this rule.	Paragraphs 90 to 91
2	LRM - BIS - Country liquidity risk indicator for NCOF	This computation rule identifies if a legal entity, holding debt securities issued by a foreign sovereign in that foreign currency, has undertaken liquidity risk in that country. The rule checks if the legal entity has operations in a foreign country, other than those for purely trading purposes, and updates the account liquidity risk flag as Yes, if this condition is met.	The identification of whether a legal entity has liquidity risk in a particular foreign jurisdiction is configured as part of this rule. This is further used for classifying debt securities held by the bank, issued in foreign currencies by non-zero risk weight sovereigns or central banks, as level 1 assets.	Paragraphs 50 (d) to 50 (e)

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
3	LRM - BIS - Mitigant Country Liquidity Risk Indicator For NCOF	This computation rule identifies if a legal entity, holds mitigants issued by a foreign sovereign in that foreign currency, has undertaken liquidity risk in that country. The rule checks if the legal entity has operations in a foreign country, other than those for purely trading purposes, and updates the account liquidity risk flag for such mitigants as Yes, if this condition is met.	The identification of whether a legal entity has liquidity risk in a particular foreign jurisdiction is configured as part of this rule. This is further used for classifying debt securities received as mitigants, issued in foreign currencies by non-zero risk weight sovereigns or central banks, as level 1 assets.	Paragraphs 50 (d) to 50 (e)
4	LRM - Excess And Contractually Due Collateral And Mitigant And Downgrade Trigger Amount Update	This rule computes and updates the values of contractually due collateral, excess collateral due, contractually receivable collateral, and excess collateral receivable and downgrade impact amount in the FSI_NETTING_AGREEMENT table.	The computation of collateral value that is contractually required to be posted to the counterparty and the excess collateral that can be recalled by the counterparty is configured as part of this rule.	Paragraphs 120 to 121
5	BIS_Ins_Unins_Amt_Calc	This DT calculates the insured, un-insured amount and Established relationship indicator at Account Customer Level in the FSI_LRM_ACCT_CUST_DETAILS table.	The allocation of the insurance limit and the computation of insured and uninsured amount at an account level are configured as part of this data transformation.	Paragraph 75

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
6	LRM - BIS - Classification Of Operational Deposits And Non-Operational Balance Computation	This rule classifies an account as operational deposit or not based on the criteria specified by BIS. It also updates the insured and uninsured operational balances and the non-operational balance for the accounts classified as operational in the FSI_LRM_INSTRUMENT table.	The classification of an account as operational or non-operational as per BIS guidelines is configured as part of this rule.	Paragraphs 94 to 95, 99 to 103
7	LRM - Withdrawable portion without penalty for Insured And Operational And Non-operational Amount	This rule calculates the portion of insured, uninsured, operational and non-operational balances that can be withdrawn without incurring any penalty in the FSI_LRM_INSTRUMENT table. This rule also updates the operational account flag as 'N' for all the accounts which are classified as non-operational deposits.	The computation of the portion of an insured, uninsured, operational and non-operational deposit that can be withdrawn without incurring any penalty is configured as part of this rule.	Paragraphs 82 to 83
8	LRM - Basel III Deposit Stability - Stable Amount Calculation	This rule calculates the stable amount as per BIS guidelines.	The computation of the stable portion of a deposit is configured as part of this rule.	Paragraph 75

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
9	LRM - Basel III Deposit Stability - Less Stable Amount Calculation	This rule calculates the less stable amount as per BIS guidelines.	The computation of the less stable portion of a deposit is configured as part of this rule.	Paragraphs 75, 79
10	LRM - High Stability Insured Indicator Assignment	This rule classifies an account as highly stable if it meets additional insurance criteria and updates the highly stable amount for such accounts in the FSI_LRM_INSTRUMENT table. This rule also updates the stable amount for accounts classified as highly stable as 0, to avoid double counting of stable amount.	The identification of whether a stable deposit account meets the additional insurance criteria and the computation of the highly stable portion of the deposit is configured as part of this rule.	Paragraphs 75 to 76
11	LRM - High Stability Insured Indicator Assignment for Operational Deposits	This rule classifies an account as highly stable if it meets additional insurance criteria for Operational Deposits and updates the highly stable amount for such accounts in the FSI_LRM_INSTRUMENT table. This rule also updates the stable amount for accounts classified as highly stable as 0, to avoid double counting of stable amount.	The identification of whether a stable operational deposit account meets the additional insurance criteria and the computation of the highly stable portion of the operational deposit is configured as part of this rule.	Paragraph 104

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
12	LRM - Withdrawable portion without penalty for Stable, Less Stable and Highly Stable Amount	This rule calculates the portion of the stable, less stable and highly stable amounts that can be withdrawn without incurring a penalty in the FSI_LRM_INSTRUMENT table.	The computation of the portion of the stable, less stable and highly stable amounts that can be withdrawn without incurring any penalty is configured as part of this rule.	Paragraphs 82 to 83
13	LRM - HQLA Reclassification - Level 1 - Cash and Central Bank Reserves	This rule reclassifies cash, banknotes and central bank reserves, to the extent that the central bank policies allow them to be drawn down in times of stress, as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of cash and central bank reserves as HQLA level 1 assets is configured as part of this rule.	Paragraphs 50 (a) to 50 (b)
14	LRM - HQLA Reclassification - Level 1 - Marketable Securities - Issuer	This rule reclassifies marketable securities issued by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of zero risk weight marketable securities issued by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA level 1 assets is configured as part of this rule.	Paragraph 50 (c)

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
15	LRM - HQLA Reclassification - Level 1 - Marketable Securities - Guarantor	This rule reclassifies marketable securities guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of zero risk weight marketable securities guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA level 1 assets is configured as part of this rule.	Paragraph 50 (c)
16	LRM - HQLA Reclassification - Level 1 - Debt Securities - Domestic Currency	This rule reclassifies securities issued by non-zero risk weight sovereigns and central banks as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of securities issued in the domestic currency by non-zero risk weight sovereigns and central banks as HQLA level 1 assets is configured as part of this rule.	Paragraph 50 (d)
17	LRM - HQLA Reclassification - Level 1 - Debt Securities - Foreign Currency	This rule reclassifies securities issued by non-zero risk weight domestic sovereigns and central banks in foreign currency as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of securities issued in foreign currencies by non-zero risk weight domestic sovereigns and central banks as HQLA level 1 assets is configured as part of this rule.	Paragraph 50 (e)

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
18	LRM - HQLA Reclassification - Level 2A - Market Asset-Guarantor	This rule reclassifies marketable securities assigned a 20% risk weight and guaranteed by sovereigns, central banks, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of 20% risk weight marketable securities guaranteed by sovereigns, central banks, PSEs or multilateral development banks as HQLA level 2A assets is configured as part of this rule.	Paragraph 52 (a)
19	LRM - HQLA Reclassification - Level 2A - Market Asset-Issuer	This rule reclassifies marketable securities assigned a 20% risk weight and issued by sovereigns, central banks, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of 20% risk weight marketable securities issued by sovereigns, central banks, PSEs or multilateral development banks as HQLA level 2A assets is configured as part of this rule.	Paragraph 52 (a)
20	LRM - HQLA Reclassification - Level 2A - Non-Financial Corporate Bonds	This rule reclassifies debt securities other than covered bonds issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of corporate bonds, excluding covered bonds, as HQLA level 2A assets are configured as part of this rule.	Paragraph 52 (b)
21	LRM - HQLA Reclassification - Level 2A - Covered	This rule reclassifies covered bonds issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS	The classification of covered bonds as HQLA level 2A assets is configured as part of this rule.	Paragraph 52 (b)

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Bonds	238.		
22	LRM - HQLA Reclassification - Level 2B RMBS	This rule reclassifies residential mortgage backed securities as HQLA Level 2B RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of residential mortgage backed securities as HQLA level 2B RMBS assets is configured as part of this rule.	Paragraph 54 (a)
23	LRM - HQLA Reclassification - Level 2B Non-RMBS - Non-Financial Corporate Bonds	This rule reclassifies debt securities issued by non-financial corporates as HQLA Level 2B Non-RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of debt securities, including commercial papers, issued by non-financial corporates as HQLA level 2B non-RMBS assets is configured as part of this rule.	Paragraph 54 (b)
24	LRM - HQLA Reclassification - Level 2B Non-RMBS - Non-Financial Common Equities	This rule reclassifies common equities issued by non-financial entities as HQLA Level 2B Non-RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of common equities issued by non-financial entities as HQLA level 2B non-RMBS assets is configured as part of this rule.	Paragraph 54 (c)
25	LRM - Mitigant HQLA Reclassification -	This rule reclassifies cash received as a mitigant as an HQLA Level 1 asset in accordance with the criteria specified by	The classification of cash and central bank reserves as HQLA level 1 assets is configured as part of this rule. It also addresses the requirement	Paragraphs 50 (a) to 50 (b), 31, 39 to 40

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Level 1 - Cash	BIS in BCBS 238.	of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	
26	LRM - Mitigant HQLA Reclassification - Level 1 - Marketable Securities - Issuer	This rule reclassifies mitigants which are marketable securities issued by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of zero risk weight marketable securities issued by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA level 1 assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 50 (c), 31, 39 to 40
27	LRM - Mitigant HQLA Reclassification - Level 1 - Marketable Securities - Guarantor	This rule reclassifies mitigants which are marketable securities guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of zero risk weight marketable securities guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks as HQLA level 1 assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 50 (c), 31, 39 to 40

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
28	LRM - Mitigant HQLA Reclassification - Level 1 - Debt Securities - Domestic Currency	This rule reclassifies mitigants which are securities issued by non-zero risk weight sovereigns and central banks as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of securities issued in the domestic currency by non-zero risk weight sovereigns and central banks as HQLA level 1 assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 50 (d), 31, 39 to 40
29	LRM - Mitigant HQLA Reclassification - Level 1 - Debt Securities - Foreign Currency	This rule reclassifies mitigants which are securities issued by non-zero risk weight domestic sovereigns and central banks in foreign currency as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of securities issued in foreign currencies by non-zero risk weight domestic sovereigns and central banks as HQLA level 1 assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 50 (e), 31, 39 to 40
30	LRM - Mitigant HQLA Reclassification - Level 2A - Market Asset-Guarantor	This rule reclassifies mitigants which are marketable securities assigned a 20% risk weight and guaranteed by sovereigns, central banks, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of 20% risk weight marketable securities guaranteed by sovereigns, central banks, PSEs or multilateral development banks as HQLA level 2A assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet	Paragraphs 52 (a), 31, 39 to 40

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			all the required criteria.	
31	LRM - Mitigant HQLA Reclassification - Level 2A - Market Asset-Issuer	This rule reclassifies mitigants which are marketable securities assigned a 20% risk weight and issued by sovereigns, central banks, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of 20% risk weight marketable securities issued by sovereigns, central banks, PSEs or multilateral development banks as HQLA level 2A assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 52 (a), 31, 39 to 40
32	LRM - Mitigant HQLA Reclassification - Level 2A - Non-Financial Corporate Bonds	This rule reclassifies mitigants which are debt securities other than covered bonds issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of corporate bonds, excluding covered bonds, as HQLA level 2A assets are configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 52 (b), 31, 39 to 40
33	LRM - Mitigant HQLA Reclassification - Level 2A - Covered Bonds	This rule reclassifies mitigants which are covered bonds issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of covered bonds as HQLA level 2A assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required	Paragraphs 52 (b), 31, 39 to 40

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			criteria.	
34	LRM - Mitigant HQLA Reclassification - Level 2B RMBS	This rule reclassifies mitigants which are residential mortgage backed securities as HQLA Level 2B RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of residential mortgage backed securities as HQLA level 2B RMBS assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 54 (a), 31, 39 to 40
35	LRM - Mitigant HQLA Reclassification - Level 2B Non-RMBS - Non-Financial Corporate Bonds	This rule reclassifies mitigants which are debt securities issued by non-financial corporates as HQLA Level 2B Non-RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of debt securities, including commercial papers, issued by non-financial corporates as HQLA level 2B non-RMBS assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	Paragraphs 54 (b), 31, 39 to 40
36	LRM - Mitigant HQLA Reclassification - Level 2B Non-RMBS - Non-Financial Common	This rule reclassifies mitigants which are common equities issued by non-financial entities as HQLA Level 2B Non-RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of common equities issued by non-financial entities as HQLA level 2B non-RMBS assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required	Paragraphs 54 (c), 31, 39 to 40

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Equities		criteria.	
37	LRM - BIS Substitutable HQLA Reclassification - Level 1 - Cash	This rule reclassifies cash and banknotes that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of cash that can potentially be substituted for existing collateral, as HQLA level 1 assets is configured as part of this rule.	Paragraphs 50 (a), 122
38	LRM - BIS Substitutable HQLA Reclassification - Level 1 - Marketable Securities - Issuer	This rule reclassifies marketable securities issued by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank and European Community, or multilateral development banks that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of zero risk weight marketable securities issued by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks, that can potentially be substituted for existing collateral, as HQLA level 1 assets is configured as part of this rule.	Paragraphs 50 (c), 122

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
39	LRM - BIS Substitutable HQLA Reclassification - Level 1 - Marketable Securities - Guarantor	This rule reclassifies the marketable securities guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of zero risk weight marketable securities guaranteed by sovereigns, central banks, PSEs, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community and multilateral development banks, that can potentially be substituted for existing collateral, as HQLA level 1 assets is configured as part of this rule.	Paragraphs 50 (c), 122
40	LRM - BIS Substitutable HQLA Reclassification - Level 1 - Debt Securities - Domestic Currency	This rule reclassifies securities issued by non-zero risk weight sovereigns and central banks that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of securities issued in the domestic currency by non-zero risk weight sovereigns and central banks that can potentially be substituted for existing collateral, as HQLA level 1 asset is configured as part of this rule.	Paragraphs 50 (d), 122
41	LRM - BIS Substitutable HQLA Reclassification -	This rule reclassifies issued by domestic non-zero risk weight securities sovereigns and central banks in foreign currency that can be contractually	The classification of securities issued in foreign currencies by non-zero risk weight domestic sovereigns and central banks that can potentially be substituted for existing collateral, as HQLA level	Paragraphs 50 (e), 122

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Level 1 - Debt Securities - Foreign Currency	substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by BIS in BCBS 238.	1 asset is configured as part of this rule.	
42	LRM - BIS Substitutable HQLA Reclassification - Level 2A - Market Asset-Guarantor	This rule reclassifies marketable securities assigned a 20% risk weight and guaranteed by sovereigns, central banks, PSEs or multilateral development banks that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of 20% risk weight marketable securities guaranteed by sovereigns, central banks, PSEs or multilateral development banks, that can potentially be substituted for existing collateral, as HQLA level 2A assets is configured as part of this rule.	Paragraphs 52 (a), 122
43	LRM - BIS Substitutable HQLA Reclassification - Level 2A - Market Asset-Issuer	This rule reclassifies marketable securities assigned a 20% risk weight and issued by sovereigns, central banks, PSEs or multilateral development banks that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of 20% risk weight marketable securities issued by sovereigns, central banks, PSEs or multilateral development banks, that can potentially be substituted for existing collateral, as HQLA level 2A assets is configured as part of this rule.	Paragraphs 52 (a), 122
44	LRM - BIS Substitutable	This rule reclassifies debt securities other than covered bonds issued by non-	The classification of corporate bonds, excluding covered bonds, that can potentially be substituted	Paragraphs 52 (b), 122

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	HQLA Reclassification - Level 2A - Non-Financial Corporate Bonds	financial corporates that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	for existing collateral, as HQLA level 2A assets is configured as part of this rule.	
45	LRM - BIS Substitutable HQLA Reclassification - Level 2A - Covered Bonds	This rule reclassifies covered bonds issued by non-financial corporates that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of covered bonds that can potentially be substituted for existing collateral, as HQLA level 2A assets is configured as part of this rule.	Paragraphs 52 (b), 122
46	LRM - BIS Substitutable HQLA Reclassification - Level 2B RMBS	This rule reclassifies residential mortgage backed securities that can be contractually substituted for existing collateral received, as HQLA Level 2B RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of residential mortgage backed securities that can potentially be substituted for existing collateral, as HQLA level 2B RMBS assets is configured as part of this rule.	Paragraphs 54 (a), 122
47	LRM - BIS Substitutable HQLA Reclassification - Level 2B Non-RMBS Non-	This rule reclassifies debt securities issued by non-financial corporates that can be contractually substituted for existing collateral received, as HQLA Level 2B Non-RMBS assets in accordance with the criteria specified by	The classification of debt securities, including commercial papers, issued by non-financial corporates that can potentially be substituted for existing collateral, as HQLA level 2B non-RMBS assets is configured as part of this rule.	Paragraphs 54 (b), 122

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Financial Corporate Bonds	BIS in BCBS 238.		
48	LRM - BIS Substitutable HQLA Reclassification - Level 2B Non-RMBS Non-Financial Common Equities	This rule reclassifies common equities issued by non-financial entities that can be contractually substituted for existing collateral received, as HQLA Level 2B Non-RMBS assets in accordance with the criteria specified by BIS in BCBS 238.	The classification of common equities issued by non-financial entities that can potentially be substituted for existing collateral, as HQLA level 2B non-RMBS assets is configured as part of this rule.	Paragraphs 54 (c), 122
49	LRM - Bank Own Assets - Meets HQLA Operational Requirements Flag Update	This rule identifies whether bank's own assets, both unencumbered assets as well as those placed as collateral, meet the operational requirements set forth by the regulator, except for being unencumbered in the case of placed collateral. In case of unencumbered assets, it updates the Meets HQLA Operational Requirements Flag. In case of placed collateral, it updates the Meets HQLA Operational Requirements on Unwind Flag.	The identification of whether an asset owned by the bank meets the operational requirements set forth by BIS for its inclusion in the stock of HQLA is configured as part of this rule.	Paragraphs 28 to 42

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
50	LRM - BIS - Re-hypothecated Mitigants - Meets HQLA Operational Requirements Flag Update	This rule identifies whether a re-hypothecated mitigant meets the operational requirements set forth by the regulator, except for being unencumbered. It updates the Meets HQLA Operational Requirements on Unwind Flag for such mitigants.	The identification of whether collateral received from a counterparty that is further placed as collateral meets the operational requirements set forth by BIS on unwind is configured as part of this rule.	Paragraphs 28 to 42
51	LRM - BIS - Instruments - Eligible High Quality Liquid Assets Flag Update	This computation rule updates the HQLA Eligibility Flag for bank's own unencumbered assets classified as HQLA that fulfill the HQLA operational requirements and therefore can be included in the stock of HQLA. It also updates the Eligible HQLA on Unwind flag for all assets placed as collateral that are classified as HQLA that fulfill the HQLA operational requirements on unwind and therefore are to be unwound.	The identification of whether a bank's asset is classified as an HQLA that meets all the operational criteria and is therefore eligible to be included in the stock of HQLA is configured as part of this rule.	Paragraph 28
52	LRM - BIS - Mitigants - Meets HQLA Operational Requirements Flag Update	This rule identifies whether a mitigant meets the operational requirements set forth by the regulator to be considered for inclusion in the stock of HQLA. It updates the Meets HQLA Operational	The identification of whether collateral received from counterparty meets the operational requirements set forth by BIS is configured as part of this rule.	Paragraphs 28 to 42

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		Requirements Flag for such mitigants.		
53	LRM - BIS - Mitigants - Eligible High Quality Liquid Assets Flag Update	This computation rule updates the HQLA Eligibility Flag for mitigants classified as HQLA that fulfill the HQLA operational requirements and therefore can be included in the stock of HQLA.	The identification of whether collateral received from counterparty is classified as an HQLA that meets all the operational criteria and is therefore eligible to be included in the stock of HQLA is configured as part of this rule.	Paragraph 28
54	LRM - BIS - Instruments - Hedge Termination Cost Adjusted Value	This computation rule identifies all high quality liquid assets that have a hedge associated with them and computes the value of the unencumbered portion of such assets to be included in the stock as less of the hedge termination cost.	The identification transaction with a hedge associated with them and deduction of the outflow that would arise on the early termination of the hedge is configured as part of this rule.	Paragraph 34
55	LRM - BIS Level 1 Stock Adjustment - Secured Funding Transaction-Addition	This rule reclassifies all secured funding transactions that mature within the LCR horizon and therefore are required to be unwound, where the collateral posted is a level 1 asset to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA, due to such an unwind, as addition of the	The identification of secured funding transactions required to be unwound and the amount to be added to the stock of level 1 assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		collateral posted.		
56	LRM - BIS Level 1 Stock Adjustment - Secured Funding Transaction-Deduction	This rule reclassifies all the secured funding transactions that mature within the LCR horizon and therefore are required to be unwound, where the collateral posted is an HQLA, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the amount received.	The identification of secured funding transactions required to be unwound and the amount to be deducted from the stock of level 1 assets due to such an unwind is configured as part of this rule.	Annex 1
57	LRM - BIS Level 1 Stock Adjustment - Secured Lending Transaction-Addition	This rule reclassifies all the secured lending transactions that mature within the LCR horizon and therefore are required to be unwound, where the mitigant received is an HQLA, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the amount paid.	The identification of secured lending transactions required to be unwound and the amount to be added to the stock of level 1 assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
58	LRM - BIS Level 1 Stock Adjustment - Secured Lending Transaction-Deduction	This rule reclassifies all the secured lending transactions that mature within the LCR horizon and therefore are required to be unwound, where the mitigant received is a level 1 asset, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received.	The identification of secured lending transactions required to be unwound and the amount to be deducted from the stock of level 1 assets due to such an unwind is configured as part of this rule.	Annex 1
59	LRM - BIS Level 1 Stock Adjustment - Asset Exchange Deduction	This rule reclassifies all the asset exchange transactions that matures within the LCR horizon and therefore is required to be unwound, where the mitigant received is a level 1 asset and the collateral posted is an HQLA, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received.	The identification of asset exchange transactions required to be unwound and the amount to be deducted from the stock of level 1 assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
60	LRM - BIS Level 1 Stock Adjustment - Asset Exchange Addition	This rule reclassifies all the asset exchange transactions that matures within the LCR horizon and therefore is required to be unwound, where the mitigant received is an HQLA and the collateral posted is a level 1 asset, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted.	The identification of asset exchange transactions required to be unwound and the amount to be added to the stock of level 1 assets due to such an unwind is configured as part of this rule.	Annex 1
61	LRM - BIS Level 2A Stock Adjustment - Secured Funding Transaction	This rule reclassifies all secured funding transactions that mature within the LCR horizon and therefore are required to be unwound, where the collateral posted is a level 2A asset, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA, due to such an unwind, as addition of the collateral posted.	The identification of secured funding transactions required to be unwound and the amount to be added to the stock of level 2A assets due to such an unwind is configured as part of this rule.	Annex 1
62	LRM - BIS Level 2A Stock Adjustment - Secured Lending	This rule reclassifies all the secured lending transactions that mature within the LCR horizon and therefore are required to be unwound, where the	The identification of secured lending transactions required to be unwound and the amount to be deducted from the stock of level 2A assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Transaction	mitigant received is a level 2A asset, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received.		
63	LRM - Level 2A Stock Adjustment - Asset Exchange Deduction	This rule reclassifies all the asset exchange transactions that mature within the LCR horizon and therefore are required to be unwound, where the mitigant received is a level 2A asset and the collateral posted is an HQLA, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received.	The identification of asset exchange transactions required to be unwound and the amount to be deducted from the stock of level 2A assets due to such an unwind is configured as part of this rule.	Annex 1
64	LRM - Level 2A Stock Adjustment - Asset Exchange Addition	This rule reclassifies all the asset exchange transactions that matures within the LCR horizon and therefore is required to be unwound, where the mitigant received is an HQLA and the collateral posted is a level 2A asset, to the appropriate adjustment rule. It updates the type of adjustment to the	The identification of asset exchange transactions required to be unwound and the amount to be added to the stock of level 2A assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		stock of HQLA due to such an unwind as addition of the collateral posted.		
65	LRM - BIS Level 2B RMBS, Non RMBS Stock Adjustment - Secured Funding Transaction	This rule reclassifies all secured funding transactions that mature within the LCR horizon and therefore are required to be unwound, where the collateral posted is a level 2B asset, either RMBS or non-RMBS, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA, due to such an unwind, as addition of the collateral posted.	The identification of secured funding transactions required to be unwound and the amount to be added to the stock of level 2B RMBS and non-RMBS assets due to such an unwind is configured as part of this rule.	Annex 1
66	LRM - BIS Level 2B RMBS, Non-RMBS Stock Adjustment - Secured Lending Transaction	This rule reclassifies all the secured lending transactions that mature within the LCR horizon and therefore are required to be unwound, where the mitigant received is a level 2B asset, either RMBS or non-RMBS, to the appropriate adjustment rule. It updates the type of adjustment to the stock of	The identification of secured lending transactions required to be unwound and the amount to be deducted from the stock of level 2B RMBS and non-RMBS assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		HQLA due to such an unwind as deduction of the collateral received.		
67	BIS Level 2B RMBS, Non RMBS Stock Adjustment - Asset Exchange Deduction	This rule reclassifies all the asset exchange transactions that mature within the LCR horizon and therefore are required to be unwound, where the mitigant received is a level 2B asset, either RMBS or non-RMBS, and the collateral posted is an HQLA, to the appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received.	The identification of asset exchange transactions required to be unwound and the amount to be deducted from the stock of level 2B RMBS and non-RMBS assets due to such an unwind is configured as part of this rule.	Annex 1
68	LRM - BIS Level 2B RMBS, Non RMBS Stock Adjustment - Asset Exchange Addition	This rule reclassifies all the asset exchange transactions that matures within the LCR horizon and therefore is required to be unwound, where the mitigant received is an HQLA and the collateral posted is a level 2B asset, either RMBS or non-RMBS, to the	The identification of asset exchange transactions required to be unwound and the amount to be added to the stock of level 2B RMBS and non-RMBS assets due to such an unwind is configured as part of this rule.	Annex 1

Serial No.	Rule Name	Rule Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		appropriate adjustment rule. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted.		

1.1.6.2 Regulation Addressed through Business Assumptions

The application supports multiple assumptions with pre-configured rules and scenarios based on regulator specified scenario parameters such as inflow rates, outflow rates, run-offs and haircuts and so on. The list of pre-configured business assumptions and the corresponding reference to the regulatory requirement that it addresses is provided in the following table:

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
1	HQLA Haircuts	Haircuts for high quality liquid assets.	The haircuts on high quality liquid assets are pre-defined as part of this assumption. This assumption applies a 0% haircut on level 1 assets, 15% on level 2A assets, 25% on level 2B RMBS assets and 50% on level 2B non-RMBS assets.	Paragraphs 49, 52, 54
2	Highly Stable Retail Deposit and SME UWF Runoff	Run-offs on the highly stable portion of deposits from retail customers and unsecured wholesale funding (UWF) from SMEs treated as retail.	The run-off rates on the highly stable portion of deposits from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 3% run-off on the stable portion of retail deposits that meet additional criteria for deposit insurance schemes and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	Paragraphs 75 to 78, 85 to 92
3	Penalty Free Highly Stable Retail and SME	Run-offs on the portion of highly stable term deposits, from retail customers and	The run-off rates on the portion of highly stable term deposits, that are treated as demand deposits,	Paragraphs 75 to 78, 82 to 83, 85 to 92

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	UWF Runoff	unsecured wholesale funding (UWF) from SMEs treated as retail, that are treated as a demand deposits.	from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 3% run-off on the portion of stable retail deposits maturing beyond the LCR horizon that meet additional criteria for deposit insurance schemes and can either be withdrawn without incurring a penalty or are allowed to be withdrawn despite a clause that says the depositor has no legal right to withdraw.	
4	Stable Retail Deposit and Unsecured SME Funding Runoff	Run-offs on the stable portion of deposits from retail customers and unsecured wholesale funding from SMEs treated as retail.	The run-off rates on the stable portion of deposits from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 5% run-off on the stable portion of retail deposits that do not meet additional criteria for deposit insurance schemes and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	Paragraphs 75 to 77, 85 to 92
5	Penalty Free Stable	Run-offs on the portion of stable term	The run-off rates on the portion of stable term	Paragraphs 75 to 77, 82 to 83, 85 to 92

Serial No.	**Assumption Name**	**Assumption Description**	**Regulatory Requirement Addressed**	**BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference**
	Retail and SME UWF Runoff	deposits, from retail customers and unsecured wholesale funding (UWF) from SMEs treated as retail, that are treated as a demand deposits.	deposits, that are treated as demand deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 5% run-off on the portion of stable retail deposits maturing beyond the LCR horizon that do not meet additional criteria for deposit insurance schemes and can either be withdrawn without incurring a penalty or are allowed to be withdrawn despite a clause that says the depositor has no legal right to withdraw.	
6	Less Stable Retail Deposit and Unsecured SME Funding Runoff	Run-offs on the less stable portion of deposits from retail customers and unsecured wholesale funding from SMEs treated as retail.	The run-off rates on the less stable portion of deposits from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 10% run-off on the portion of retail deposits that do not meet the deposit stability criteria and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	Paragraphs 79 to 81, 85 to 92
7	Penalty Free Less Stable	Run-offs on the portion of less stable term	The run-off rates on the portion of less stable term	Paragraphs 79 to 80, 82 to 83, 85 to 92

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Retail and SME UWF Runoff	deposits, from retail customers and unsecured wholesale funding (UWF) from SMEs treated as retail, that are treated as a demand deposits.	deposits, that are treated as demand deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 10% run-off on the portion of retail deposits maturing beyond the LCR horizon that do not meet the deposit stability criteria and can either be withdrawn without incurring a penalty or are allowed to be withdrawn despite a clause that says the depositor has no legal right to withdraw.	
8	High Run-off Category 1 Retail Deposit and SME UWF Runoff	Run-offs on the portion of deposits from retail customers and unsecured wholesale funding from SMEs treated as retail that are eligible for category 1 high run-offs.	The run-off rates on the deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR, that qualify for higher run-offs are pre-defined as part of this assumption. This assumption applies a 10% run-off on the less stable portion of retail deposits that qualify for category 1 higher run-offs, and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	Paragraphs 74, 79 to 81, 85 to 92
9	Penalty Free HR	Run-offs on the portion of term deposits,	The run-off rates on the term deposits, that are	Paragraphs 74, 79 to 80, 82 to 83, 85

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Category 1 Retail Deposit and SME UWF Runoff	from retail customers and unsecured wholesale funding (UWF) from SMEs treated as retail, that are treated as a demand deposits and are eligible for category 1 high run-offs.	treated as demand deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR, that qualify for higher run-offs are pre-defined as part of this assumption. This assumption applies a 10% run-off on the less stable portion of retail deposits maturing beyond the LCR horizon that qualify for category 1 higher run-offs and can either be withdrawn without incurring a penalty or are allowed to be withdrawn despite a clause that says the depositor has no legal right to withdraw.	to 92
10	High Run-off Category 2 Retail Deposit and SME UWF Runoff	Run-offs on the portion of deposits from retail customers and unsecured wholesale funding from SMEs treated as retail that are eligible for category 2 high run-offs.	The run-off rates on the deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR, that qualify for higher run-offs are pre-defined as part of this assumption. This assumption applies a 10% run-off on the less stable portion of retail deposits that qualify for category 2 higher run-offs, and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	Paragraphs 74, 79 to 81, 85 to 92

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
11	Penalty Free HR Category 2 Retail Deposit and SME UWF Runoff	Run-offs on the portion of term deposits, from retail customers and unsecured wholesale funding (UWF) from SMEs treated as retail, that are treated as a demand deposits and are eligible for category 2 high run-offs.	The run-off rates on the term deposits, that are treated as demand deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR, that qualify for higher run-offs are pre-defined as part of this assumption. This assumption applies a 10% run-off on the less stable portion of retail deposits maturing beyond the LCR horizon that qualify for category 2 higher run-offs and can either be withdrawn without incurring a penalty or are allowed to be withdrawn despite a clause that says the depositor has no legal right to withdraw.	Paragraphs 74, 79 to 80, 82 to 83, 85 to 92
12	High Run-off Category 3 Retail Deposit and SME UWF Runoff	Run-offs on the portion of deposits from retail customers and unsecured wholesale funding from SMEs treated as retail that are eligible for category 3 high run-offs.	The run-off rates on the deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR, that qualify for higher run-offs are pre-defined as part of this assumption. This assumption applies a 10% run-off on the less stable portion of retail deposits that qualify for category 3 higher run-offs, and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR	Paragraphs 74, 79 to 81, 85 to 92

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			horizon.	
13	Penalty Free HR Category 3 Retail Deposit and SME UWF Runoff	Run-offs on the portion of term deposits, from retail customers and unsecured wholesale funding (UWF) from SMEs treated as retail, that are treated as a demand deposits and are eligible for category 3 high run-offs.	The run-off rates on the term deposits, that are treated as demand deposits, from retail customers and SMEs who are treated like retail customers for the purposes of LCR, that qualify for higher run-offs are pre-defined as part of this assumption. This assumption applies a 10% run-off on the less stable portion of retail deposits maturing beyond the LCR horizon that qualify for category 3 higher run-offs and can either be withdrawn without incurring a penalty or are allowed to be withdrawn despite a clause that says the depositor has no legal right to withdraw.	Paragraphs 74, 79 to 80, 82 to 83, 85 to 92
14	Insured Operational Balance Run-off	Run-off on the portion of operational balance, from deposits generated by clearing, custody and cash management activities, that is fully covered by deposit insurance.	The run-off rates on the insured portion of the balance held in operational accounts to fulfill operational requirements are pre-defined as part of this assumption. This assumption applies a 3% run-off on insured operational balances that meet the additional criteria for deposit insurance schemes and a 5% run-off on those that do not meet the additional criteria.	Paragraphs 75 to 78, 93 to 104

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
15	Uninsured Operational Balance Run-off	Run-off on the portion of operational balance, from deposits generated by clearing, custody and cash management activities, that is not covered by deposit insurance.	The run-off rates on the uninsured portion of the balance held in operational accounts to fulfill operational requirements are pre-defined as part of this assumption. This assumption applies a 25% run-off on operational balances that are not covered by deposit insurance.	Paragraphs 93 to 104
16	Run-off on Deposits in Institutional Network of Co-op Banks	Run-off on deposits placed with the central institution or specialized central service providers of an institutional network of co-operative banks due to statutory minimum deposit requirements or in the context of common task sharing and legal, statutory or contractual arrangements.	The run-off rates on deposits placed by a member institution with the central institution or specialized central service providers of an institutional network of co-operative banks are pre-defined as part of this assumption. This assumption applies a 75% rollover i.e. a 25% run-off on deposits in institutional networks of cooperative banks, which are non-operational in nature, placed due to statutory minimum deposit requirements or in the context of common task sharing and legal, statutory or contractual arrangements.	Paragraphs 105 to 106
17	Run-off on Unsecured Non-Operational Funding from SMEs	Run-off on the unsecured wholesale funding, provided by SMEs, that is not classified as an operational deposit. This is achieved by rolling over 1 – run-off rate	The run-off rates on the cash flows, from unsecured funding that is not classified as an operational deposit, received from SME's, treated as wholesale customers for the purposes of LCR, are pre-defined	Paragraphs 107 to 108

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		to beyond the LCR horizon of 30 days.	as part of this assumption. This assumption applies a 80% rollover i.e. 20% run-off on cash flows from non-operational funding accounts that are fully covered by deposit insurance and a 60% rollover i.e. 40% run-off on those non-operational funding accounts that are not fully covered by deposit insurance.	
18	NFC, Sov, CB, MDB, PSE Non-operational UWF Run-off	Run-off on the unsecured wholesale funding (UWF), provided by non-financial corporate (NFC), sovereigns (Sov), central banks (CB), multilateral development banks (MDB) and PSEs, that is not classified as an operational deposit. This is achieved by rolling over 1 – run-off rate to beyond the LCR horizon of 30 days.	The run-off rates on the cash flows, from unsecured funding that is not classified as an operational deposit, received from non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 80% rollover i.e. 20% run-off on cash flows from non-operational funding accounts that are fully covered by deposit insurance and a 60% rollover i.e. 40% run-off on those non-operational funding accounts that are not fully covered by deposit insurance.	Paragraphs 107 to 108
19	UWF Run-off on Non-operational Balance from SMEs	Run-offs on unsecured wholesale funding (UWF) from SMEs not treated as retail.	The run-off rates on the non-operational portion of operational deposits from SME's, treated as wholesale customers for the purposes of LCR, are	Paragraph 96, 107 to 108

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			pre-defined as part of this assumption. This assumption applies a 20% run-off on the non-operational portion of operational deposits that are fully covered by deposit insurance and a 40% run-off on the non-operational portion of operational deposits that are not fully covered by deposit insurance.	
20	NFC, Sov, CB, MDB, PSE UWF Run-off on Non-op Balance	Run-off on the non-operational portion of unsecured wholesale funding provided by non-financial corporate (NFC), sovereigns (Sov), central banks (CB), multilateral development banks (MDB) and PSEs that is classified as an operational deposit.	The run-off rates on the non-operational portion of operational deposits from non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 20% run-off on non-operational portion of operational deposits that are fully covered by deposit insurance and a 40% run-off on the non-operational portion of operational deposits that are not fully covered by deposit insurance.	Paragraphs 96, 107 to 108
21	Other Legal Entity Unsecured Wholesale Funding Run-off	Run-off on unsecured wholesale funding, from wholesale customers other than SMEs, non-financial corporate, sovereigns, central banks, multilateral	The run-off rates on the cash flows, from unsecured funding that is not classified as an operational deposit, received from wholesale counterparties other than SMEs, non-financial corporate,	Paragraphs 105 to 106, 109

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
		development banks and PSEs, provided for non-operational purposes.	sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 0% rollover i.e. 100% run-off on cash flows from non-operational funding accounts.	
22	UWF Run-off on Non-operational Balance of Other Entities	Run-off on the non-operational portion of unsecured wholesale funding (UWF) provided by customers other than non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs that is classified as an operational deposit.	The run-off rates on the non-operational portion of operational deposits from wholesale counterparties other than SMEs, non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 100% run-off on the non-operational portion of operational deposits from such counterparties.	Paragraphs 96, 109
23	Issued Debt Security Outflow	Outflows on debt securities issued by the bank itself.	The run-off rates on the debt securities issued by the bank itself are pre-defined as part of this assumption. This assumption applies a 90% rollover i.e. 10% run-off on issued securities that are sold exclusively in the retail market and held in retail accounts, and 0% rollover i.e. 100% run-off on all other issued securities.	Paragraphs 89 to 91, 110
24	Secured Funding Run-	Run-off on secured funding, excluding	The run-off rates on the secured funding, excluding	Paragraphs 112 to 115

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
	Off	collateral swaps, received from sovereigns, central banks and multilateral development banks.	collateral swaps, received from sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies the regulatory run-offs applicable to each counterparty type in the form of rollover rates i.e. 1 – run-off rates.	
25	Run-off on Secured Funding From PSEs	Run-off on secured funding, excluding collateral swaps, received from PSEs.	The run-off rates on the secured funding, excluding collateral swaps, received from PSEs, are pre-defined as part of this assumption. This assumption applies the regulatory run-offs applicable to PSEs in the form of rollover rates i.e. 1 – run-off rates.	Paragraphs 112 to 115
26	Run-off on Secured Funding from Other Counterparties	Run-off on secured funding, excluding collateral swaps, received from counterparties other than sovereigns, central banks, multilateral development banks and PSEs.	The run-off rates on the secured funding, excluding collateral swaps, received from counterparties other than sovereigns, central banks, multilateral development banks and PSEs, where the transaction is backed by level 2B non-RMBS or other assets, are pre-defined as part of this assumption. This assumption applies the regulatory run-offs applicable to other counterparties, based on the asset quality of the placed collateral, in the form of rollover rates i.e. 1 – run-off rates.	Paragraphs 112 to 115

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
27	Collateral Swap Run-off	Run-off on collateral swap transactions.	The run-off rates on collateral swaps are pre-defined as part of this assumption. This assumption applies the run-offs applicable to the market value of received collateral, when the collateral received under a swap transaction is of a higher quality than the collateral placed, as the difference between the liquidity haircuts applicable to the received and placed collateral.	Paragraphs 112 to 115
28	Additional Collateral Required Due to Ratings Downgrade	Increased liquidity needs arising from the requirement to post additional collateral due to a 3-notch ratings downgrade.	The outflow rate, on the additional collateral required to be posted on contracts with downgrade triggers, due to a 3-notch ratings downgrade, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the downgrade impact amount arising from a 3-notch ratings downgrade.	Paragraph 118
29	Loss of Re-hypothecation Rights Due to Ratings Downgrade	Increased liquidity needs arising from a loss of re-hypothecation rights on assets received as collateral due to a 3-notch ratings downgrade.	The outflow rate, on the additional cash outflows arising on contracts with downgrade triggers that result in a loss of re-hypothecation rights due to a 3-notch ratings downgrade is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of mitigants received under re-	Paragraph 118

Serial No.	**Assumption Name**	**Assumption Description**	**Regulatory Requirement Addressed**	**BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference**
			hypothecation rights corresponding to accounts whose downgrade trigger is activated due to the 3-notch ratings downgrade.	
30	Increased Liquidity Needs Due to Change in Collateral Value	Increased liquidity needs arising from the potential change in the value of posted collateral.	The outflow rate on the additional cash outflow due to a potential loss in the market value of non-level 1 assets posted as collateral is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of non-level 1 posted collateral computed after netting the non-level 1 collateral received under re-hypothecation rights on the same transaction.	Paragraph 119
31	Increased Liquidity Needs Due To Excess Collateral	Increased liquidity needs arising from excess non-segregated collateral received that can be recalled by the counterparty.	The outflow rate on the excess unsegregated collateral held by a bank, which can potentially be withdrawn by the counterparty, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of excess collateral.	Paragraph 120
32	Increased Liquidity Needs from Contractually Due Collateral	Increased liquidity needs arising from collateral that is contractually required to be posted to the counterparty but has not yet been posted.	The outflow rate on the collateral that the bank is contractually required to post to its counterparty, but has not yet posted, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of contractually due collateral.	Paragraph 121

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
33	Increased Liquidity Needs Due to Substitutable Collateral	Increased liquidity needs arising from contracts that allow a counterparty to substitute lower quality collateral for the current higher quality collateral.	The outflow rate on the collateral that the counterparty can contractually substitute with lower quality collateral is pre-defined as part of this assumption. This assumption applies an outflow rate equal to the difference between the liquidity haircuts of collateral that can be potentially substituted by the counterparty and the collateral that substitutes it.	Paragraph 122
34	Increased Liquidity Needs Due to Market Valuation Changes	Increased liquidity needs arising from market valuation changes on derivatives and other transactions.	The outflow rate on the collateral outflows occurring due market valuation changes on derivative and other transactions is pre-defined as part of this assumption. This assumption applies a 100% outflow rate on the largest absolute net 30-day collateral flow occurring during the preceding 24 months under the historical look-back approach.	Paragraph 123
35	Loss of Funding on Structured Financing Instruments	Loss of funding on asset-backed securities, covered bonds and other structured financing instruments.	The run-off rate on the maturing asset-backed securities, covered bonds and other structured financing instruments is pre-defined as part of this assumption. This assumption applies a 100% run-off on structured financing instruments that mature within the LCR horizon.	Paragraph 124

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
36	Loss of Funding from Financing Facility – Maturing Debt	Loss of funding on asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities due to inability to refinance maturing debt.	The run-off rate on the maturing amounts of asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities is pre-defined as part of this assumption. This assumption applies a 100% run-off on the EOP balance of the structured financing facilities that mature within the LCR horizon.	Paragraph 125
37	Loss of Funding from Financing Facility – Return of Assets	Loss of funding on asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities due to potential return of assets.	The run-off rate on the returnable assets underlying asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities is pre-defined as part of this assumption. This assumption applies a 100% run-off on the value of the assets that are returnable within the LCR horizon.	Paragraph 125
38	Loss of Funding from Financing Facility – Liquidity Draws	Loss of funding on asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities due to drawdown of liquidity facilities provided by the bank.	The outflow rate on the undrawn amount available to be drawn down on the liquidity facility extended to the structured financing facility is pre-defined as part of this assumption. This assumption applies a 100% outflow as a drawdown rate on the liquidity facilities extended as support for structured financing purposes.	Paragraph 125

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
39	Drawdowns on Committed Credit and Liquidity Facilities	Drawdowns on committed credit and liquidity facilities extended to retail customers, SMEs, corporates, sovereigns, central banks, MDBs and PSEs.	The outflow rate on the undrawn amount available to be drawn down on the committed credit and liquidity facilities extended to retail customers, SMEs, corporates, sovereigns, central banks, MDBs and PSEs is pre-defined as part of this assumption. This assumption applies the relevant outflow as a drawdown rate, based on the counterparty type, for the aforementioned counterparties.	Paragraphs 126 to 131 (c)
40	Draws on Committed Facilities Extended to Banks	Drawdowns on committed credit and liquidity facilities extended to banks.	The outflow rate on the undrawn amount available to be drawn down on the committed credit and liquidity facilities extended to customers is pre-defined as part of this assumption. This assumption applies the relevant outflow as a drawdown rate, for banks, including those subject to prudential regulation.	Paragraphs 131 (d) to 131 (f)
41	Draws on Committed Facilities Extended to Other Entities	Drawdowns on committed credit and liquidity facilities extended to entities other than retail customers, SMEs, corporates, sovereigns, central banks, MDBs, PSEs and banks.	The outflow rate on the undrawn amount available to be drawn down on the committed credit and liquidity facilities extended to customers other than retail customers, SMEs, corporates, sovereigns, central banks, MDBs, PSEs and banks is pre-	Paragraph 131 (g)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			defined as part of this assumption. This assumption applies a 100% outflow as a drawdown rate to all counterparties excluding the aforementioned counterparties.	
42	Other Contractual Obligations to Financial Institutions	Outflows related to other contractual obligations to extend funds within 30 days to financial institutions.	The outflow rate on other contractual obligations to extend funds to financial institutions, not covered in the previous assumptions, is pre-defined as part of this business assumption. This assumption applies a 100% outflow rate on such contractual obligations.	Paragraph 132
43	Other Contractual Obligations to Non-Financial Customers	Outflows related to other contractual obligations to extend funds within 30 days to retail and non-financial wholesale counterparties.	The outflow rate on the other contractual obligations to extend funds to retail and non-financial corporate customers, in excess of 50% of contractual inflows from such customers within the LCR horizon, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the excess contractual obligation amount.	Paragraph 133
44	Other Contingent Funding Obligation Outflows	Outflows related to trade finance related instruments.	The outflow rate on the trade finance related instruments is pre-defined as part of this assumption. This assumption applies a 5% run-off	Paragraph 138

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			on such trade finance obligations.	
45	Uncommitted Facility Outflows	Drawdowns on uncommitted credit and liquidity facilities extended to customers.	The outflow rate on the undrawn amount available to be drawn down on the uncommitted credit and liquidity facilities extended to customers is pre-defined as part of this assumption. This assumption applies a 0% drawdown on the uncommitted facilities. The drawdown rates are allowed to be updated to reflect the rates specified by national regulators.	Paragraph 140
46	Non-contractual Obligation Outflows	Outflows from non-contractual obligations related to joint ventures, minority investments, debt buy-back requests, structured products, managed funds and any other similar obligations	The outflow rate on the non-contractual obligations related to joint ventures, minority investments, debt buy-back requests, structured products, managed funds and any other similar obligations is pre-defined as part of this assumption. This assumption applies a 0% outflow rate on the non-contractual obligations. The outflow rate is allowed to be updated to reflect the rates specified by national regulators.	Paragraph 140
47	Contractual Interest Payment Outflows	Outflows related to contractual payments of interest.	The outflow rate on the interest payments contractually due within the LCR horizon is pre-defined as part of this assumption. This assumption	Paragraph 141

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			applies a 100% outflow on interest in the form of a 0% rollover rate.	
48	Contractual Dividend Payment Outflows	Outflows related to contractual payments of dividends.	The outflow rate on the dividends payable within the LCR horizon is pre-defined as part of this assumption. This assumption applies a 100% outflow on dividends payable.	Paragraph 141
49	Outflows Related to Short Positions	Outflows related to customer and bank short positions.	The outflow rate on the customer and firm short positions is pre-defined as part of this assumption. This assumption specifies outflows on the short positions based on assets covering such short positions.	Paragraphs 113, 115, 140, 141, 147
50	Secured Lending Inflows	Inflows from secured lending transactions excluding collateral swaps.	The inflow rates on the secured lending, excluding collateral swaps, are pre-defined as part of this assumption. This assumption applies the regulatory inflows to secured lending transactions based on the asset level of the collateral received in the form of rollover rates i.e. 1 – run-off rates. A 0% inflow rate is applied to assets used for covering short positions.	Paragraphs 145 to 146
51	Collateral Swap Inflows	Inflows from collateral swap transactions.	The inflow rates on collateral swaps are pre-defined as part of this assumption. This assumption applies	Paragraphs 145 to 146

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			the inflows applicable to the market value of placed collateral, when the collateral placed under a swap transaction is of a higher quality than the collateral received, as the difference between the liquidity haircuts applicable to the placed and received collateral. A 0% inflow rate is applied when the underlying asset received is used for covering short positions.	
52	Drawdowns on Committed Funding Facilities	Drawdowns on committed facilities received by the bank.	The inflow rate on the undrawn amount available to be drawn down, on the committed credit and liquidity facilities received by the bank, is pre-defined as part of this assumption. This assumption applies a 0% inflow rate on the credit and liquidity lines received by the bank.	Paragraph 149
53	Other Inflows from Retail Counterparties	Other inflows from fully performing loans, which have a specified maturity and are extended to retail customers and SMEs treated as retail.	The inflow rate on the fully performing loans with a stated maturity, extended to retail customers and SMEs who are treated like retail customers for the purposes of LCR, is pre-defined as part of this assumption. This assumption applies a 50% rollover i.e. 50% inflow on performing retail loans.	Paragraphs 150 to 151, 153

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
54	Other Inflows from WSME, NFC, Sov, CB, MDB and PSE	Other inflows from fully performing loans, which have a specified maturity and are extended to small and medium enterprises treated as wholesale (WSME), non-financial corporate (NFC), sovereigns (Sov), central banks (CB), multilateral development banks (MDB) and public sector enterprises (PSE).	The inflow rate on the fully performing loans with a stated maturity, extended to wholesale SMEs, non-financial corporates, sovereigns, central banks, multilateral development banks and public sector enterprises is pre-defined as part of this assumption. This assumption applies a 0% rollover i.e. 100% inflow on performing loans from central banks and a 50% rollover i.e. 50% inflow on those from other non-financial counterparties specified earlier.	Paragraphs 150 to 151, 154
55	Other Inflows from Other Wholesale Counterparties	Other inflows from fully performing loans extended to financial entities, excluding central bank, multilateral development bank and public sector enterprise, and to non-financial wholesale counterparties, excluding corporate, sovereign, central bank, multilateral development bank and public sector enterprise.	The inflow rate on the fully performing loans with a stated maturity, extended to counterparties other than retail, SMEs, non-financial corporates, sovereigns, central banks, multilateral development banks and public sector enterprises, is pre-defined as part of this assumption. This assumption applies a 0% rollover i.e. 100% inflow on performing loans from other financial entities and a 50% rollover i.e. 50% inflow on those from other non-financial counterparties.	Paragraphs 150 to 151, 154
56	Revolving, Non-Maturity	Exclusion of inflows from revolving	The exclusion of cash inflows from revolving	Paragraphs 151 to 152

Serial No.	**Assumption Name**	**Assumption Description**	**Regulatory Requirement Addressed**	**BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference**
	and Non-Performing Inflow Exclusion	products, products that do not have a specified maturity, and products that are not fully performing.	assets, assets that do not have a stated maturity and assets that are not fully performing is pre-defined as part of this assumption. This assumption applies a 100% rollover on the inflows from such assets.	
57	Open Maturity Loan Minimum Payment Inflows	Inflows due to minimum payments received within the LCR horizon on open maturity loans	The inflow rate on the minimum payments of principal, interest and fee, that are contractually due within the LCR horizon, on an open maturity loan, is pre-defined as part of this assumption. This assumption applies a 100% inflow on such minimum payments.	Paragraph 152
58	Operational Deposit Inflows	Inflows from operational deposits held with other financial institutions and deposits held with the centralized institution of a cooperative banking network.	The inflow rate on the deposits, held by the bank at other institutions for operational purposes, are pre-defined as part of this assumption. This assumption applies a 0% inflow on such operational deposits.	Paragraphs 156 to 157
59	Non-HQLA Security Inflows	Inflows from securities not included in the stock of HQLA.	The inflow rate on the performing securities that are excluded from the stock of HQLA is pre-defined as part of this assumption. This assumption applies a 100% inflow on securities classified as Other Assets and securities classified as HQLA but do not	Paragraph 155

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	BCBS 238, Basel III: The Liquidity Coverage Ratio and Liquidity Risk Monitoring Tools Reference
			meet the eligibility criteria for inclusion in the stock of HQLA. It also applies a 0% inflow rate on non-performing securities and securities that are classified as HQLA and meet the criteria for inclusion in the stock of HQLA, to avoid double counting.	
60	Contractual Interest Inflows	Inflows related to contractual receipt of interest.	The inflow rate on the interest contractually receivable, on fully performing assets other than non-HQLA securities, within the LCR horizon is pre-defined as part of this assumption. This assumption applies a 100% inflow on interest in the form of a 0% rollover rate.	Paragraphs 142, 160

Note: The LRM application does not have assumptions configured for Derivatives Cash Inflows (Paragraphs 158 to 159) and Derivatives Cash Outflows (Paragraphs 116 to 117) as this has a 100 % rate specified by the regulator. LRM calculates the netted derivative cash flows occurring within the LCR horizon and includes them in the calculations. For the purpose of stress testing if you require a less than 100 % rate on the inflows and outflows of such transactions, then you need to configure a separate business assumption for the same.

1.2 Net Stable Funding Ratio Calculation

Net Stable Funding Ratio (NSFR) is one of the two minimum standards developed to promote funding and liquidity management in financial institutions. Liquidity Coverage Ratio (LCR) is the first standard which assesses the short term liquidity challenges of a bank.

NSFR assesses the bank's liquidity risks over a longer time horizon. Both the standards, complement each other, are aimed at providing a holistic picture of a bank's funding risk profile, and aid in better liquidity risk management practices.

1.2.1 Overview

NSFR is defined as the amount of available stable funding relative to the required stable funding. Available stable funding refers to the portion of capital and liabilities expected to be reliable over the horizon of 1 year. Required stable funding refers to the portion of assets and off balance sheet exposures over the same horizon. The NSFR ratio is expected to be at least 100%.

$$\left(\frac{Available\ stable\ funding}{Required\ stable\ funding}\right) \geq 100\%$$

1.2.2 Process Flow

The Available Stable Funding (ASF) factor and Required Stable Funding (RSF) factor is applied through business assumptions and reflects through the execution of a Business as Usual (BaU) run in the OFSAA LRM application. The ASF and RSF factors are applied as weights at the account level and the Total ASF and Total RSF is obtained by taking a sum of the all the weighted amounts. The ratio is then computed by the application as the (Total ASF amount)/(Total RSF amount) A set of pre-defined business assumptions for ASF and RSF as defined in the NSFR guidelines are prepackaged in the application. For the complete list of pre seeded ASF and RSF assumptions refer section 1.2.3.1 Regulation Addressed through Business Assumptions.

1.2.2.1 Maturity bands

One of the various dimensions used to allocate ASF and RSF factors is the maturity bucket of the instrument. For NSFR computation, maturity bands are used to allocate the factors. The BIS NSFR band is pre-defined as per regulatory guidelines and has values as follows:

- Less than 6 months
- Greater than or equal to 6 months but less than 1 year
- Greater than or equal one year

- Open maturity

All accounts will be categorized on one of the above bands depending on the maturity date. It must be noted that to categorize any product into open maturity, the Rule "LRM - Classification of Products as Open Maturity" has to be edited and the product must be included in the Rule.

1.2.2.2 Available Amount of Stable Funding Computation

The available stable funding factor is a pre-determined weight ranging from 0% to 100% which is applied through business assumptions for the accounts falling under the dimensional combinations defined. The weights are as guided by the NSFR standard. The available stable funding is then taken as a total of all the weighted amounts where an ASF factor is applied.

The formula for calculating Available Amount of Stable Funding is as follows:

$$\boldsymbol{Available\ Amount\ of\ Stable\ Funding = \sum_{i=1}^{n} Liability_i * Factor_i}$$

$$\boldsymbol{where\ n = \ The\ number\ of\ capital\ and\ liability\ accounts}$$

An example of the application of ASF factor is given below:

Consider an assumption defined with the following dimensional combination and ASF factors, with the based on measure being Total stable balance:

Dimensional Combination			ASF Factor
Product	**Retail/Wholesale Indicator**	**Residual Maturity Band**	
Deposits	R	<= 6 months	95%
Deposits	R	6 months - 1 year	95%
Deposits	R	>= 1 year	95%

If there are five accounts falling under the above combination, then after the assumption is applied the resulting amounts with application of ASF factors is as follows:

Account	Stable Balance	ASF Weighted Amount
A1	3400	3230
A2	3873	3679.35
A3	9000	8550
A4	1000	950
A5	100	95

NOTE: OFS LRM application does not compute ASF items such as Tier 1 and Tier 2 capital, deferred tax liabilities, and minority interest. The items are taken as a download from the OFS Basel application. By updating the latest Basel Run Skey as a setup parameter, the LRM application picks up the respective standard accounting head balances and applies the respective ASF factors.

In case OFS Basel is not installed, then the items mentioned below must be provided as a download in FCT_STANDARD_ACCT_HEAD table.

- Gross Tier 2 Capital
- Deferred Tax Liability related to Other Intangible Asset
- Deferred Tax Liability related to Goodwill
- Deferred Tax Liability related to MSR
- Deferred Tax Liability related to Deferred Tax Asset
- Deferred Tax Liability related to Defined Pension Fund Asset
- Net CET1 Capital post Minority Interest Adjustment
- Net AT1 Capital post Minority Interest Adjustment
- Total Minority Interest required for NSFR

1.2.2.3 Required Amount of Stable Funding Computation

The required stable funding factor is a pre-determined weight ranging from 0% to 100% which is applied through business assumptions for the accounts falling under the defined dimensional combinations. The weights are as guided by the NSFR standard. The required stable funding is then considered as a sum of all the weighted amounts where an RSF factor is applied.

The required stable funding factor is a weight function and is applied in a similar manner as that of the ASF. The formula which is used for calculating the Required Amount of Stable Funding is as follows:

$$\textbf{Required Amount of Stable Funding} = \left(\sum_{i=1}^{n} Asset_i * Factor_i\right) + \left(\sum_{i=1}^{m} Off\ Balance\ Sheet_i * Factor_i\right)$$

$$where\ n = Number\ of\ asset\ accounts$$

$$where\ m = Number\ of\ off\ balance\ sheet\ accounts$$

1.2.2.4 Off Balance Sheet Items

Off balance sheet items are considered under the application of RSF factor, and are given the appropriate factor as guided. Some combinations such as line of credit have a pre-defined RSF factor as guided and are available as pre seeded assumptions. Other off balance sheet products such as Variable Rate Demand Notes (VRDN) and Adjustable Rate Notes (ARN) do not have pre-defined factors and are left to the discretion of the jurisdictions. For such products, the user can define assumptions and apply desired RSF factors as applicable.

1.2.2.5 Derivatives

Derivatives are handled through application of both ASF and RSF factors as applicable. They can behave as either an asset or a liability, depending on the marked to market value. Application of factors on derivatives is done on the market value after subtracting variation margin posted/received against the account. The computation is described below:

1. NSFR derivative liabilities = Derivative liabilities – (Total collateral posted as variation margin against the derivative liabilities)
2. NSFR derivative assets = Derivative assets – (Cash collateral received as variation margin against the derivative assets)
3. The factors are then applied as follows:
    - **ASF factor application**

      ASF amount for derivatives = 0% * Max ((NSFR derivative liabilities –NSFR derivative assets), 0)
    - **RSF factor application**

      RSF amount for derivatives = 100% * Max ((NSFR derivative assets- NSFR derivative liabilities), 0)

Derivative liabilities refer to those derivative accounts where the market value is negative. Derivative assets refer to those derivative accounts where the market value is positive. Apart from the variation margin, the initial margin against derivative contracts is also treated with the appropriate factor.

1.2.2.6 Net Stable Funding Ratio Computation

The Net Stable Funding Ratio is calculated as follows:

$$\boldsymbol{Net\ Stable\ Funding\ Ratio = \frac{Available\ Amount\ of\ Stable\ Funding}{Required\ Amount\ of\ Stable\ Funding}}$$

1.2.3 Pre-configured BIS Regulatory NSFR Scenarios

OFS LRM supports out-of-the-box BIS NSFR assumptions according to BIS guidelines on the Net stable funding ratio.

This section explains the business assumptions which support NSFR as per Basel Committee on Banking Supervision Basel III: the net stable funding ratio, October 2014.

NOTE: This section gives only the contextual information about all the business assumptions. For more detailed information refer OFS LRM application (UI).

1.2.3.1 Regulation Addressed through Business Assumptions

The application supports multiple assumptions with pre-configured rules and scenarios based on regulator specified NSFR scenario parameters. The list of pre-configured business assumptions and the corresponding reference to the regulatory requirement that it addresses is provided in the following tables:

1.2.3.1.1 Available Stable Funding Factor

This section enlists all the pre seeded assumptions acting on liabilities and capital items which receive an ASF factor.

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
Capital Instruments-Tier 1 , Tier 2 and Others				
1	ASF- Capital items DTL and minority interest	[BIS]: Gross tier 1, additional tier 1, tier 2 capital, Deferred tax liabilities and minority interest	This assumption specifies Tier 1 and Tier 2 capital, before the application of capital deductions and excluding the proportion of Tier 2 instruments with residual maturity of less than one year. Capital instruments not included above are those with an effective residual maturity of one year or more.	Paragraphs 21 a and b
Stable and Less Stable Deposits ASF factor				
2	ASF- Stable retail deposits with maturity less than 1yr	[BIS]: ASF- Stable and highly stable deposits as defined in the LCR from retail customers with a remaining maturity of less than 1 year.	This assumption specifies "Stable" (as defined in the LCR) demand and/or term deposits from retail and small business customers.	Paragraph 22.
3	ASF- Less stable retail deposits with maturity more than 1yr	[BIS]: ASF- Stable and highly stable deposits as defined in the LCR from retail customers with a remaining maturity of more than 1 yr and cash flow maturity of less than 1 year	This assumption specifies "Stable" (as defined in the LCR) demand and/or term deposits from retail and small business customers.	Paragraph 22.

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
4	ASF- Less stable retail deposits with maturity less than 1yr	[BIS]: ASF- Less stable deposits as defined in the LCR from retail customers with a remaining maturity of less than 1 year.	This assumption specifies "Less Stable" (as defined in the LCR) demand and/or term deposits from retail and small business customers.	Paragraph 23.
5	ASF: Less stable retail deposits- Cash flow basis	[BIS]: ASF- Less stable deposits as defined in the LCR from retail customers with a remaining maturity of more than 1 yr and cash flow maturity of less than 1 year	This assumption specifies "Less Stable" (as defined in the LCR) demand and/or term deposits from retail and small business customers.	Paragraph 23.
Unsecured Funding from Non-Financial Corporates - ASF factor				
6	ASF-UOD from non fin corporates with maturity less than 1 yr	[BIS] Unsecured operational deposits (UOD) from non-financial corporates with deposit maturity less than 1 year.	The ASF factor to be applied on unsecured funding from non-financial corporates of which is an operational deposit (as defined in the LCR)	Paragraphs 24 (a) and (b).
7	ASF- UOD from non fin corp with maturity more than 1 yr	[BIS] Unsecured operational deposits (UOD) from non-financial corporate with deposit maturity more than 1 year and cash flow maturity less than 1 yr	This assumption specifies unsecured funding from non-financial corporates of which is an operational deposit (as defined in the LCR)	Paragraphs 24 (a) and (b).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
8	ASF-UnOD from nonfin corporates with maturity less than 1 yr	[BIS] Unsecured non-operational deposits (UnOD) from non-financial corporate with deposit maturity less than 1 year. This includes a) entire portion of non-operational deposits. b) non-operational part of operational deposits	This assumption specifies unsecured funding from non-financial corporates of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (a) and (b).
9	ASF- UnOD from non fin corp with maturity more than 1 yr	[BIS] Unsecured non-operational funding (UnOD) from non-financial corporates with deposit maturity more than 1 year and cash flow maturity less than 1 yr	This assumption specifies unsecured funding from non-financial corporate of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (a) and (b).
10	ASF-UnOth from nonfin corporate with maturity less than 1 yr	[BIS] Unsecured funds which are not deposits (UnOth) from non-financial corporate with account maturity less than 1 year.	This assumption specifies unsecured funding from non-financial corporate of which are not deposits.	Paragraphs 24 (a) and (b). (QIS template reference)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
11	ASF- UnOth funds from corporates with maturity more than 1yr	[BIS] Unsecured funds which are not deposits (UnOth) from corporate (financial and non-financial) with account maturity more than 1 year, but cash flow maturity less than 1 year.	This assumption specifies unsecured funding from non-financial corporates of which are not deposits.	Paragraphs 24 (a) and (b). (QIS template reference)
Unsecured Funding from Central Banks-ASF Factor				
12	ASF-UOD from central bank with maturity less than 1 yr	[BIS] Unsecured operational deposit funding from central bank with a deposit maturity of less than 1 year	This assumption specifies the unsecured funding from central banks of which is an operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
13	ASF- UOD from CB PSE MDB Sov with mat more than 1 yr	BIS] Unsecured operational deposit funding from central bank (CB), Public sector enterprises (PSE), National development bank (NDB), Multilateral development bank (MDB) and sovereigns with a deposit maturity of more than 1 year, and cash flow maturity of less than 1 year.	This assumption specifies unsecured funding from central banks of which is an operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
14	ASF- UnOD from central bank with maturity less than 1 year	[BIS] Unsecured non-operational deposit funding from central banks with a deposit maturity of less than 1 year.	This assumption specifies unsecured funding from central banks of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
15	ASF- UnOD from CB NDB PSE MDB Sov with mat more than 1yr	BIS] Unsecured non-operational deposit funding from central bank (CB), Public sector enterprises (PSE), National development bank (NDB), Multilateral development bank (MDB) and sovereigns with a deposit maturity of more than 1 year, and cash flow maturity of less than 1 year.	This assumption specifies unsecured funding from central banks of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
16	ASF-UOth funds from central bank with maturity less than 1yr	[BIS] Unsecured other funds (non deposits) from central banks with an account maturity of less than 1 year.	This assumption specifies unsecured funding from central banks of which are not deposits.	Paragraphs 24 (d) and 25 (a).
17	ASF- UnOth from CB PSE MDB NDB Sov with mat more than 1yr	BIS] Unsecured other funding (non deposits) from central bank (CB), Public sector enterprises (PSE), National development bank (NDB),	This assumption specifies unsecured funding from central banks of which are not deposits.	Paragraphs 24 (d) and 25 (a).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
		Multilateral development bank (MDB) and sovereigns with a deposit maturity of more than 1 year, and cash flow maturity of less than 1 year.		
Unsecured Funding from Sovereigns/PSEs/MDBs/NDBs-ASF Factor				
18	ASF- UOD from PSE NDB MDB with maturity less than a year	[BIS] Unsecured operational deposit (UOD) funding from sovereigns, Public sector entities (PSE), Multilateral development banks (MDB), and National development banks (NDB) with maturity less than 1 year.	This assumption specifies the unsecured funding from sovereigns/PSEs/MDBs/NDBss of which is an operational deposit (as defined in the LCR).	Paragraphs 24 (b) and (c).
19	ASF- UnOD from PSE NDB MDB with maturity less than a year	[BIS] Unsecured non-operational (UnOD) deposit funding from sovereigns, Public sector entities (PSE), Multilateral development banks (MDB), and National development banks (NDB) with maturity less than 1 year.	This assumption specifies unsecured funding from sovereigns/PSEs/MDBs/NDBs of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (b) and (c).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
20	ASF- UnOth from PSE NDB MDB with maturity less than a year	[BIS] Unsecured other funding (UnOth) from sovereigns, Public sector entities (PSE), Multilateral development banks (MDB), and National development banks (NDB) with maturity less than 1 year.	This assumption specifies unsecured funding from sovereigns/PSEs/MDBs/NDBs of which is non-deposit unsecured funding.	Paragraphs 24 (b) and (c).
Unsecured Funding from Other Legal Entities (including financial institutions)				
21	ASF- UOD funds from financ insti with maturity less than 1yr	[BIS] Unsecured operational deposit funding from financial corporates with a remaining maturity of less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is an operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
22	ASF- UOD funds from other LE with maturity less than 1yr	[BIS]: Unsecured operational deposit funding (UOD) from all other legal entities (LE) with a remaining maturity of less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is an operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
23	ASF- UOD funds	[BIS] Unsecured operational deposit	This assumption specifies unsecured	Paragraphs 24 (d) and 25 (a).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	from finan insti with maturity more than 1yr	funding from financial corporates with a remaining account maturity of more than 1 year, but cash flows maturing less than 1 year.	funding from other legal entities (including financial corporates and financial institutions) of which is an operational deposit (as defined in the LCR).	
24	ASF- UnOD funds from other LE with maturity more than 1yr	[BIS]: Unsecured operational deposit funding (UOD) from all other legal entities (LE) with a remaining maturity more than 1 year, but cash flows maturing in less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is an operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
25	ASF- UnOD funds from financ inst with maturity less than 1yr	[BIS] Unsecured non-operational deposit funding from financial corporates with a remaining maturity of less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
26	ASF-UnOD funds from other LE with maturity less than 1yr	[BIS]: Unsecured non-operational deposit funding (UnOD) from all other legal entities (LE) with a remaining maturity of less than 1	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is a non-operational deposit (as defined in the	Paragraphs 24 (d) and 25 (a).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
		year.	LCR).	
27	ASF- UnOD from finan insti with maturity more than 1 yr	[BIS] Unsecured non-operational deposit funding from financial corporates with a remaining account maturity of more than 1 year, but cash flows maturing less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
28	ASF- UnOD funds from other LE with maturity greater than a year	[BIS]: Unsecured non-operational deposit funding (UnOD) from all other legal entities (LE) with a remaining maturity more than 1 year, but cash flows maturing in less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is a non-operational deposit (as defined in the LCR).	Paragraphs 24 (d) and 25 (a).
29	ASF-UnOth funds from finan inst with maturity less than 1yr	[BIS] Unsecured other funding from financial corporates with a remaining maturity of less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is non-deposit unsecured funding.	Paragraphs 24 (d) and 25 (a).
30	ASF-Unoth funds from other LE with maturity less than	[BIS] Unsecured other funding (UnOth) from other legal entities (LE) with a remaining maturity of less	This assumption specifies unsecured funding from other legal entities (including financial corporates and	Paragraphs 24 (d) and 25 (a).

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	1yr	than 1 year.	financial institutions) of which is non-deposit unsecured funding.	
31	ASF- UnOth funds from other LE with maturity more than 1yr	[BIS]: Unsecured other funding (UnOth) from all other legal entities (LE) with a remaining maturity more than 1 year, but cash flows maturing in less than 1 year.	This assumption specifies unsecured funding from other legal entities (including financial corporates and financial institutions) of which is non-deposit unsecured funding.	Paragraphs 24 (d) and 25 (a).
Deposits from Members of the same Cooperative Network of Banks- ASF Factor				
32	ASF-Deposits in network of coop bank with mat less than 1yr	[BIS] Deposits from members of the same cooperative network of banks subject to national discretion with a remaining maturity of less than 1 year.	This assumption specifies the deposits from members of the same cooperative network of banks subject to national discretion as defined in FN 10	Paragraphs 24 (d) and footnote (10).
33	ASF-Deposits from co op banks with mat more than 1 yr	[BIS] Deposits from members of the same cooperative network of banks subject to national discretion with a remaining maturity of more than 1 year.	This assumption specifies the deposits from members of the same cooperative network of banks subject to national discretion as defined in FN 10.	Paragraphs 24 (d) and footnote (10).
Secured Borrowings and Liabilities				

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
34	ASF- Sec deposits from sov, PSE and other parties	Secured deposits from sovereigns, Public sector enterprises (PSE), National development banks (NDB), Multilateral development banks (MDB), central banks and other parties with a residual maturity of less than a year.	This assumption specifies the secured deposits from PSE, MDB, NDB, sovereigns, central banks, and other parties.	Paragraphs 21(c), 24, 25(a)
35	ASF- Sec borr from sov, PSE and other parties	Other Secured liabilities from Retail, Small business enterprises(SME), sovereigns, Public sector enterprises (PSE), National development banks (NDB), Multilateral development banks (MDB), central banks and other parties with a residual maturity of less than a year.	This assumption specifies the other secured liabilities from PSE, MDB, NDB, sovereigns, SME, Retail and other counterparties.	Paragraphs 21(c), 24, 25(a)
36	ASF- Sec borr and dep from corp with maturity less than a yr	Secured deposits and other liabilities from financial and non-financial corporates with maturity less than a year.	This assumption specifies the secured borrowings and liabilities (including secured term deposits) - financial and non-financial corporate.	Paragraphs 21(c), 24, 25(a)
37	ASF- Sec dep and funds mat more	Secured funds from central bank, PSE, sov, NDB, MDB, financial and	This assumption specifies the secured borrowings and liabilities from	Paragraphs 21(c), 24, 25(a)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	than a year; CF within 1yr	non-financial corporates and other parties where residual maturity is greater than a year and CF falling within a year.	Sovereigns, PSE, MDB, NDB, central bank, financial and non-financial corporates and others.	
38	ASF- Sec deposits from wholesale SME	Secured deposits from Small and medium enterprises (SME) which are treated as wholesale.	This assumption specifies the secured deposits from SME treated as wholesale.	Paragraphs 21(c), 24, 25(a)
39	ASF- Sec funds from corp mat more than 1yr, CF within 1yr	Secured deposits and other liabilities from financial and non-financial corporates with residual maturity more than a year, and cash flows falling within one year.	This assumption specifies the secured borrowings and liabilities (including secured term deposits) - financial and non-financial corporate.	Paragraphs 21(c), 24, 25(a)
Other Liability and Equity Categories -ASF factor				
40	ASF- Trade date payables	[BIS]: Trade date payables arising from purchases of foreign currencies, financial instruments and commodities that are expected to settle or have failed but are expected to settle within the standard settlement cycle.	This assumption specifies trade date payables.	Paragraph 25 (d)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
41	ASF- Liabilities with open maturity	[BIS]: Secured deposits and all other borrowings and which do not have a stated maturity.	This assumption specifies liabilities without a stated maturity.	Paragraph 25 (b)
42	ASF-Borrowings and Liabilities with maturities beyond 1yr	[BIS]: Borrowings and liabilities with residual maturities and cash flows falling beyond 1 year.	This assumption specifies the total amount of secured and unsecured borrowings and liabilities (including term deposits) with effective residual maturities of one year or more (Catch all for cash flows beyond 1 year).	Paragraph 21 (c)

1.2.3.1.2 Required Stable Funding Factor

This section enlists all the pre seeded assumptions acting on assets and off balance sheet items which receive an RSF factor.

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
Cash and Central Bank Reserves				
1	RSF- Coins and banknotes	[BIS]: Coins, banknotes, cash and restricted cash held by the bank.	This assumption specifies Banknotes and Coin.	Paragraph 36 (a)
2	RSF- Central bank reserves	[BIS]: All central bank reserves, including, required reserves and excess reserves.	This assumption specifies Central bank Reserves.	Paragraph 36 (b)
Loans to central banks				
3	RSF- Unencumbered claims on central banks	[BIS]: Unencumbered loans and other claims on central banks	This assumption specifies claims on central banks with residual maturities less than 6 months. This assumption specifies Loans to central banks and financial institutions with a residual maturity between 6 months to 1 year.	Paragraphs 31, 36(c), 40(c), 43(a) 43©
4	RSF- Encumbered claims on central	[BIS]: Encumbered loans and other claims on central banks	This assumption specifies Claims on central banks with residual maturities	Paragraphs 31, 36(c), 40(c), 43(a) 43(c)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	banks		less than 6 months. This assumption specifies Loans to central banks and financial institutions with a residual maturity between 6 months to 1 year.	
Deposits Placed Within a Co-operative Network				
5	RSF- Deposits placed within same co operative network	[BIS]: Deposits between banks within the same co operative network, placed as required by law or in the context of common task sharing and legal, statutory, or contractual arrangements.	This assumption specifies the deposits between banks within the same cooperative network can be excluded from liabilities receiving a 0% ASF , provided [mentioned] conditions, so long as the bank that has received the monies and the bank that has deposited, participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members. Such deposits can be assigned an ASF up to the RSF factor assigned by regulation for the same deposits to the depositing bank, not to exceed 85%.	Paragraphs FN (10), 43 (C)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
6	RSF- Unencumbered other deposits from co operative banks	[BIS]: Unencumbered other deposits from co operative banks.	This assumption specifies the deposits between banks within the same cooperative network can be excluded from liabilities receiving a 0% ASF , provided [mentioned] conditions, so long as the bank that has received the monies and the bank that has deposited, participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members. Such deposits can be assigned an ASF up to the RSF factor assigned by regulation for the same deposits to the depositing bank, not to exceed 85%.	Paragraphs FN (10), 43 (C)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
7	RSF- Encumbered other deposits from co operative banks	[BIS]: Encumbered other deposits from Cooperative banks	This assumption specifies the deposits between banks within the same cooperative network can be excluded from liabilities receiving a 0% ASF , provided [mentioned] conditions, so long as the bank that has received the monies and the bank that has deposited, participate in the same institutional network's mutual protection scheme against illiquidity and insolvency of its members. Such deposits can be assigned an ASF up to the RSF factor assigned by regulation for the same deposits to the depositing bank, not to exceed 85%.	Paragraphs FN (10), 43 (C)
Loans to Financial Institutions				

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
8	RSF- Unenc loans to fin insti secured by level 1 asset	[BIS]: Unencumbered loans to financial institutions where the loan is secured against Level 1 assets as defined in the LCR.	This assumption specifies unencumbered loans to financial institutions with residual maturities of less than 6 months, where the loan is secured against level 1 asset and where the bank has the ability to freely rehypothecate the received collateral for the life of the loan.	Paragraphs 31, 38, 40(c), 43(a), 43(c)
9.	RSF-Encum loans to fin insti secured by level 1 asset	[BIS]: Encumbered loans to financial institutions where the loan is secured against Level 1 assets as defined in the LCR.	This assumption specifies unencumbered loans to financial institutions with residual maturities of less than 6 months, where the loan is secured against level 1 asset and where the bank has the ability to freely re hypothecate the received collateral for the life of the loan.	Paragraphs 31, 38, 40(c), 43(a), 43(c)
10.	RSF - Unenc loans to fin insti secured by other level assets	[BIS]: Unencumbered loans to financial institutions where the loan is secured against assets belonging to levels other than level 1, as defined in the LCR.	This assumption specifies all other secured loans to financial institutions.	Paragraphs 31, 39(b), 40(c), 43(a), 43(c)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
11.	RSF- Enc loans to fin insti secured by other level assets	[BIS]: Encumbered loans to financial institutions where the loan is secured against assets belonging to levels other than level 1, as defined in the LCR.	This assumption specifies all other secured loans to financial institutions.	Paragraphs 31, 39(b), 40(c), 43(a), 43(c)
12.	RSF- Unenc unsec loans to financial institutions	[BIS]: Unencumbered unsecured loans to financial institutions.	This assumption specifies all unsecured loans to financial institutions.	Paragraphs 31, 39(b), 40(c), 43(a), 43(c)
13.	RSF- Enc unsec loans to financial institutions	[BIS]: Encumbered unsecured loans to financial institutions.	This assumption specifies all unsecured loans to financial institutions.	Paragraphs 31, 39(b), 40(c), 43(a), 43(c)
Loans to other parties				
14.	RSF- Unenc loans to others, mat less than 1yr	[BIS]: Unencumbered loans with residual maturity less than a year to other counterparties i.e. Non-financial corporate, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	This assumption specifies loans to non-financial corporate, retail and small business customers, sovereigns and PSE with a residual maturity of less than 1 year.	Paragraphs 31, 40(e), 41, 43(a)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
15.	RSF- Enc loans to others, mat less than 1yr	[BIS]: Encumbered loans with residual maturity less than a year to other counterparties i.e. Non financial corporate, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	This assumption specifies loans to non-financial corporate, retail and small business customers, sovereigns and PSE with a residual maturity of less than 1 year.	Paragraphs 31, 40(e), 41, 43(a)
16	RSF- Unenc loans to others, mat more than 1 yr	[BIS]: Unencumbered loans with residual maturity more than a year to other counterparties i.e. Non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	This assumption specifies other unencumbered loans not included in the above categories, with a residual maturity of 1 year or more that would qualify for a 35% or lower weight under Basel 2 approach. Other unencumbered performing loans that do not qualify for the 35% or lower risk weight under Basel 2 and have residual maturities of 1 year or more excluding loans to banks and financial institutions.	Paragraphs 41 (b), 42 (b), 43(a)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
17	RSF - Enc Loans to others, mat more than 1yr	[BIS]: Encumbered loans with residual maturity more than a year to other counterparties i.e. Non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	This assumption specifies other unencumbered loans not included in the above categories, with a residual maturity of 1 year or more that would qualify for a 35% or lower weight under Basel 2 approach. Other unencumbered performing loans that do not qualify for the 35% or lower risk weight under Basel 2 and have residual maturities of 1 year or more excluding loans to banks and financial institutions.	Paragraphs 41 (b), 42 (b), 43(a)
Non HQLA Assets				

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
18.	RSF- Unenc non HQLA assets	[BIS]:Unencumbered securities, with maturity less than 1 year, which do not qualify as High quality liquid assets under the LCR Rule	This assumption specifies all other non HQLA not included in the above categories that have a residual maturity of less than 1 year. Unencumbered securities with a remaining maturity of one year or more and exchange traded equities that are not in default and do not qualify for HQLA.	Paragraphs 31, 42(c), 43(a)
19	RSF- Unenc non HQLA securities mat greater than 1yr	[BIS]:Unencumbered securities, with maturity greater than 1 year which do not qualify as HQLA under the LCR Rule	This assumption specifies all other non HQLA not included in the above categories that have a residual maturity of less than 1 year. Unencumbered securities with a remaining maturity of one year or more and exchange traded equities that are not in default and do not qualify for HQLA.	Paragraphs 31, 42(c), 43(a)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
20	RSF- Enc non HQLA assets	[BIS]:Encumbered portion of securities, with maturity less than 1 year which do not qualify as High quality liquid assets under the LCR Rule	This assumption specifies all other non HQLA not included in the above categories that have a residual maturity of less than 1 year. Unencumbered securities with a remaining maturity of one year or more and exchange traded equities that are not in default and do not qualify for HQLA.	Paragraphs 31, 42(c), 43(a)
21	RSF- Enc non HQLA assets mat greater than 1yr	[BIS]:Encumbered portion of securities, with maturity greater than 1 year which do not qualify as HQLA under the LCR Rule	This assumption specifies all other non HQLA not included in the above categories that have a residual maturity of less than 1 year. Unencumbered securities with a remaining maturity of one year or more and exchange traded equities that are not in default and do not qualify for HQLA.	Paragraphs 31, 42(c), 43(a)
HQLA Eligible Assets				
22	RSF-	[BIS]: Unencumbered assets which	This assumption specifies unencumbered	Paragraphs 37, 40(b),

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	Unencumbered level 1 assets	qualify for inclusion in Level 1 of High quality liquid assets as defined in the LCR.	level 1 assets excluding assets receiving a 0% RSF as in para 36.	
23	RSF- Unencumbered Level 2 assets	[BIS]: Unencumbered assets which qualify for inclusion in Level 2A and 2B of High quality liquid assets as defined in the LCR.	This assumption specifies unencumbered Level 2A assets and unencumbered level 2B assets.	Paragraphs 39(a), 40(b), 40(a)
24	RSF- Encumbered level 1 assets	[BIS]: Encumbered portion of assets which qualify for inclusion in Level 1 of High quality liquid assets as defined in the LCR.	This assumption specifies encumbered Level 1 assets excluding assets receiving a 0% RSF.	Paragraphs 31, 37, 40(b), 43(a)
25	RSF- Encumbered level 2 assets	[BIS]: Encumbered portion of assets which qualify for inclusion in Level 2A and 2B of High quality liquid assets as defined in the LCR.	This assumption specifies encumbered level 2A and 2B NRMBS assets.	Paragraphs 31, 39(a), 40(b), 40(a), 43(a)
Deposits Held at Financial Institutions for Operational Purposes				
26	RSF- Unencumbered Operational balances with other	[BIS]: Operational portion of Unencumbered deposits held at other financial institutions, for operational purpose and are subject	This assumption specifies unencumbered Deposits held at other financial institutions for operational purposes that are subject to the 50% ASF treatment.	Paragraph 40 (d)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	banks	to the 50% ASF treatment.		
27	RSF- Unencumbered non operational balances with other banks	[BIS]: Non operational portion of Unencumbered deposits held at other financial institutions, for operational purpose and are subject to the 50% ASF treatment.	This assumption specifies non-operational deposits held at financial institutions.	Paragraph 40 (d)
28	RSF- Encumbered op and non op balances with other banks	[BIS]: Encumbered deposits held at other financial institutions, for operational purpose and are subject to the 50% ASF treatment.	This assumption specifies encumbered Operational deposits at financial institutions.	Paragraphs 31, 40(d), 43(a)
Residential Mortgages				
29	RSF- Unencumbered residential mortgage loans	[BIS]: Unencumbered residential mortgage loans which would qualify for a) 35% or lesser risk weight as per Basel 2 standardized approach for credit risk b) higher than 35% risk weight as per Basel 2 standardized approach for credit risk	This assumption specifies unencumbered residential mortgages with a residual maturity of 1 year or more that would qualify for a 35% or lesser risk weight as per Basel 2. All other non HQLA not included in above categories that have a residual maturity of less than 1 year, including loans to nonfinancial corporate clients, loans to	Paragraphs 41 a and 40 e

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			retail customers, and small business customers and loans to sovereigns and PSEs	
30	RSF- Encumbered residential mortgage loans	[BIS]: Encumbered residential mortgage loans which would qualify for a) 35% or lesser risk weight as per Basel 2 standardized approach for credit risk b) higher than 35% risk weight as per Basel 2 standardized approach for credit risk	This assumption specifies unencumbered residential mortgages with a residual maturity of 1 year or more that would qualify for a 35% or lesser risk weight as per Basel 2. All other non HQLA not included in above categories that have a residual maturity of less than 1 year, including loans to nonfinancial corporate clients, loans to retail customers, and small business customers and loans to sovereigns and PSEs	Paragraphs 41 a and 40 e
		Commodities		
31	RSF- Unencumbered commodities	[BIS]: Unencumbered physically traded commodities, including gold.	This assumption specifies physically traded commodities including gold.	Paragraphs 31, 42(d), 43(a)
32	RSF- encumbered	[BIS]: Encumbered physically traded	This assumption specifies physically	Paragraphs 31, 42(d), 43(a)

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	commodities	commodities including gold.	traded commodities including gold.	
Trade date Receivables				
33	RSF- Trade date receivables	[BIS]: Trade date receivables arising from purchases of foreign currencies, financial instruments and commodities that are expected to settle or have failed but are expected to settle within the standard settlement cycle.	This assumption specifies trade date receivables	Paragraph 36 (d)
Off Balance Sheet				
34	RSF OBS- Credit and liquidity facilities to client	[BIS]: Off balance sheet exposures- Irrevocable, revocable and conditionally revocable credit and liquidity facilities offered to any clients by the bank	This assumption specifies irrevocable and conditionally revocable facilities to clients	Paragraph 47

1.2.3.1.3 Derivatives

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
1	RSF- Derivative liabilities	[BIS]: RSF Treatment of derivative liabilities	This assumption specifies 20% of derivative liabilities (negative replacement cost amounts) as calculated according to para 19 (before deducting variation margin posted)	Paragraph 43 (d)
2	RSF- Derivative liabilities with netting agreement	[BIS]: RSF Treatment of derivative liabilities with netting agreement	20% of derivative liabilities (negative replacement cost amounts) as calculated according to para 19 (before deducting variation margin posted)	Paragraph 44 (d)
3	ASF- Derivative liabilities	[BIS]: Calculation of derivative liabilities as per NSFR standard, by deducting variation margin posted from market value.	Calculation of NSFR derivative liabilities	Paragraphs 19 and 20
4	ASF - Derivative liabilities with netting agreement	[BIS]: ASF Treatment of derivative liabilities with netting agreement	Calculation of NSFR derivative liabilities	Paragraphs 20 and 20
5	RSF-Derivative	[BIS]: Calculation of derivative assets as per NSFR standard, by	Calculation of NSFR derivative assets	Paragraphs 34 and 35

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	assets	deducting variation margin received in the form of cash from market value.		
6	RSF-Derivative assets with netting agreement	[BIS]: RSF Treatment of derivative assets with netting agreement	Calculation of NSFR derivative assets	Paragraphs 35 and 35
7	RSF- Margin for derivatives	[BIS]: Cash, securities and other assets posted as initial margin for derivative contracts	Cash, securities and other assets posted as initial margin for derivative contracts	Paragraph 42 (a)

2 Regulatory Calculations as Per US Federal Reserve

2.1 Liquidity Coverage Ratio Calculation

2.1.1 Overview

US Federal Reserve issued a notice of final rule, Liquidity Coverage Ratio: Liquidity Risk Measurement, Standards, and Monitoring, in November 2013 covering the requirements for the computation of Liquidity Coverage Ratio for US covered companies. These guidelines are along the lines of those issued by BIS, with some deviations based on the conditions under which US banks operate. US Federal Reserve has prescribed two approaches for computing the Liquidity Coverage Ratio, each of which is applicable to banks of different sizes.

OFS Liquidity Coverage Ratio is updated to comply with WW, Final Rule, and Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014.

1. **Liquidity Coverage Ratio**

   The Liquidity Coverage Ratio is applicable to larger banks and requires the stock of HQLA to be sufficient to cover add-on approach over a liquidity horizon of 30 days. The regulator provides specific guidelines on the inclusion of assets into the stock of HQLA and provides the relevant haircuts. The computation of the denominator is based on a add-on approach based on inflow and outflow rates specified by the regulator.

2. **Modified Liquidity Coverage Ratio**

   A new approach, the modified LCR calculation, is prescribed by US Federal Reserve for smaller banks, which requires the stock of HQLA to be sufficient to cover net cash outflows over a liquidity horizon of 30 days. These banks are required to compute a less stringent LCR, because of their relatively small size and lower complexity. The inflow and outflow rates for such banks are 70% of those prescribed under the LCR approach.

OFS LRM supports both these approaches for computing Liquidity Coverage Ratio as prescribed by the US Federal Reserve in its Final Rule as per Regulation WW, Liquidity Coverage Ratio: Liquidity Risk Measurement, Standards, and Monitoring.

2.1.2 Inputs

Inputs required for Liquidity Coverage Ratio calculated by the LRM application are as follows:

- Liquidity haircut, inflow percentage and outflow percentage of the respective business assumption are preconfigured. However, you can change them, if required.
- Liquidity Horizon is specified as the Run time parameter

2.1.3 Process Flow

This section aims to explain the procedure of calculating the Liquidity Coverage Ratio (LCR).

The procedure for calculating Liquidity Coverage Ratio is as follows:

- Asset Level Identification
- Identifying Eligible HQLA
- Calculation of Stock of High Quality Liquid Asset (SHQLA)
- Determination of the Maturity of Cash Flows
- Deposit Stability Identification
- Classifying Operational Account
- Calculation of Cash Inflows and Outflows
- Calculation of Net Cash Outflows (NCOF)
- Consolidation as Per LCR Approach

The application supports an out-of-the-box Run for computing LCR as per the final Rule issued by the US Federal Reserve. This Run includes the regulatory scenario with associated HQLA haircuts, inflow and outflow rates pre-configured in the form of business assumptions.

2.1.3.1 Asset Level Identification

Assets classified as “available-for-sale” or “held-to-maturity” are included in the stock of HQLA provided they fulfill the following HQLA criteria:

- Are unencumbered
- Meet the operational HQLA requirements
- Are not client pool securities that are held in segregated accounts or cash received from a repurchase agreement on client pool securities held in a segregated account
- If consolidated, then the portion of assets required to cover the consolidated subsidiary’s net cash outflow and an excess amount of assets having unrestricted transferability
- An asset received under a re-hypothecation right where the owner has a right to withdraw the asset anytime during the liquidity horizon without remuneration
- Assets held not to cover operational costs

NOTE:

‘Available-for-Sale Security’ is a security that is purchased with the intent of selling it before its maturity or selling it within a short time period if the security does not have a known maturity.

‘Held-to-Maturity Securities’ are securities that a bank intends to hold until maturity.

All assets, whether owned by the bank or received from counterparties as collateral, are classified as follows:

- Level 1 Assets
- Level 2A Assets
- Level 2B Assets
- Other Assets

Level 1, 2A and 2B assets are considered high quality liquid assets and are included as part of the stock of HQLA provided they meet the HQLA eligibility criteria set out by the US Federal Reserve detailed above. Assets are classified as HQLA based on the qualifying criteria set by the US Federal Reserve. The steps involved in identifying the asset level are as follows:

2.1.3.1.1 Identification of Assets as Liquid and Readily Marketable

The application identifies liquid and readily marketable assets in the following manner:

- It is traded in an active secondary market with more than two committed market makers
- It has a large number of committed non-market maker participants on both the buying and selling sides of transactions
- It has timely and observable market prices
- It has high trading volumes

An asset that is not liquid and readily marketable is not considered a high quality liquid asset.

2.1.3.1.2 Treatment of Assets Issued by Financial Sector Entities

Any asset whose issuer is either a financial sector entity or a consolidated subsidiary of a financial sector entity are classified as non-HQLA assets and excluded from the stock of high quality liquid assets. These attributes are captured at the standard party level.

a. Identification and Treatment of Level 1 Assets

The qualifying criteria for assets to be classified as level 1 assets is detailed below.

Level 1 assets are fully included as part of the stock of high quality liquid assets provided they meet the HQLA eligibility criteria.

The application identifies HQLA Level 1 Assets in the following manner:

i. **Federal Reserve Bank Balances**: Balances held by the Federal Reserve banks include reserve balance requirements, excess balances and term deposits. Only excess balances and certain term deposits are included in the stock of level 1 assets. To be included in the stock, term deposits should be held pursuant to the terms and conditions that:

   - explicitly and contractually permit such term deposits to be withdrawn upon demand prior to the expiration of the term

Or that,

- permit such term deposits to be pledged as collateral for term or automatically-renewing overnight advances from a Federal Reserve Bank

Reserve balance requirements are excluded from the stock as they have to be maintained with the Federal Reserve Bank at all times.

Federal Reserve Bank balances include the central bank reserves held at a US Federal Reserve Bank directly by the bank or through a correspondent bank less any reserve balance requirement.

Additionally, central bank term deposits held by a bank directly or through a correspondent bank are included provided they fulfill the following criteria:

- It is withdrawn on demand prior to maturity

Or

- It is pledged as collateral for term or automatically-renewing overnight advances from a Federal Reserve Bank

The value of eligible term deposits that is included is the amount net of any withdrawal penalty.

ii. **Foreign Withdrawable Reserves**: Reserves held in foreign central banks which have no transferability restrictions are included. Any reserves held by the bank in a foreign central bank that do not have restrictions on use i.e. freely withdrawable and denominated in the local currency of that foreign country are included as level 1 assets. The reserves include term deposits held at the central bank.

iii. **United States Government Securities**: Securities issued by or unconditionally guaranteed as to the timely payment of principal and interest by, the U.S Department of the Treasury, are included. Additionally, securities issued by any other US government agency and explicitly guaranteed by the full faith and credit of the U.S. government, provided that they are liquid and readily-marketable.

iv. **Certain Sovereign and Multilateral Organization Securities**: Securities issued or guaranteed by a sovereign entity, a central bank, the Bank for International Settlements, the International Monetary Fund, the European Central Bank and European Community, or a multilateral development bank are included if the securities fulfill the following conditions:

- Are assigned a 0% risk weight
- Should be liquid and readily marketable
- Issued by an entity whose obligations have a proven record as a reliable source of liquidity in the repurchase or sales markets during stressed market conditions
- Not an obligation of a financial entity or its consolidated subsidiary

v. **Certain Foreign Sovereign Debt Securities**: Debt securities issued by a foreign sovereign entity with a non 0% risk weight if they fulfill the following conditions:

- Are liquid and readily marketable
- Are issued in the local currency of the foreign sovereign

The legal entity holds the securities to cover its cash outflows in that jurisdiction.

b. Identification and Treatment of Level 2A Assets

The application identifies HQLA Level 2A Assets in the following manner:

i. U.S. GSE Securities: A security issued by, or guaranteed as to the timely payment of principal and interest by, a U.S. government-sponsored enterprise, that is investment grade under 12 CFR part 1 as of the calculation date, provided the claim is senior to preferred stock.

ii. Securities issued by or guaranteed by a US government sponsored entity (GSE) as they have been assigned a 20% risk weight.

iii. Securities issued by or guaranteed by a sovereign or multi-lateral development bank that is:

- Not included in level 1 assets
- Assigned a risk weight between 0% and 20%
- Price has not decreased or haircut increased by > 10% during a 30-calendar day period of significant stress
- Not an obligation of a financial entity or its consolidated subsidiary

NOTE: The rule excludes covered bonds and securities issued by other PSE’s to be included in the stock even though they are assigned a 20% risk weight.

c. Identification and Treatment of Level 2B Assets

The application identifies HQLA Level 2B Assets in the following manner:

i. Publicly traded corporate debt securities that meet the following criteria:

- Considered investment grade in accordance with the definition provided in 12 CFR part 1.
- Issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 20% over a 30-day stress period.
- Not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity.

ii. Publicly traded common equities that meet the following criteria:

- Included in Russell 100 Index or an index that the bank's supervisor in a foreign jurisdiction recognizes for inclusion in Level 2B assets if the share is held in that jurisdiction.
- Issued in US Dollars or in the currency of the jurisdiction in which the bank operates and holds the common equity share to cover net cash outflows in that jurisdiction.
- Issued by an entity whose publicly traded common equity shares have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 40% over a 30-day stress period.
- Not issued by a financial sector entity and not issued by a consolidated subsidiary of a financial sector entity
- If held by a depository institution, is not acquired in satisfaction of a debt previously contracted (DPC)
- If held by a consolidated subsidiary of the bank, it includes the publicly traded common equity share in its level 2B liquid assets only if the share is held to cover net cash outflows of its consolidated subsidiary in which the publicly traded common equity share is held.

iii. U.S. general obligation municipal securities that meet the following criteria:

a. Is issued by, or guaranteed as to the timely payment of principal and interest by, a public sector entity.
b. Is liquid and readily marketable.
c. Considered investment grade in accordance with the definition provided in 12 CFR part 1.
d. Is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 20% over a 30-day stress period.
e. Is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity.

NOTE:

A public sector entity is defined as any state, local authority, or other governmental subdivision below the U.S. sovereign entity level.

The maximum value of such securities issued by a single public sector entity than can be included in the stock of HQLA is the fair value up to two times the times the average daily trading volume during the previous four quarters of all general obligation securities issued by that public sector entity.

The U.S. Municipal Securities can be included as Level 2B Asset only to the extent of 5% of the total stock of HQLA.

2.1.3.2 Identifying Eligible HQLA

The application identifies whether a bank's asset or a mitigant received under re-hypothecation rights meets all the operational requirements and generally applicable criteria. If both conditions are met, then such an HQLA is marked as eligible HQLA and are included in the stock of HQLA.

Assets are classified as eligible HQLA if they meet the operational prerequisites as well as the generally applicable criteria for eligible HQLA.

2.1.3.2.1 Operational Requirements

a. Operational Capability to Monetize HQLA

   An asset can be considered HQLA only if the bank has demonstrated the operational capability to monetize such an asset. The application captures this information for each asset as a flag.

b. HQLA Under the Control of the Liquidity Management Function

   To be considered eligible HQLA the asset are under the control of the management function of the bank that manages liquidity. The application captures this information for each asset as a flag.

c. Termination of Transaction Hedging HQLA

   If a HQLA is hedged by a specific transaction, then the application considers the impact of closing out the hedge to liquidate the asset that is, the cost of terminating the hedge while computing the stock of HQLA. The hedge termination cost is deducted from the fair value of the asset and the difference is included in the stock of HQLA.

d. Policies and Procedures to Determine Eligible HQLA Composition

   The banks that have established policies and procedures determine the composition of their eligible HQLA on a periodic basis. This is a qualitative criteria which banks have to ensure compliance with.

2.1.3.2.2 Generally Applicable Criteria for Eligible HQLA

a. Unencumbered

   The application looks at the encumbrance status and includes only those assets in the stock which are unencumbered. If partially encumbered, then the portion of the asset that is unencumbered is considered as HQLA and included in the stock.

b. Segregated Client Pool Securities

   A segregated client pool security held by the bank or the cash received as part of a repo transaction where the underlying is a client pool security are not considered eligible HQLA and therefore excluded from the stock.

c. Maintenance of Eligible HQLA in the United States

   A bank is generally expected to maintain an amount and type of eligible HQLA in the United States that is sufficient to meet its total net cash outflow amount in the United States.

d. Exclusion of Certain Re-hypothecated Assets

Any asset that a bank receives under a re-hypothecation right is not considered eligible HQLA if the counterparty or beneficial owner of the asset has a contractual right to withdraw the asset without an obligation to pay more than the minimum remuneration at any time within 30 calendar days. This exclusion also applies to any asset generated from another asset obtained under such a re-hypothecation right.

e. Exclusion of Assets Designated to Cover Operational Costs

Bank's own assets such as deposits held at other depository institutions for the purpose of meeting its operational costs such as wages, facility maintenance and so on are excluded from HQLA as such assets are not available to cover the liquidity needs that arise during stress situations. The application assesses the operational deposit criteria for such assets and excludes them from the stock of HQLA.

2.1.3.3 Calculation of Stock of High Quality Liquid Asset (SHQLA)

All unencumbered assets classified as Level 1, 2B or 2B which meet the HQLA eligibility criteria are included in the stock of HQLA. The formula for calculating SHQLA is as follows:

$$\begin{aligned} \boldsymbol{Stock\ of\ HQLA} = \{&\boldsymbol{Post - Haircut\ Stock\ of}\ (\boldsymbol{Level\ 1\ Assets + Level\ 2A\ Assets + Level\ 2B\ Assets})\} \\ &- \boldsymbol{Maximum}\ \{\boldsymbol{Unadjusted\ Excess\ HQLA; Adjusted\ Excess\ HQLA}\} \end{aligned}$$

NOTE: All calculations are based on the fair value of assets.

a. **Calculation of Liquid Asset Amount**:

The application applies the relevant liquidity haircuts to the fair value of each eligible HQLA based on the haircuts specified as part of the business assumption. The sum of haircut adjusted fair value of all assets which are not 'other assets' and which are classified as 'eligible HQLA' comprises of the stock of unadjusted HQLA. The stock includes bank's own assets which are unencumbered, i.e. not placed as collateral; as well assets received from counterparties where the bank has a re-hypothecation right and where such assets are not re-hypothecated.

i. Level 1 liquid asset amount

The level 1 liquid asset amount equals the fair value of all level 1 liquid assets held by the bank as of the calculation date that are eligible HQLA, less the amount of the reserve balance requirement less hedge termination costs (if any), less withdrawal penalty on time deposits (if any).

ii. Level 2A liquid asset amount

The level 2A liquid asset amount equals 85 percent of the fair value of all level 2A liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).

iii. Level 2B liquid asset amount

The level 2B liquid asset amount equals 50 percent of the fair value of all level 2B liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).

iv. Level 2B PSE security liquid asset amount

The level 2B liquid asset amount equals 50 percent of the fair value of fair value of all level 2B PSE securities, to the extent of 2 times the average daily trading volumes of all US general obligation municipal bonds issued by each issuer, held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).

b. **Calculation of Unadjusted Excess HQLA**:

The unadjusted excess HQLA is calculated based on the following formula:

$$\begin{aligned}&\boldsymbol{Unadjusted\ Excess\ HQLA}\\&= \boldsymbol{Level\ 2\ Cap\ Excess\ Amount} + \boldsymbol{Level\ 2B\ Cap\ Excess\ Amount}\\&+ \boldsymbol{Level\ 2B\ PSE\ Security\ Cap\ Excess\ Amount}\end{aligned}$$

The formula for computing the cap excess amounts is provided below:

I. **Calculation of Level 2 Cap Excess Amount**

$$\begin{aligned}&\boldsymbol{Level\ 2\ Cap\ Excess\ Amount}\\&= \boldsymbol{Max}[\{\boldsymbol{Level\ 2A\ Liquid\ Asset\ Amount} + \boldsymbol{Level\ 2B\ Liquid\ Asset\ Amount}\\&- (\boldsymbol{0.6667} \times \boldsymbol{Level\ 1\ Liquid\ Asset\ Amount})\}, \boldsymbol{0}]\end{aligned}$$

II. **Calculation of Level 2B Cap Excess Amount**

$$\begin{aligned}&\boldsymbol{Level\ 2\ B\ Cap\ Excess\ Amount}\\&= \boldsymbol{Max}[\langle \boldsymbol{Level\ 2B\ Liquid\ Asset\ Amount} - \boldsymbol{Level\ 2\ Cap\ Excess\ Amount}\\&- \{\boldsymbol{0.1765}\\&\times (\boldsymbol{Level\ 1\ Liquid\ Asset\ Amount} + \boldsymbol{Level\ 2A\ Liquid\ Asset\ Amount})\}\rangle, \boldsymbol{0}]\end{aligned}$$

III. **Calculation of Level 2B PSE Security Cap Excess Amount**

$$\begin{aligned}&\boldsymbol{Level\ 2B\ PSE\ Security\ Cap\ Excess\ Amount}\\&= \boldsymbol{Max}[\langle \boldsymbol{Level\ 2B\ PSE\ Security\ Liquid\ Asset\ Amount}\\&- \boldsymbol{Level\ 2\ Cap\ Excess\ Amount} - \boldsymbol{Level\ 2B\ Cap\ Excess\ Amount}\\&- \{\boldsymbol{0.0526}\\&\times (\boldsymbol{Level\ 1\ Liquid\ Asset\ Amount} + \boldsymbol{Level\ 2A\ Liquid\ Asset\ Amount}\\&+ \boldsymbol{Level\ 2B\ Liquid\ Asset\ Amount}\\&- \boldsymbol{Level\ 2B\ PSE\ Security\ Liquid\ Asset\ Amount})\}\rangle, \boldsymbol{0}]\end{aligned}$$

c. **Identification of Eligible HQLA on Unwind**:

The application identifies the assets that are placed as collateral which are eligible HQLA if they are not encumbered. Placed collateral is marked as eligible HQLA on unwind if it fulfills all of the following criteria:

- Asset Level is level 1, 2A or 2B asset
- Meets HQLA Operational Requirements
- Meets Generally Applicable HQLA Criteria on Unwind

d. **Unwinding of Transactions Involving Eligible HQLA**

The application identifies all transactions maturing within the LCR horizon where HQLA is placed or received. These transactions include repos, reverse repos, secured lending transactions, collateral swaps and so on. Such transactions are to be unwound that is, the original position is to be reversed and the cash or stock of HQLA is adjusted accordingly. This is done to avoid inclusion of any asset in the stock that may have to be returned to its owner before the end of the LCR horizon.

e. **Calculation of Adjusted Liquid Asset Amount**

I. Adjusted Level 1 liquid asset amount

The formula for calculating adjusted level 1 liquid asset amount is as follows:

$$\begin{aligned}&\boldsymbol{Adjusted\ Level\ 1\ Liquid\ Asset\ Amount}\\ &\quad = \boldsymbol{Post\ Haircut\ Level\ 1\ Liquid\ Asset\ Amount}\\ &\quad + \boldsymbol{Post\ Haircut\ Adjustments\ to\ Level\ 1\ Liquid\ Asset\ Amount}\end{aligned}$$

NOTE: Adjustments relate to the cash received or paid and the eligible level 1 assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

II. Adjusted Level 2A liquid asset amount

The formula for calculating adjusted level 2A liquid asset amount is as follows:

$$\begin{aligned}&\boldsymbol{Adjusted\ Level\ 2A\ Liquid\ Asset\ Amount}\\ &\quad = \boldsymbol{Post - Haircut\ Level\ 2A\ Liquid\ Asset\ Amount}\\ &\quad + \boldsymbol{Post\ Haircut\ Adjustments\ to\ Level\ 2A\ Liquid\ Asset\ Amount}\end{aligned}$$

NOTE: Adjustments relate to eligible level 2A assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

III. Adjusted Level 2B liquid asset amount

The formula for calculating adjusted level 2B liquid asset amount is as follows:

$$\begin{aligned}&\boldsymbol{Adjusted\ Level\ 2B\ Liquid\ Asset\ Amount}\\ &\quad = \boldsymbol{Post - Haircut\ Level\ 2B\ Liquid\ Asset\ Amount}\\ &\quad + \boldsymbol{Post\ Haircut\ Adjustments\ to\ Level\ 2B\ Liquid\ Asset\ Amount}\end{aligned}$$

NOTE: Adjustments relate to eligible level 2B assets posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

IV. Adjusted Level 2B PSE security liquid asset amount

The formula for calculating adjusted level 2B PSE security liquid asset amount is as follows:

Adjusted Level 2B PSE Security Liquid Asset Amount = Post-Haircut Level 2B PSE Security Liquid Asset Amount + Post Haircut Adjustments to Level 2B Liquid Asset Amount.

NOTE: Adjustments relate to eligible level 2B PSE securities posted or received as collateral or underlying assets as part of a secured funding transaction, secured lending transaction, asset exchanges, or collateralized derivatives transaction.

f. **Calculation of Adjusted Excess HQLA**

The adjusted excess HQLA is calculated based on the following formula:

$$\begin{aligned}&\boldsymbol{Adjusted\ Excess\ HQLA}\\&\quad= \boldsymbol{Adjusted\ Level\ 2\ Cap\ Excess\ Amount} + \boldsymbol{Adjusted\ Level\ 2B\ Cap\ Excess\ Amount}\\&\quad+ \boldsymbol{Adjusted\ Level\ 2B\ PSE\ Security\ Cap\ Excess\ Amount}\end{aligned}$$

The formula for computing the adjusted cap excess amounts is provided below:

I. Calculation of Adjusted Level 2 Cap Excess Amount

$$\begin{aligned}&\boldsymbol{Adjusted\ Level\ 2\ Cap\ Excess\ Amount}\\&\quad= \boldsymbol{Max}[\{\boldsymbol{Adjusted\ Level\ 2A\ Liquid\ Asset\ Amount}\\&\quad+ \boldsymbol{Adjusted\ Level\ 2B\ Liquid\ Asset\ Amount} - (\boldsymbol{0.6667}\\&\quad\times \boldsymbol{Adjusted\ Level\ 1\ Liquid\ Asset\ Amount})\}, \boldsymbol{0}]\end{aligned}$$

II. Calculation of Adjusted Level 2B Cap Excess Amount

$$\begin{aligned}&\boldsymbol{Adjusted\ Level\ 2\ B\ Cap\ Excess\ Amount}\\&\quad= \boldsymbol{Max}[\langle \boldsymbol{Adjusted\ Level\ 2B\ Liquid\ Asset\ Amount}\\&\quad- \boldsymbol{Adjusted\ Level\ 2\ Cap\ Excess\ Amount}\\&\quad- \{\boldsymbol{0.1765}\\&\quad\times (\boldsymbol{Adjusted\ Level\ 1\ Liquid\ Asset\ Amount}\\&\quad+ \boldsymbol{Adjusted\ Level\ 2A\ Liquid\ Asset\ Amount})\}\rangle, \boldsymbol{0}]\end{aligned}$$

III. Calculation of Adjusted Level 2B PSE Security Cap Excess Amount

$$
\begin{aligned}
&\boldsymbol{Adjusted\ Level\ 2B\ PSE\ Security\ Cap\ Excess\ Amount}\\
&\quad = \boldsymbol{Max}[\langle \boldsymbol{Adjusted\ Level\ 2B\ PSE\ Security\ Liquid\ Asset\ Amount}\\
&\quad - \boldsymbol{Adjusted\ Level\ 2\ Cap\ Excess\ Amount}\\
&\quad - \boldsymbol{Adjusted\ Level\ 2B\ Cap\ Excess\ Amount}\\
&\quad - \{\boldsymbol{0.0526}\\
&\quad \times (\boldsymbol{Adjusted\ Level\ 1\ Liquid\ Asset\ Amount}\\
&\quad + \boldsymbol{Adjusted\ Level\ 2A\ Liquid\ Asset\ Amount}\\
&\quad + \boldsymbol{Adjusted\ Level\ 2B\ Liquid\ Asset\ Amount}\\
&\quad - \boldsymbol{Adjusted\ Level\ 2B\ PSE\ Security\ Liquid\ Asset\ Amount})\}\rangle, \boldsymbol{0}]
\end{aligned}
$$

2.1.3.4 Determination of the Maturity of Cash Flows

For the purposes of calculating the Liquidity Coverage Ratio and the components thereof, a bank assumes an asset or transaction's maturity is based on the following assumptions:

a. If an instrument or transaction is subject to outflow, then the earliest possible contractual maturity date or the earliest possible date the transaction occurs is considered. The application checks if the counter party has an option to reduce the maturity. The following options must be considered which results either in reducing or extending the maturity date:

   i. In case an investor or funds provider has an option that reduces the maturity, then the application considers the earliest date as the maturity date. If the option is exercised then it means that the maturity date is equal to the earliest date or latest date.

   ii. In case an investor or funds provider has an option that extends the maturity, then the application assumes that the investor or funds provider does not exercise the option to extend the maturity. This means that the maturity date equals to the original maturity date if the option is not exercised.

   iii. In case a covered company holds an option to reduce the maturity of the transaction, the application assumes that the option is exercised. If the option is exercised then it means that the maturity date is equal to the earliest date or latest date.

   iv. In case a covered company holds an option to extend the maturity of the transaction, the application assumes that the option is not exercised by the covered company and calculates the maturity of the transaction. This means the existing maturity date continues.

   The application considers the following exceptions to the above mentioned rule (iv):

   - If a long term callable bond which is issued by a covered company has an original maturity greater than one year and the call option held by the covered company does not go into effect until at least six months after the issuance, the original maturity of the bond is considered for purposes of the LCR.

     OR

   - If the covered company holds an option permitting it to repurchase any of its obligation from a sovereign entity, a U.S. government-sponsored enterprise, or a public sector entity, then the original maturity of the obligation is considered for calculation of LCR.

v. In case the covered company has an option that extends the maturity of an obligation it has issued, then the application does not exercise this option to extend the maturity. This means the extended maturity date is considered for the purpose of computing LCR.

vi. In case an option is subject to a contractually defined notice period, then the application determines the earliest possible contractual maturity date regardless of the notice period. This mean that the application considers the earliest date as the maturity date.

b. If an instrument or transaction is subject to inflows, then the application considers the latest possible contractual maturity date or the latest possible date the transaction occurs. The following options are considered which results in increasing the maturity date:

i. In case the borrower has an option which results in extending the maturity, then application assumes that the borrower exercises the option and consider to extend the maturity date to the latest possible date. This means that the maturity date is equal to the earliest date or latest date.

ii. In case the borrower has an option which reduces the maturity, then the application assumes that the borrower will not exercise the option to reduce the maturity. This means that the existing maturity date is continued.

iii. In case the covered company has an option that reduces the maturity then the application assumes that it will not exercise the option to reduce the maturity. This means that the existing maturity date is continued.

iv. In case the covered company has an option that extends the maturity of an instrument or transaction, the application assumes that it will exercise the option to extend the maturity to the latest possible date. If the option is exercised then it means that the maturity date is equal to the earliest date or latest date.

v. In case any option is subject to a contractually defined notice period, then the application considers it while calculating maturity for Inflows.

c. The maturity date of secured lending transactions or inflow-generating asset exchanges is the later of the contractual maturity date of the secured lending transaction or inflow-generating asset exchange and the maturity date of the secured funding transaction or outflow-generating asset exchange for which the received collateral was used.

d. The maturity date for a transaction with financial sector entities and which is not an operational deposit is considered by the application to be the first calendar day after the calculation date for the purpose of LCR.

e. Maturity for transactions related to broker-dealer segregated account inflow amount is considered by the application to be based on calculation performed by the broker-dealer for release of assets to its customers. In case if a broker-dealer performs this calculation on a daily basis, then the inflow is considered by the application to be on the first day of the 30 calendar-day period, if a broker-dealer performs the calculation on a weekly basis, then the inflow is considered on the date of the next regularly scheduled calculation.

NOTE: The revised maturity is considered for computation of LCR. The maturity computation for cash flows is calculated as part of LRM application. However, an assumption is defined to move the cash flows of financial sector entities, which are not an operational deposit, for the purpose of LCR calculation.

2.1.3.5 Deposit Stability Identification

A stable deposit is a deposit whose entire outstanding balance is fully covered by deposit insurance provided by Federal Deposit Insurance Corporation (FDIC) of USA and which satisfies one of the following conditions:

a. It is held in a transactional account by the depositor

   Or

b. The depositor has an established relationship with the reporting legal entity.

   The FDIC covers all deposit accounts, including checking and savings accounts, money market deposit accounts and certificates of deposit. The standard insurance amount is $250,000 per depositor, per insured bank, for an ownership category. The application expects the limit to be provided at a customer-ownership category combination. This limit is allocated to the insurance eligible accounts based on a waterfall approach such that it maximizes insurance coverage from the perspective of deposit stability identification. Once the insurance limit is allocated, deposit stability is identified based on insurance coverage and other conditions. Only the fully covered accounts meeting the other stability criteria are considered stable deposits.

NOTE:

Insurance eligible account means an account which is covered by the deposit insurance scheme.

Fully covered, in the context of US Federal Reserve on LCR, means that, the entire outstanding balance of the deposit account must be covered by insurance.

2.1.3.5.1 Ownership Categories

OFS LRM assumes the insurance limit for each customer per ownership category level as download.

The ownership categories covered by Federal Deposit Insurance Corporation (FDIC) are the following eight in number:

a. Single Accounts
b. Joint Accounts
c. Certain Retirement Accounts
d. Revocable Trust Accounts
e. Irrevocable Trust Accounts

f. Employee Benefit Plan Accounts

g. Corporation / Partnership / Unincorporated Association Accounts

h. Government Accounts

2.1.3.5.2 Products Covered by Federal Deposit Insurance Corporation (FDIC)

FDIC covers all deposit accounts including deposits in a checking account, negotiable order of withdrawal (NOW) account, savings account, money market deposit account (MMDA), time deposit such as a certificate of deposit (CD), or an official item issued by a bank (such as a cashier's check or money order).

2.1.3.5.3 Allocation of Maximum Insured Amount

The insurance limit captured at each customer-ownership category combination is allocated to multiple accounts in the decreasing order of the outstanding amount (including interest) of the accounts, provided it fully covers the outstanding amount of the account. The insurance coverage status is updated for each deposit account as follows:

Fully Insured: Insured Amount = Outstanding Amount

Partially Insured: Insured Amount > 0 and < Outstanding amount

Uninsured: Insured Amount = 0

The insurance limit is allocated to each eligible account belonging to a particular customer within a given ownership category as per the procedure given as follows:

a. Arrange all accounts in the descending order of their outstanding balances.

b. Allocate the insurance limit available to account 1 to n – 1 as per the formula given below:

$$\boldsymbol{Insured\ Amount} = \boldsymbol{If}\ [\{(\boldsymbol{Insurance\ Limit\ Available} - \boldsymbol{Outstanding\ Balance}) \geq \mathbf{0}\}; \boldsymbol{Outstanding\ Balance\ else}\ \mathbf{0}]$$

Where,

Insurance Limit Available : Limit available post allocation to previous accounts

= Insurance Limit Available$_{x-1}$ – Insured Amount $_{x-1}$

x : Number of accounts up to the current account to which insured amount is to be allocated

n : Total number of accounts of a customer which are eligible for insurance coverage under a given ownership category

c. Allocate the remaining available insurance to the last account i.e. account n.

d. If a part of the insurance limit remains unallocated after step 3, it is allocated to the first account which was skipped as part of step 2.

An illustration of this procedure is detailed as follows for all accounts belonging to customer A which are eligible for insurance coverage under the Single ownership category.

Account Number	Outstanding Balance (a)	Insurance Limit Available (b)	Remaining Insurance Limit (b - a)	Insured Amount	Uninsured Amount
9	143934	250000	106066	143934	0
3	131071	106066	-25005	0	131071
5	124006	106066	-17940	0	124006
10	117015	106066	-10949	0	117015
4	91870	106066	14196	91870	0
7	78324	14196	-64128	0	78324
2	58462	14196	-44266	0	58462
1	51370	14196	-37174	0	51370
6	35700	14196	-21504	0	35700
8	29405	14196	-15209	14196	15209

Table 3 Insurance Limit Allocation

2.1.3.6 Classifying Operational Account

Operational deposit means unsecured wholesale funding or a collateralized deposit that is necessary for the covered company to provide operational services as an independent third-party intermediary, agent, or administrator to the wholesale customer or counterparty providing the unsecured wholesale funding or collateralized deposit.

The deposits are classified as operational deposit if it is designated as operational deposit by the covered company and the deposit is used or either cash management, custody management or clearing management and not used of prime brokerage or correspondent banking. The customer must hold the deposit at the covered company for the primary purpose of obtaining the operational services provided by the covered company. The related operational services must be performed pursuant to a legally binding written agreement, and:

a. The termination of the agreement must be subject to a minimum 30 calendar-day notice period; or

b. As a result of termination of the agreement or transfer of services to a third-party provider, the customer providing the deposit would incur significant contractual termination costs or switching costs (switching costs include significant technology, administrative, and legal service costs incurred in connection with the transfer of the operational services to a third-party provider);

2.1.3.7 Calculation of Cash Inflows and Outflows

Note:

- This section details the cash inflows and outflows that are included as part of the regulatory LCR computation as per US Federal Reserve requirements “Name of the US Federal Reserve Guidelines”. The associated regulatory inflow and outflow rates to determine the cash flows to be included in the denominator.
- The inflow and outflow rates are specified as part of business assumption definition UI. You can define and maintain multiple business assumptions with different rates and can apply them to compute the LCR and other liquidity metrics under various scenarios.

Net cash outflow is derived from cash inflow and cash outflow.

2.1.3.7.1 Cash flow Exclusions

a. Cash Inflow computation:

i. Cash Inflow Exclusions

The US Federal Reserve explicitly excludes the following cash flows from the denominator of LCR/modified LCR:

- The deposits held by the bank, at other banks, for its own operational purposes, that is, the bank’s operational deposits
- Amounts that the bank would receive from derivative transactions due to forward sale of mortgage loans or any derivatives that are mortgage commitments or pipeline
- Undrawn amount of funding credit and liquidity lines received by the bank
- The fair value of any asset included in the bank’s stock of HQLA as well as any inflows received from or with respect to such assets. For instance, inflows received from HQLA assets maturing within 30 days.
- Any cash flows from a non performing asset or any asset that is expected to be non-performing within the LCR horizon
- Cash flows from any account that does not have a contractual maturity or from an account whose maturity date is beyond the liquidity horizon
- Any inflows or outflows from intragroup transactions are excluded. These include transactions between the following:
  - The legal entity at the level of which consolidation is being carried out that is, consolidation level and its subsidiaries
  - Any two subsidiaries in the immediate organization structure of the consolidation level entity

ii. Net Derivative Cash Inflow

Net derivative cash flows refer to the cash inflows and outflows obtained from derivative contracts and their underlying collateral. These cash inflows include all payments that the bank is expected to receive from its counterparty as well as any collateral that is due to be received from the counterparty within the LCR horizon. If an ISDA master netting agreement is in place, then the payments and collateral due to the counterparty during the LCR horizon are off-set against the cash inflows. If the net exposure value is positive, it is considered a derivatives cash outflow and included in the outflow part of the denominator.

Such inflows and outflows are offset against each other at a netting agreement level provided the payment netting indicator is Yes.

The process of computing the derivative cash inflows and outflows is provided as follows:

- The application checks if payment netting indicator is Yes for a given netting agreement. If Yes, sum all cash outflows (negative cash flows) and inflows (positive cash flows) denominated in a particular currency, occurring on each date from the instruments which are part of a particular netting agreement and the underlying collateral.
  - If the sum of cash flows is negative, then it is considered net derivative cash outflows.
  - If the sum of cash flows is positive, then it is considered net derivative cash inflows.
- The application checks if payment netting indicator is No for a given netting agreement. If No, then
- Sum all cash outflows denominated in a particular currency, occurring on each date from the instruments which are part of a particular netting agreement and the underlying collateral. This is considered net derivative cash outflow.
- Sum all cash inflows denominated in a particular currency, occurring on each date from the instruments which are part of a particular netting agreement and the underlying collateral. This is considered net derivative cash inflow.
  - The net derivative cash outflow at a legal entity level equals the sum of all derivative cash outflows computed in step 1(i) and 2(i).
  - The net derivative cash outflow at a legal entity level equals the sum of all derivative cash outflows computed in step 1(ii) and 2(ii).

iii. Retail Cash Inflow Amount

The cash inflows from retail customers or counterparties include contractually payable amounts multiplied by the regulator-specified inflow rate.

iv. Unsecured Wholesale Cash Inflow Amount

Unsecured wholesale cash inflows include amounts contractually due from wholesale customers or counterparties, regulated and non-regulated financial companies, investment companies, non-regulated funds, pension funds, investment advisers, or identified companies, or from a consolidated subsidiary of any of the foregoing, or central banks.

v. Securities Cash Inflow Amount

The contractual payments due to the bank from non-HQLA securities that it owns are included as part of cash inflows.

vi. Secured Lending and Asset Exchange Cash Flows

Inflows from secured lending transactions maturing within the LCR horizon are based on the collateral securing such transactions. The inflow rates increase in inverse proportion to the quality of the collateral and are related to the liquidity haircuts specified for such assets.

Inflows from asset exchanges are determined based on the difference between the quality of the assets received and posted. If the assets to be posted by the bank to the counterparty at the maturity of the transaction are of lower quality than the assets that will be received from the counterparty, such asset exchanges result in cash inflows to the bank.

The inflow and outflow rates are specified as part of the business assumptions UI.

vii. Segregated Account Inflow Amount

A Covered Company's broker-dealer segregated account inflow amount is the fair value of all assets released from broker-dealer segregated accounts maintained in accordance with statutory or regulatory requirements for the protection of customer trading assets, provided that the calculation of the broker-dealer segregated account inflow amount, for any transaction affecting the calculation of the segregated balance (as required by applicable law), is consistent with the following:

- In calculating the broker-dealer segregated account inflow amount, the covered company must calculate the fair value of the required balance of the customer reserve account as of 30 calendar days from the calculation date by assuming that customer cash and collateral positions is changed consistent with the outflow and inflow calculations.
- If the fair value of the required balance of the customer reserve account as of 30 calendar days from the calculation date, as calculated consistent with the outflow and inflow calculations, is less than the fair value of the required balance as of the calculation date, the difference is the segregated account inflow amount.
- If the fair value of the required balance of the customer reserve account as of 30 calendar days from the calculation date, as calculated consistent with the outflow and inflow.

viii. Other Cash Inflow Amounts

A Covered Company's inflow amount as of the calculation date includes zero percent of other cash inflow amounts which are other than the inflows included in the following: Excluded Amount for Intragroup Transactions

The inflow amounts mentioned do not include amounts arising out of transactions between the following:

- The Bank and a consolidated subsidiary of the bank; or
- A consolidated subsidiary of the bank and another consolidated subsidiary of the bank.

All of the intra group transactions mentioned above are eliminated for the purpose of computing the Inflow Amount.

b. **Calculation of Cash Outflow**:

i. Retail Funding Outflow

The retail funding outflow amount includes outflows with respect to deposits and other unsecured funding from retail customers, regardless of the maturity of the transaction. These exclude brokered deposits. Retail funding is further classified as stable and less stable based on the regulatory guidelines and receive run-off rates based on this classification. Please refer section Deposit Stability Identification.

- **Classifying small business customers as retail customers**

A business customer is treated as retail customer, if the following conditions are met:

- The banks manages its transactions with the business customer, including deposits, unsecured funding, and credit facility and liquidity facility transactions, in the same way it manages its transactions with individuals;
- Transactions with the business customer have liquidity risk characteristics that are similar to comparable transactions with individuals; and
- The total aggregate funding raised from the business customer is less than $1.5 million

- **Classifying Trust customers as retail customers**

The agencies have concluded that certain trusts pose liquidity risks substantially similar to those posed by individuals, and the agencies are modifying the final rule to clarify that living or testamentary trusts can be treated as retail customers or counterparties if the following conditions are met:

- Is solely for the benefit of natural persons;
- Does not have a corporate trustee; and
- Terminates within 21 years and 10 months after the death of grantors or beneficiaries of the trust living on the effective date of the trust or within 25 years, if applicable under state law (in states that have a rule against perpetuities).

- **Classifying established relationship**

The retail deposits that are entirely covered by deposit insurance and:

(1) Is held by the depositor in a transactional account; or

(2) The depositor that holds the account has another established relationship with the bank such as another deposit account, a loan, bill payment services, or any similar service or product provided to the depositor that the bank demonstrates to the satisfaction of the agency would make deposit withdrawal highly unlikely during a liquidity stress event.

ii. Structured Transaction Outflow

The outflow amount from structured transaction either issued or sponsored by the bank is calculated as the maximum of one of the following values:

- 100% of the structured transactions, issued by the bank, that mature during the LCR horizon and all commitments made by the bank to purchase assets during the LCR horizon.

  Or

- Maximum contractual amount that the bank may be required to provide to its sponsored entity that issues the structured instrument, through a liquidity facility, a return or repurchase of assets from that entity or other funding agreement.

iii. Derivative Cash Outflow

Net derivative cash outflows include all payments that the bank has to make to its counterparty as well as any collateral that is due to be paid by the bank within the LCR horizon. If an ISDA master netting agreement is in place, then the payments and collateral to be received from the counterparty during the LCR horizon are off-set against the cash outflows. If the net exposure value is negative, it is considered a derivatives cash inflow and included in the inflow part of the denominator.

Note:

Any cash flows from forward sales of mortgages and mortgage commitments are excluded from derivative cash flows as they are assigned a different outflow rate.

iv. Mortgage Commitments or Pipelines

A mortgage commitment is a written agreement that the bank is willing to provide a mortgage loan to the buyer in order to complete the purchase formalities. This is not an actual loan but only a commitment to provide the loan. Once the buyer has purchased a property in accordance with the terms of commitment and availed the loan, it gets converted to a mortgage.

As per US Federal Reserve an outflow is captured for retail mortgage commitments.

v. Commitment Outflow Amount

The commitment outflow amount includes the undrawn portion of committed credit and liquidity facilities provided by various counterparties. The application deducts the value of any level 1 or 2A asset which is securing the facility from the portion of the undrawn amount of that facility that are drawn down within the LCR horizon, provided the underlying asset is not included in the stock of HQLA. The outflow amount is determined by multiplying the adjusted undrawn amount with the outflow rates specified by the user. These rates vary based on the facility type and the customer type.

vi. Collateral Outflow

- Changes in financial condition: Derivatives and other transactions may include certain clauses that result in collateral outflows due to change in financial condition of an institution due to a downgrade. The application supports the ability to capture downgrade triggers for derivatives and other transactions. It also supports the ability to activate these triggers through the Ratings Downgrade assumption. For details on this assumption refer Chapter 6 Business Assumptions in the Oracle Financial Services Liquidity Risk Management User Guide in the [OHC Documentation Library](). The collateral outflow due to change in financial condition is supported through calculation and outflow of downgrade impact amount.

A. Downgrade Impact Amount for Derivatives

The downgrade impact amount for derivatives is calculated at the netting agreement level as follows:

a. The application checks if a downgrade trigger exists for a particular derivative transaction. If there is no downgrade trigger, the downgrade impact amount is 0.

b. If a downgrade trigger exists, the application checks for the signage of the net exposure. If the net exposure is positive, that is > 0, the downgrade impact amount is 0.

c. If a downgrade trigger exists and the net exposure is negative, the downgrade impact amount is calculated as follows:

$$\boldsymbol{Downgrade\ Impact\ Amount} = \boldsymbol{Max}[\mathbf{0}, \{\boldsymbol{Abs}(\boldsymbol{Net\ Exposure}) - \boldsymbol{Contractually\ Required\ Collateral}\}]$$

Note:

The ratings downgrade business assumption is defined at the netting agreement level for all accounts that have a netting agreement ID associated with them. The outflow of downgrade impact amount depends on the downgrade specified. For instance, if a 3-notch downgrade is specified, then the downgrade impact amount outflows only for those accounts that have a trigger of 1-notch, 2-notches and 3-notches. If a 2-notch downgrade is specified, then the downgrade impact amount outflows only for those accounts that have a trigger of 1-notch and 2-notches. For details on the ratings downgrade business assumption refer Chapter 6 Business Assumptions in the Oracle Financial Services Liquidity Risk Management User Guide in the [OHC Documentation Library]().

B. Downgrade Impact Amount for Securitizations

The downgrade impact amount for securitizations is calculated as follows:

a. The application checks the commingling indicator value. If the commingling indicator is 'No', the downgrade impact amount is 0.

b. If commingling indicator is 'Yes', the application checks if downgrade trigger exists for such a securitization. If there is no downgrade trigger, the downgrade impact amount is 0.

c. If a downgrade trigger exists the application compares the start date of the collections from the underlying assets with the as of date. If collection start date > as of date, the downgrade impact amount is 0.

d. If the collection start date <= as of date ,the downgrade impact amount is calculated as follows:

$$\boldsymbol{Downgrade\ Impact\ Amount} = \sum_{c}^{f} \boldsymbol{Collections\ from\ underlying\ assets}$$

Where,

c : Collection start date <= as of date

f : As of date

Note:

The ratings downgrade business assumption is defined for securitizations for the outflow of downgrade impact amount.

C. Downgrade Impact Amount for Other Liabilities

In case of other liabilities, including annuities, that have a downgrade trigger associated with them, the downgrade impact amount is calculated as follows:

a. The application checks if a downgrade trigger exists for liabilities other than derivatives and securitizations. If there is no downgrade trigger, the downgrade impact amount is 0. Else,

b. If a downgrade trigger exists, the application checks if the product is derivative or securitization. If it is not a derivative or securitization, the downgrade impact amount is calculated as follows:

$$\boldsymbol{Downgrade\ Impact\ Amount} = \boldsymbol{Max}[\boldsymbol{0}, (\boldsymbol{EOP\ Balance} - \boldsymbol{Collateral\ Posted})]$$

Note:

The ratings downgrade business assumption is defined for other liabilities for the outflow of downgrade impact amount.

i. Potential valuation changes: Collateral outflows may result due to the fall in the fair value of non-level 1 assets securing a transaction. The application provides the ability to specify outflow rates on the fair value of collateral posted.

ii. Excess collateral: Any unsegregated collateral in excess of the amount contractually required to be provided by the counterparty to the bank is assumed to be withdrawn during stress conditions. The application calculates the value of excess collateral and provides the ability to specify outflows on such excess collateral.

The procedure of calculating excess collateral posted by counterparty is as follows:

- The application checks for signage of net exposure. If net exposure is negative, that is < 0, then the excess collateral is 0. Else,
- If net exposure is positive, the excess collateral is calculated as follows:

$$\boldsymbol{Excess\ Collateral = Max[0, (Threshold - Net\ Exposure)]}$$

Note:

- Excess collateral mentioned above is computed only for derivatives and not for any other assets.
- The business assumption of outflow of excess collateral is defined at the netting agreement level for all accounts that have a netting agreement ID associated with them.

iii. For non-derivative transactions , applications computes excess collateral as:

Excess Collateral = Max(0, (Collateral Received - EOP Balance))

iv. Contractually required collateral: Any collateral that is contractually due from the bank to the counterparty, but has not yet been posted, is assumed to be demanded by the counterparty during times of stress. The application calculates the value of contractually due collateral and provides the ability to specify outflows on such collateral.

The procedure of calculating the collateral that a bank is required to post contractually is as follows:

- The application checks for CSA type of the transaction. If CSA Type = One way then the contractually due collateral is 0. Else,
- If CSA Type = Two way, it checks for signage of net exposure. If net exposure is positive i.e. > 0, then the contractually due collateral is 0. Else,
- If net exposure is negative, the contractually due collateral is calculated as follows:

$$\boldsymbol{Contractually\ Due\ Collateral = Max[0, \{Abs(Net\ Exposure) - Threshold\}]}$$

Where,

Threshold : Minimum exposure amount required to call for additional collateral.

Note:

- Contractually due collateral mentioned above is computed only for derivatives and not for any other liabilities.
- The business assumption of outflow of required collateral is defined at the netting agreement level for all accounts that have a netting agreement ID associated with them.
- For non-derivative transactions , application computes the contractually collateral as:

Contractually Due Collateral = Max(0, EOP Balance – Collateral Placed)

v. Outflow related to collateral substitution: In a stress scenario, any collateral that are substituted by collateral, is assumed to be substituted by the lowest quality of collateral allowed under the substitution clause of the contract. The application provides the ability to capture the substitution details identifies the asset level of each substitutable collateral based on the attributes of the substitutable collateral and determines the lowest quality of substitutable collateral permissible under the terms of the contract. The outflow rates due to collateral substitution are captures through the business assumptions UI.

vi. Derivative collateral change: The absolute value of the largest LCR horizon cumulative net mark-to-market collateral outflow or inflow resulting from derivative transactions realized during the preceding 24 months.

vii. Brokered Deposit Outflow

As per US Federal Reserve, brokered deposits are assigned higher Run-offs. A brokered deposit is a deposit that a bank obtains whether directly or indirectly from or through the mediation or assistance of a deposit broker or brokerage house. For instance, a bank may offer a large denomination deposit to a brokerage house which it then sells in smaller chunks to its ultimate customers.

Brokered deposits are further sub-divided into the following categories:

- Reciprocal Brokered Deposits
- Brokered Sweep Deposit
- Other Brokered Deposits

Each of the above specified brokered deposit categories are assigned a different Run-off rate.

viii. Debt Security Outflow

The application defines the debt security outflow amount from retail customers through business assumption. Separate outflow rates are assigned based on the securities issued is structured or not.

ix. Unsecured wholesale funding outflow amount

Any unsecured funding from wholesale customers, including operational deposits that matures within the LCR horizon is identified by the application. The application identified the operational deposits as those arising from clearing, custody and cash management relationship based on the regulatory guidelines. Separate outflow rates are assigned to such funding based on regulatory or user specified parameters.

x. Secured funding and asset exchange outflow amount

Outflows from secured funding transactions maturing within the LCR horizon are based on the collateral securing such transactions. The outflow rates increase in inverse proportion to the quality of the collateral and are related to the liquidity haircuts specified for such assets.

Outflows from asset exchanges are determined based on the difference between the quality of the assets received and posted. If the assets to be posted by the bank to the counterparty at the maturity of the transaction are of higher quality than the assets that will be received from the counterparty, such asset exchanges result in cash outflows to the bank.

The inflow and outflow rates are specified as part of the business assumptions UI.

xi. Central Bank Borrowings

If a bank has borrowed from a foreign central bank, then such borrowings will get an outflow rate equal to the rate specified by that jurisdiction under its minimum liquidity standard. In the absence of a specific outflow rate from the foreign jurisdiction, the outflow rate is equal to the rates specified for secured funding transactions under of the US Federal Reserve's regulation, *Liquidity Coverage Ratio: Liquidity Risk Measurement, Standards, and Monitoring.*

The application provides banks the ability to specify multiple outflow rates for borrowings from each foreign central bank.

2.1.3.8 Calculation of Net Cash Outflows (NCOF)

Under the US Liquidity Coverage Ratio requirements, a peak cumulative net cash outflow day is identified and an add-on is computed and added to the previous Net cash outflow computation. The agencies elected to employ peak day approach to take into account potential maturity mismatches between a covered company's outflows and inflows during the 30 calendar-day period; that is, the risk that a covered company could have a substantial amount of contractual inflows that occur late in a 30 calendar-day period while also having substantial outflows that occur early in the same period. Such mismatches have the potential to threaten the liquidity position of the organization during a time of stress and would not be apparent under the Basel III Revised Liquidity Framework denominator calculation.

Cumulative cash inflows have been capped at 75 percent of aggregate cash outflows in the calculation of total net cash outflows. This limit would have prevented a covered company from relying exclusively on cash inflows, which may not materialize in a period of stress, to cover its liquidity needs and ensure that covered companies maintain a minimum HQLA amount to meet unexpected liquidity demands during the 30 calendar-day period

The formula for computing the Total Net Cash Outflows is as follows:

Total Net Cash Outflows = Aggregated Outflows – MIN (.75*Aggregated Outflows, Aggregated Inflows) + Add-On

Where,

Aggregated Outflows is the sum of:

i. Cash Outflows from Open Maturity Products and
ii. Cash outflows occurring over a 30 day period.

Aggregated Inflows is the sum of:

i. Cash Inflows from Open Maturity Products and
ii. Cash Inflows occurring over a 30 day period

Add –On is calculated as:

i. The greater of:
    a. 0; and
    b. The largest net cumulative maturity outflow amount as calculated for any of the 30 calendar days following the calculation date; minus
ii. The greater of:

a. 0; and
b. The net day 30 cumulative maturity outflow amount as calculated.

2.1.3.8.1 Calculation of Net Cumulative Peak Day amount using Add-on Approach

The proposed net cumulative add – on Approach is calculated in two step process as specified below:

a. Cash outflows and inflows over the 30 calendar-day period are aggregated and netted against one another, with the aggregated inflows capped at 75 percent of the aggregated outflows.
b. Calculation of add-on, which requires a covered company to identify the largest single-day maturity mismatch within the 30 calendar-day period by calculating the daily difference in cumulative outflows and inflows that have set maturity dates, as specified by section 31 of the final rule, within the 30 calendar-day period. The day with the largest difference reflects the net cumulative peak day. The covered company must calculate the difference between that peak day amount and the net cumulative outflow amount on the last day of the 30 calendar-day period for those same outflow and inflow categories that have maturity dates within the 30 calendar-day period. This difference equals the add-on. The amounts calculated in steps one and two are added together to determine the total net cash outflow.

Note:

- In calculating the add-on, both the net cumulative peak day amount and the net cumulative outflow amount on the last day of the 30 calendar-day period cannot be less than zero.
- The categories of inflows and outflows included in the add-on calculation comprise those categories that are the most likely to expose covered companies to maturity mismatches within the 30 calendar-day period, such as repurchase agreements and reverse repurchase agreements with financial sector entities, whereas outflows such as non-maturity retail deposits are not a part of the add-on calculation.
- Transactions that have no maturity date are not included in the calculation of the maturity mismatch add-on.

2.1.3.8.2 Calculation of Inflow Cap

A covered company's total cash inflow amount is capped at 75 percent of its total cash outflows. This is to ensure that covered companies would hold a minimum HQLA amount equal to at least 25 percent of total cash outflows.

However, certain foreign currency exchange derivative cash flows are to be treated on a net basis and have therefore effectively been removed from the gross inflow cap calculation. The inflow leg of a foreign currency exchange derivative transaction in effect is not subject to the 75 percent inflow cap as long as it settles on the same date as the corresponding outflow payment of that derivative transaction.

NOTE: Inflow cap does not apply to the calculation of the maturity mismatch add-on.

2.1.3.8.3 Numerical example for Net Cash Outflow Calculation – LCR

As per the US Federal Reserve, the peak cumulative net cash outflow approach is used for calculation of the denominator of the Liquidity Coverage Ratio. This is applicable to all large banks that are required to calculate the LCR on an unmodified basis. The liquidity horizon prescribed by the US Federal Reserve for the calculation of the LCR is 30 calendar days.

The table below illustrates this approach to Liquidity Coverage Ratio calculation. For computational convenience we have taken the liquidity horizon as 10 days instead of 30 days.

Day	Non Maturing Outflows	Outflows with Maturity Date as specified in section 31	Cumulative Outflows with Maturity Date as specified in section 31	Non Maturing Inflows	Inflows with Maturity Date as specified in section 31	Cumulative Inflows with Maturity Date as specified in section 31	Net Cumulative Maturity Outflows
Day 1		100	100		90	90	10
Day 2		20	120		5	95	25
Day 3		10	130		5	100	30
Day 4		15	145		20	120	25
Day 5		20	165		15	135	30
Day 6		0	165		0	135	30
Day 7		0	165		0	135	30
Day 8		10	175		8	143	32
Day 9		15	190		7	150	40
Day 10		25	215		20	170	45
Day 11		35	250		5	175	75
Day 12		10	260		15	190	70
Day 13		0	260		0	190	70
Day 14		0	260		0	190	70

Day	Non Maturing Outflows	Outflows with Maturity Date as specified in section 31	Cumulative Outflows with Maturity Date as specified in section 31	Non Maturing Inflows	Inflows with Maturity Date as specified in section 31	Cumulative Inflows with Maturity Date as specified in section 31	Net Cumulative Maturity Outflows
Day 15		5	265		5	195	70
Day 16		15	280		5	200	80
Day 17		5	285		5	205	80
Day 18		10	295		5	210	85
Day 19		15	310		20	230	80
Day 20		0	310		0	230	80
Day 21		0	310		0	230	80
Day 22		20	330		45	275	55
Day 23		20	350		40	315	35
Day 24		5	355		20	335	20
Day 25		40	395		5	340	55
Day 26		8	403		125	465	-62
Day 27		0	403		0	465	-62

Day	Non Maturing Outflows	Outflows with Maturity Date as specified in section 31	Cumulative Outflows with Maturity Date as specified in section 31	Non Maturing Inflows	Inflows with Maturity Date as specified in section 31	Cumulative Inflows with Maturity Date as specified in section 31	Net Cumulative Maturity Outflows
Day 28		0	403		0	465	-62
Day 29		5	408		10	475	-67
Day 30		2	410		5	480	-70
Total	300	410		100	480		

Table 4 Peak Cumulative Net Cash Outflow Calculation - LCR

- Total Aggregated Cash Outflows = 710
- Total Aggregated Cash Inflows = 580
- Total Net Cash Outflows = 262.5

NOTE: The Non maturity outflows and inflows will directly be taken in calculation. It will not be considered in Day 1**.**

As per this illustration, the cumulative net cash outflow occurs on Day 8. Therefore, the net cash outflow on Day 8, that is, 232, is taken as the denominator value in the LCR calculation.

2.1.3.9 Consolidation as Per LCR Approach

The approach to consolidation as per LCR approach followed by OFS Liquidity Risk Management is detailed below:

a. **Identification and Treatment of Unconsolidated Subsidiary**

The application assesses whether a subsidiary is a consolidated subsidiary or not by checking the regulatory entity indicator against each legal entity. The application consolidates the cash inflows and outflows of a subsidiary and computes the consolidated LCR, only if the subsidiary is a regulatory consolidated subsidiary. If the entity is an unconsolidated subsidiary, the cash inflows and outflows from the operations of such subsidiaries are ignored (unless otherwise specifically included in the denominator of LCR per regulations) and only the equity investment in such subsidiaries is considered as the bank's asset and appropriately taken into the numerator or denominator based on the asset level classification.

For instance, legal entity 1 has 3 subsidiaries, legal entity 2, legal entity 3 and legal entity 4. The regulatory consolidated flag for legal entity 4 is No. In such a case, legal entity 4 is treated as a third party for the purpose of consolidation and its assets and cash flows are completely excluded from calculations. Legal entity 1's interest in legal entity 4 including common equity of legal entity 4 and assets and liabilities where legal entity 4 is the counterparty will not be eliminated as legal entity 4 is considered a third party during consolidation.

b. **Updation of Asset Restriction Flag for Certain Assets**

The regulations states that if a level 2B asset eligible common equity is held by a consolidated subsidiary of a depository institution, the depository institution can include such an equity in its level 2B liquid assets only to the extent of the net cash outflows of that consolidated subsidiary. The application checks if a legal entity, included in the consolidated Run, is a consolidated subsidiary of a depository institution i.e. the depository institution flag of its parent is Yes, then common equities of such entities are restricted during consolidation. The application updates the asset restriction flag of level 2B common equities of such legal entities as restricted before starting the consolidation process.

c. **Identification of and Consolidation by Subsidiary Type**

The process of consolidating HQLA as per US Federal Reserve differs slightly based on the type of subsidiary. Broadly 3 methods of consolidating HQLA are followed, based on the type of subsidiary, which is detailed below:

i. In case of US Consolidated Subsidiaries Subject to LCR Requirements: In case of a US based legal entity that is a consolidated subsidiary of a covered company, consolidation is done as follows:

- The application identifies whether the subsidiary is a US consolidated subsidiary.
- If condition (a) is fulfilled, it identifies whether the US consolidated subsidiary is subject to LCR requirement that is, whether the subsidiary in question is a regulated entity.

- If condition (b) is fulfilled, then it calculates the net cash outflow based on the US Federal Reserve LCR approach that is, based on the add-on approach calculation, eliminating inter-company transactions at the level of the consolidated subsidiary.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow that is, to the extent required to satisfy minimum LCR requirements of that subsidiary as part of the covered company's HQLA.
- It consolidates the entire amount of post-haircut unrestricted HQLA held at the consolidated subsidiary as part of the covered company's HQLA.
- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

ii. In case of US Consolidated Subsidiaries Not Subject to LCR Requirements

- The application identifies whether the subsidiary is a US consolidated subsidiary.
- If condition (a) is fulfilled, it identifies whether the US consolidated subsidiary is subject to minimum LCR requirement that is, whether the subsidiary in question is a regulated entity.
- If condition (b) is not fulfilled, it eliminates all inter-company transactions till the level of the immediate parent of the consolidated subsidiary and then calculates the net cash outflow based on the modified LCR approach that is, based on cumulative net cash flows on the 30th day.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow and the entire amount of post-haircut unrestricted HQLA as part of the covered company's HQLA.
- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

iii. In case of Non-US Consolidated Subsidiaries

- The application identifies whether the subsidiary is a US consolidated subsidiary.
- If condition (a) is not fulfilled, it eliminates all inter-company transactions till the level of the immediate parent of the foreign subsidiary and then calculates the net cash outflow based on the modified LCR approach that is, based on cumulative net cash flows on the 30th day.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow and the entire amount of post-haircut unrestricted HQLA as part of the covered company's HQLA.
- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

Consolidation is done on a step by step basis based on each level of the organization structure starting from the most granular level. This means that intercompany transactions are eliminated at each sub-consolidation level till the final level of the consolidation (generally BHC) is reached. The Consolidated HQLA calculated at the level of the immediate subsidiary of the BHC is added to the HQLA held by the BHC. All intercompany cash flows are eliminated and the LCR is calculated in accordance with the LCR approach.

For instance a bank's organization structure is as follows:

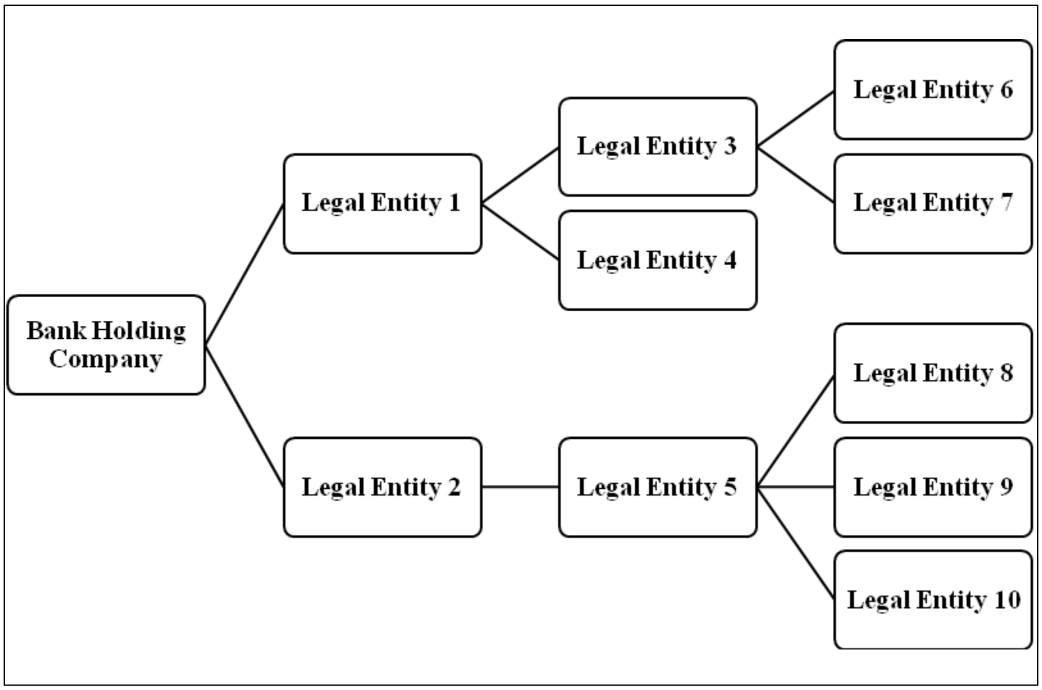


Figure 2 A Bank's Organization Structure

In this case, at the first level of consolidation, calculation of net cash outflows and HQLA is done on a solo basis for legal entities 6, 7, 8, 9 and 10 as they do not have any subsidiaries. In case of regulated entities, intercompany transactions are not eliminated; whereas in case of non-regulated or foreign subsidiaries, intercompany transactions are eliminated to the next level of consolidation that is, legal entities 3 and 5. The restricted HQLA from entities 6 and 7 are consolidated to the extent of their net cash outflows, based on the respective approaches, while the unrestricted HQLA is transferred fully to legal entity 3. The cash inflows and outflows are consolidated to the full extent.

At the second level of consolidation that is, legal entity 3, intercompany transactions are eliminated till legal entity 1, if LE 3 is a non-regulated or foreign subsidiary. The HQLA is calculated as a sum of the consolidated restricted and unrestricted HQLA of entities 6 and 7 and the HQLA of legal entity 3. The net cash outflow is calculated based on the cash flows of entities 3, 6 and 7, post elimination of intercompany transactions if applicable. The consolidated HQLA is calculated based on the procedure detailed in the following section.

This process continues in a step-by-step manner till the bank holding company level.

NOTE:

Stock of HQLA is calculated based on the US Federal Reserve LCR calculation approach for all subsidiaries. Only the approach to net cash outflow calculation changes based on the type of subsidiary as detailed earlier.

The amount of HQLA that are consolidated is determined after applying the relevant haircuts that is; the post haircut value of HQLA is compared with the net cash outflow in order to estimate the consolidated HQLA.

The restricted HQLA is consolidated based on the sequence of the quality of the asset that is, level 1 HQLA is consolidated first, followed by level 2A and 2B.

In case of modified holding companies, the net cash outflow is calculated in accordance with the modified LCR approach that is, the 30-day scenario. All other calculations remain unchanged.

The table below provides a mapping of the consolidation approach followed by the application based on the type of subsidiary:

NCOF Calculation Methodology for Highest US Parent i.e. BHC/IHC	Subsidiary Type	NCOF Calculation Methodology during Consolidation	Intercompany Transaction Elimination Level
LCR Approach	Regulated	LCR Approach	Up to the entity itself
	Non-Regulated	Modified LCR Approach	Up to the immediate parent
	Foreign	Modified LCR Approach	Up to the immediate parent
Modified LCR Approach	Regulated	Modified LCR Approach	Up to the entity itself
	Non-Regulated	Modified LCR Approach	Up to the immediate parent
	Foreign	Modified LCR Approach	Up to the immediate parent

Table 5 Mapping of approach and intercompany transaction elimination level to each subsidiary type

NOTE:

Regulated subsidiary is a consolidated subsidiary domiciled in USA that is expected to calculate LCR separately at its own level in addition to the LCR at BHC/IHC level.

Non-regulated subsidiary is a consolidated subsidiary domiciled in USA that is not required to calculate LCR separately from the BHC/IHC.

Foreign subsidiary is a consolidated subsidiary domiciled in a country other than USA.

2.1.4 Pre-configured Regulatory LCR Scenario

OFS LRM supports pre-configured calculations, scenarios, and reporting templates to ensure full compliance with BIS Basel III guidelines, US Liquidity Coverage Ratio calculation and 4G liquidity reporting guidelines.

This section explains the rules and business assumptions which support regulatory inflow, outflow rates and haircuts as per US Federal Reserve Regulation WW, Final Rule, and Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014.

NOTE:

This section gives only the contextual information about all the rules and business assumptions. For more detailed information refer OFS LRM application (UI).

For detailed Processes and Tasks, refer to the Run Chart.

2.1.4.1 Regulation Addressed through Rules

The application supports multiple pre-configured rules and scenarios based on regulator specified scenario parameters such as inflow rates, outflow rates, run-offs and haircuts and so on.

2.1.4.1.1 US LCR Contractual Run

The list of pre-configured rules and the corresponding reference to the regulatory requirement that it addresses is provided in the following table:

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
1	LRM - US LCR Party and Product Type Reclassification	LRM - Standard Party Type Reclassification	This is a reclassification rule to reclassify all bank party type to standard party type in FSI_PARTY_TYPE_CLASSIFICATION table. Further all the OOB rules and Business assumptions are defined on Standard Party Type.	
		LRM - Standard Product Type Reclassification	This is a reclassification rule to reclassify all bank products to standard product type in FSI_REG_PROD_TYPE_RECLASS table. Further all the OOB rules and Business assumptions are defined on Standard Product Type.	
		LRM - Classification of Products as Open Maturity	This rule is used to identify which products bank is treating as Open Maturity Products. Based on which the cash flows movement from STG_ACCOUNT_CASH_FLOWS TO FCT_ACCOUNT_CASH_FLOWS of the products marked as Open Maturity is aggregated and posted to Open Maturity Time Bucket. As part of OOB solution the products marked as open maturity includes Credit Cards, Current Account and Saving Account, Common Equity, Equity, Other Equity, Other Preference Shares Preference Shares - Cumulative, Preference Shares - Non Cumulative, Home Equity and Overdraft.	
2	LRM - US LCR GL Data Population	LRM - Capital Accounting Head Reclassification	This rule reclassifies capital account head to standard account head items.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
3	LRM - US LCR Mitigant Data Population	LRM - Mitigant Sub Type Classification	This is a reclassification rule to reclassify all Mitigants product to standard product type in FCT_MITIGANTS.	
4	LRM - US LCR Account Derived Attributes	LRM - Time Bucket Assignment for Account Attributes	This Rule updates the time bucket assignment for account attributes like Effective Maturity, Embedded Option Next Call Date and Effective Residual Maturity.	
		LRM - Lendable Amount Calculation	This computation rule is used to compute Lendable Amount. Lendable amount is the portion of Fair Value at which covered company can lend/sale the asset. In OOB solution, lendable amount is 100% of fair value of the asset. Lendable amount can vary based on product type, customer type and so on. You can update the rule based on dimensional combination if required. The lendable value is required for the FR2052 reports. In the application a placeholder rule is created for calculation of this value. It is recommended to improvise the rule to include other relevant variables like product /customer type and so on to arrive at the lendable value.	
		LRM - Classification Of Customers As Retail And Wholesale	This rule is to identify customer as retail or wholesale based on customer type. This identifier is further used in business assumptions to identify whether a customer is retail or wholesale.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Classification Of Trust To Retail	This rule reclassifies if a trust customer can be treated as retail. Identification of Trust is done based on customer type. By default Trust are treated as wholesale. A trust customer is treated as retail based on the following criteria: • Is solely for the benefit of natural persons • Does not have a corporate trustee • Terminates within 21 years and 10 months after the death of grantors or beneficiaries of the trust living on the effective date of the trust or within 25 years, if applicable under state law.	§ __.3 Definitions.pg.337
		LRM - Classification Of Small Business Customers To Retail	This rule reclassifies if a small business customer can be treated as retail. Identification of small business customer is done based on customer type. By default small business customer are treated as wholesale. A business customer is treated as retail customer, based on the following criteria: • The bank manages its transactions with the business customer, including deposits, unsecured funding, and credit facility and liquidity facility transactions, in the same way it manages its transactions with individuals. • Transactions with the business customer have liquidity risk characteristics that are similar to comparable transactions with individuals • The total aggregate funding raised from the business customer is less than $1.5 million;	§ __.3 Definitions.pg.337

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Identification Of Customer As Sovereign Or MDB Or US GSE	This rule is to identify customer is a Sovereign or MDB or US GSE with 0 % risk weight. This flag is defined for the ease of defining business assumption.	
		LRM - Undrawn Amount Within Liquidity Horizon Update	This rule computes portion of undrawn amount that can be withdrawn in liquidity horizon period. OOB considers Hundred Percent of undrawn amount can be drawn. The user can update the rule based on multi-dimensional combination like product, customer, currency and so on, if required.	
		LRM - Country liquidity risk indicator for NCOF	This computation rule updates account liquidity risk flag for a legal entity having debt securities issued by a foreign sovereign in that foreign currency. The rule checks if that legal entity has foreign operations other than pure trading operations.	
		LRM - Mitigant Country Liquidity Risk Flag Update For NCOF	This computation rule updates mitigants liquidity risk flag for a legal entity having debt securities issued by a foreign sovereign in that foreign currency. The rule checks if that legal entity has foreign operations other than pure trading operations.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM_FSI_MTM_COLL_VALL_FLI_POP	This T2T populates absolute value of the largest 30-consecutive calendar day cumulative net mark-to-market collateral outflow or inflow realized during the preceding 24 months resulting from derivative transaction valuation changes. The data is populated from FSI_MTM_COLL_VAL_CHANGE to FLI_LRM_INSTRUMENT for the legal entities selected in run. In case of consolidated run data is moved only for consolidated legal entity.	
5	LRM - US LCR Time Bucketing and Account Cash Flow Population	LRM - Spot or Forward Rate Assignment for Currency Conversion	This Rule assigns the spot or forward rate assignment for currency conversion.	
6	LRM - US LCR Account Insured and Uninsured Amount Computation	LRM - US LCR Insurance Eligible Currency Population	This Rule is used to identify eligible currency applicable for the insurance scheme.	
		US_LCR_INS_UNINS_AMT_CAL	This DT calculates the insured and un-insured amount at Account Customer Level. This is performed at ownership category level.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Account Fully Covered	This Rule updates account fully covered flag in FSI_LRM_INSTRUMENT table. If the EOP balance of the account is same as insured amount, then account is considered as fully insured.	
		LRM - Insurance Scheme Cover Type Update	This rule is used to identify whether an account is fully insured or partially insured or uninsured in FSI_LRM_INSTRUMENT table. If EOP balance is same as insured amount then it is fully insured. If the insured amount is zero then it is uninsured and partially insured elsewhere.	
7	LRM - US LCR Account Stable Amount Computation	LRM - US LCR Deposit Stability - Stable Amount Calculation	This rule calculates stable amount of a deposit account. The stable retail deposit means a retail deposit that is entirely covered by deposit insurance and is held by the depositor in a transactional account or the depositor that holds the account has another established relationship with the bank such as another deposit account, a loan, bill payment services, or any similar service or product provided to the depositor that the bank demonstrates to the satisfaction of the agency would make deposit withdrawal highly unlikely during a liquidity stress event. If the deposit account satisfies the criteria of stable amount, then the EOP balance is considered as stable amount.	§ __.3 Definitions.pg.339
		LRM - US LCR Deposit Stability - Less Stable Amount Calculation	This rule calculates less stable amount of a deposit account. If the deposit account does not satisfy the criteria of stable amount , then the EOP balance is considered as less stable amount.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - US LCR Account Fully Stable Calculation	This rule is used to identify whether an account is fully stable or not in FSI_LRM_INSTRUMENT table. If the stable amount is same as EOP balance then yes else No.	
8	LRM - US LCR Account Operational Amount Computation	LRM - Meets Operational Services Flag Update	This rule updates operation services flag based on the deposit primary purpose If the deposit primary purpose is same as operational services specified in the regulation then yes else No. The operational services includes the following: payment remittance, payroll administration and control over the disbursement of funds, transmission, reconciliation, and confirmation of payment orders, daylight overdraft, determination of intra-day and final settlement positions, settlement of securities transactions, transfer of recurring contractual payments, client subscriptions and redemptions, scheduled distribution of client funds, escrow, funds transfer, stock transfer, and agency services, including payment and settlement services, payment of fees, taxes, and other expenses; and collection and aggregation of funds. All operational deposits placed by the bank are identified in a similar manner to that of operational deposits placed by the customer. The operational amount is identified for both assets and liabilities using the same derivation logic.	Definition of “Operational Services”(pg.no.222)

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Classification Of Deposits As Operational And Non-Operational Amount	This rule classifies a deposit is an operational deposit or not. In order to recognize a deposit as an operational deposit for purposes of this part, a covered company must comply with the requirements of operational deposit 1. The related operational services must be performed pursuant to a legally binding written agreement, and: a. The termination of the agreement must be subject to a minimum 30 calendar-day notice period; or b. As a result of termination of the agreement or transfer of services to a third-party provider, the customer providing the deposit would incur significant contractual termination costs or switching costs; 2. The deposit must be held in an account designated as an operational account; 3. The customer must hold the deposit at the covered company for the primary purpose of obtaining the operational services provided by the covered company; 4. The deposit account must not be designed to create an economic incentive for the customer to maintain excess funds therein through increased revenue, reduction in fees, or other offered economic incentives;	§ __.3 Definitions.pg.340

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
			5. The covered company must demonstrate that the deposit is empirically linked to the operational services and that it has a methodology that takes into account the volatility of the average balance for identifying any excess amount, which must be excluded from the operational deposit amount; 6. The deposit must not be provided in connection with the covered company's provision of prime brokerage services, which, for the purposes of this part, are a package of services offered by the covered company whereby the covered company, among other services, executes, clears, settles, and finances transactions entered into by the customer or a third-party entity on behalf of the customer (such as an executing broker), and where the covered company has a right to use or rehypothecate assets provided by the customer, including in connection with the extension of margin and other similar financing of the customer, subject to applicable law, and includes operational services provided to a non-regulated fund; 7. The deposits must not be for arrangements in which the covered company (as correspondent) holds deposits owned by another depository institution bank (as respondent) and the respondent temporarily places excess funds in an overnight deposit with the covered company.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
9	LRM - US LCR Pre - HQLA Classification	LRM - Instruments - Liquid And Readily Marketable Flag Update	This rule reclassifies an account as liquid and readily marketable based on the following criteria: • It is traded in an active secondary market • Has more than 2 committed market makers • Has a two-way market • Has timely and observably market prices • Has high trading volumes	**Common Rule**: Subpart A § __.3 Definitions; Page 330 – 331 Subpart C § __.20 High-Quality Liquid Asset Criteria; Page 343 – 345 **Supplementary Information**: Section II B 2 a The Liquid and Readily-Marketable Standard; Page 47 – 50
		LRM - Mitigants - Liquid And Readily Marketable Flag Update	This rule reclassifies a mitigant as liquid and readily marketable based on the following criteria: • It is traded in an active secondary market • Has more than 2 committed market makers • Has a two-way market • Has timely and observably market prices • Has high trading volumes	**Common Rule**: Subpart A § __.3 Definitions; Page 330 – 331 Subpart C § __.20 High-Quality Liquid Asset Criteria; Page 343 – 345 **Supplementary Information**: Section II B 2 a The Liquid and Readily-Marketable Standard; Page 47 – 50

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
10	LRM - US LCR HQLA Reclassification	LRM - Corporate Debt Security	This rule reclassifies a liquid and readily marketable corporate debt security as a level 2B high quality liquid asset if it meets the criteria specified below: • It is classified as investment grade. • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 20% over a 30-day stress period. • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (1); Page 345 – 346 **Supplementary Information:** Section II B 2 e i Corporate Debt Securities; Page 77 – 79

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Publicly Traded Shares of Common Stock	This rule reclassifies a publicly traded common equity share as a level 2B high quality liquid asset if it meets the criteria specified below: • It is included in Russell 100 Index or an index that the bank's supervisor in a foreign jurisdiction recognizes for inclusion in Level 2B assets if the share is held in that jurisdiction. • Issued in US Dollars or in the currency of the jurisdiction in which the bank operates and holds the common equity share to cover net cash outflows in that jurisdiction. • Issued by an entity whose publicly traded common equity shares have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 40% over a 30-day stress period. • Not issued by a financial sector entity and not issued by a consolidated subsidiary of a financial sector entity. • If held by a depository institution, is not acquired in satisfaction of a debt previously contracted (DPC).	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (2); Page 346 – 347 **Supplementary Information**: Section II B 2 e ii Publicly Traded Shares of Common Stock; Page 79 – 85

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - U.S. GSE Securities	This rule reclassifies a security issued by, or guaranteed as to the timely payment of principal and interest by, a U.S. government-sponsored enterprise, that is investment grade under 12 CFR part 1 as of the calculation date, as a level 2A high quality liquid asset provided the claim is senior to preferred stock.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (1); Page 344 **Supplementary Information**: Section II B 2 d i U.S. GSE Securities; Page 70 – 75
		LRM - Instruments - Certain Sovereign and Multilateral Organization Securities For Level2A	This rule reclassifies a security issued by, or unconditionally guaranteed as to the timely payment of principal and interest by, a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 2A high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (2); Page 344 – 345 **Supplementary Information**: Section II B 2 d ii Certain Sovereign and Multilateral Organization Securities; Page 75 – 76

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Certain Foreign Sovereign Debt Securities for Issuer	This rule reclassifies a security issued by a sovereign entity that is not assigned a zero percent risk weight, where the sovereign entity issues the security in its own currency, the security is liquid and readily-marketable, and the bank holds the security in order to meet its net cash outflows in the jurisdiction of the sovereign entity, as a level 1 high quality liquid asset.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (6); Page 344 **Supplementary Information**: Section II B 2 c v Certain Foreign Sovereign Debt Securities; Page 67
		LRM - Certain Foreign Sovereign Debt Securities for Guarantor	This rule reclassifies a security unconditionally guaranteed as to the timely payment of principal and interest by a sovereign entity that is not assigned a zero percent risk weight, where the security is issued in the currency of the sovereign entity, is liquid and readily-marketable, and the bank holds the security in order to meet its net cash outflows in the jurisdiction of the sovereign entity, as a level 1 high quality liquid asset.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (6); Page 344 **Supplementary Information**: Section II B 2 c v Certain Foreign Sovereign Debt Securities; Page 67

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Certain Sovereign and Multilateral Organization Securities for Issuer as Level1 Asset	This rule reclassifies a security issued by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 1 high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (5); Page 343 – 344 **Supplementary Information**: Section II B 2 c iv Certain Sovereign and Multilateral Organization Securities; Page 65 – 67

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Certain Sovereign and Multilateral Organization Securities for Guarantor as Level1 Asset	This rule reclassifies a security unconditionally guaranteed as to the timely payment of principal and interest by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 1 high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (5); Page 343 – 344 Supplementary Information: Section II B 2 c iv Certain Sovereign and Multilateral Organization Securities; Page 65 – 67
		LRM - United States Government Securities	This rule reclassifies the following securities as level 1 high quality liquid assets: • A security issued by, or unconditionally guaranteed as to the timely payment of principal and interest by, the U.S. Department of the Treasury • A security issued by any other U.S. government agency whose obligations are fully and explicitly guaranteed by the full faith and credit of the U.S. government, provided that they are liquid and readily-marketable.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (3) and (4); Page 343 Supplementary Information: Section II B 2 c iii United States Government Securities; Page 64 – 65

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Foreign Withdrawable Reserves For Instruments As Level 1 Asset	This rule reclassifies any reserves held in a foreign central bank that do not have restrictions on use, i.e. are freely withdrawable, and denominated in the local currency of that foreign country, as level 1 high quality liquid assets. The classification of reserves as level 1 high quality liquid assets includes term deposits held at the foreign central bank that fulfill any one of the criteria specified below: • Can be withdrawn on demand prior to maturity • Can be pledged as collateral for term or automatically-renewing overnight advances from a Federal Reserve Bank	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (2); Page 343 **Supplementary Information**: Section II B 2 c ii Foreign Withdrawable Reserves; Page 64
		LRM - Instrument - Federal Reserve Bank Balances	This rule reclassifies reserves held with any US Federal Reserve Bank, both held directly or through a correspondent bank, as level 1 high quality liquid assets. The classification of reserves as level 1 high quality liquid assets includes term deposits held at a US Federal Reserve Bank, both directly or through a correspondent bank, that fulfill any one of the criteria specified below: • Can be withdrawn on demand prior to maturity • Can be pledged as collateral for term or automatically-renewing overnight advances from a Federal Reserve Bank	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (1); Page 343 **Supplementary Information**: Section II B 2 c i Reserve Bank Balances; Page 60 – 63

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
11	LRM - US LCR Mitigant HQLA Reclassification	LRM - Mitigants - Corporate Debt Security As L2B	This rule reclassifies a liquid and readily marketable corporate debt security, received as a mitigant, as a level 2B high quality liquid asset if it meets the criteria specified below: • It is classified as investment grade • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 20% over a 30-day stress period. • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (1); Page 345 – 346 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 e i Corporate Debt Securities; Page 77 – 79 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigant - Publicly Traded Shares Of Common Stock As L2B	This rule reclassifies a publicly traded common equity share, received as a mitigant, as a level 2B high quality liquid asset if it meets the criteria specified below: - It is included in Russell 100 Index or an index that the bank's supervisor in a foreign jurisdiction recognizes for inclusion in Level 2B assets if the share is held in that jurisdiction • Issued in US Dollars or in the currency of the jurisdiction in which the bank operates and holds the common equity share to cover net cash outflows in that jurisdiction • Issued by an entity whose publicly traded common equity shares have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 40% over a 30-day stress period. • Not issued by a financial sector entity and not issued by a consolidated subsidiary of a financial sector entity. • If held by a depository institution, is not acquired in satisfaction of a debt previously contracted (DPC) • If held by a consolidated subsidiary of the bank, it can include the publicly traded common equity share in its level 2B liquid assets only if the share is held to cover net cash outflows of its consolidated subsidiary in which the publicly traded common equity share is held.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (2); Page 346 – 347 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 e ii Publicly Traded Shares of Common Stock; Page 79 – 85 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigant - U.S. GSE Securities For Guarantor As Level 2A	This rule reclassifies a security received as a mitigant, which is guaranteed as to the timely payment of principal and interest by a U.S. government-sponsored enterprise, that is investment grade under 12 CFR part 1 as of the calculation date, as a level 2A high quality liquid asset provided the claim is senior to preferred stock.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (1); Page 344 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 d i U.S. GSE Securities; Page 70 – 75 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigant - U.S. GSE Securities For Issuer As Level 2A	This rule reclassifies a security, received as a mitigant, issued by a U.S. government-sponsored enterprise, that is investment grade under 12 CFR part 1 as of the calculation date, as a level 2A high quality liquid asset provided the claim is senior to preferred stock.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (1); Page 344 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 d i U.S. GSE Securities; Page 70 – 75 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigant - Certain Sovereign and Multilateral Organization Securities for L2A	This rule reclassifies a security, received as a mitigant, issued by, or unconditionally guaranteed as to the timely payment of principal and interest by, a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 2A high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (2); Page 344 – 345 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 d ii Certain Sovereign and Multilateral Organization Securities; Page 75 – 76 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - Certain Foreign Sovereign Debt Securities for Issuer	This rule reclassifies a security, received as a mitigant, issued by a sovereign entity that is not assigned a zero percent risk weight, where the sovereign entity issues the security in its own currency, the security is liquid and readily-marketable, and the bank holds the security in order to meet its net cash outflows in the jurisdiction of the sovereign entity, as a level 1 high quality liquid asset.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (6); Page 344 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 c v Certain Foreign Sovereign Debt Securities; Page 67 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigant - Certain Foreign Sovereign Debt Securities For Guarantor As Level 1	This rule reclassifies a security, received as a mitigant, unconditionally guaranteed as to the timely payment of principal and interest by a sovereign entity that is not assigned a zero percent risk weight, where the security is issued in the currency of the sovereign entity, is liquid and readily-marketable, and the bank holds the security in order to meet its net cash outflows in the jurisdiction of the sovereign entity, as a level 1 high quality liquid asset.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (6); Page 344 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 c v Certain Foreign Sovereign Debt Securities; Page 67 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - Certain Sovergn and Multilateral Organization Securities for Guarantor as L1 Asset	This rule reclassifies a security, received as a mitigant, unconditionally guaranteed as to the timely payment of principal and interest by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 1 high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (5); Page 343 – 344 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 c iv Certain Sovereign and Multilateral Organization Securities; Page 65 – 67 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	**Process Name**	**Task Name**	**Regulatory Requirement Addressed**	**Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014** **Reference**
		LRM - Mitigants - Certain Svrgn and Multilateral Organization Securities for Issuer as Level1 Asset	This rule reclassifies a security, received as a mitigant, issued by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 1 high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (5); Page 343 – 344 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 c iv Certain Sovereign and Multilateral Organization Securities; Page 65 – 67 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - United States Government Securities For Guarantor As Level 1 Assets	This rule reclassifies a security received as a mitigant that is unconditionally guaranteed as to the timely payment of principal and interest by, the U.S. Department of the Treasury, as a level 1 high quality liquid asset.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (3) and (4); Page 343 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 c iii United States Government Securities; Page 64 – 65 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - United States Government Securities For Issuer As Level 1 Assets	This rule reclassifies the following securities received as mitigants, as level 1 high quality liquid assets: • A security issued by the U.S. Department of the Treasury • A security issued by any other U.S. government agency whose obligations are fully and explicitly guaranteed by the full faith and credit of the U.S. government, provided that they are liquid and readily-marketable.	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (3) and (4); Page 343 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information**: Section II B 2 c iii United States Government Securities; Page 64 – 65 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
12	LRM - US LCR Substitutable Collateral HQLA Reclassification	LRM - Substitutable Collateral - Corporate Debt Security As L2B	This rule reclassifies a liquid and readily marketable corporate debt security, which can be substituted by a bank's counterparty for an existing mitigant, as a level 2B high quality liquid asset if it meets the criteria specified below: • It is classified as investment grade • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 20% over a 30-day stress period. • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule**: Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (1); Page 345 – 346 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information**: Section II B 2 e i Corporate Debt Securities; Page 77 – 79 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral - Publicly Traded Shares Of Common Stock As L2B	This rule reclassifies a publicly traded common equity share, which can be substituted by a bank's counterparty for an existing mitigant, as a level 2B high quality liquid asset if it meets the criteria specified below: • It is included in Russell 100 Index or an index that the bank's supervisor in a foreign jurisdiction recognizes for inclusion in Level 2B assets if the share is held in that jurisdiction • Issued in US Dollars or in the currency of the jurisdiction in which the bank operates and holds the common equity share to cover net cash outflows in that jurisdiction • Issued by an entity whose publicly traded common equity shares have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions. Reliability is proven if price has not decreased or haircut increased by 40% over a 30-day stress period. • Not issued by a financial sector entity and not issued by a consolidated subsidiary of a financial sector entity • If held by a depository institution, is not acquired in satisfaction of a debt previously contracted (DPC) • If held by a consolidated subsidiary of the bank, it can include the publicly traded common equity share in its level 2B liquid assets only if the share is held to cover net cash outflows of its consolidated subsidiary in which the publicly traded common equity share is held	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (2); Page 346 – 347 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 e ii Publicly Traded Shares of Common Stock; Page 79 – 85 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral - Certain Sovereign and Multilateral Organization Securities for L2A	This rule reclassifies a security, which can be substituted by a bank's counterparty for an existing mitigant, issued by, or unconditionally guaranteed as to the timely payment of principal and interest by, a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 2A high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (2); Page 344 – 345 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 d ii Certain Sovereign and Multilateral Organization Securities; Page 75 – 76 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FSI - Substitutable Collateral U.S. GSE Securities Level 2A for Issuer	This rule reclassifies a security, which can be substituted by a bank's counterparty for an existing mitigant, issued by a U.S. government-sponsored enterprise, that is investment grade under 12 CFR part 1 as of the calculation date, as a level 2A high quality liquid asset provided the claim is senior to preferred stock.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (1); Page 344 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 d i U.S. GSE Securities; Page 70 – 75 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FSI - Substitutable Collateral U.S. GSE Securities Level 2A for Guarantor	This rule reclassifies a security which can be substituted by a bank's counterparty for an existing mitigant, which is guaranteed as to the timely payment of principal and interest by a U.S. government-sponsored enterprise, that is investment grade under 12 CFR part 1 as of the calculation date, as a level 2A high quality liquid asset provided the claim is senior to preferred stock.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (b) Level 2A liquid assets (1); Page 344 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 d i U.S. GSE Securities; Page 70 – 75 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral - Certain Foreign Sovereign Debt Securities For Guarantor As Level 1	This rule reclassifies a security, which can be substituted by a bank's counterparty for an existing mitigant, unconditionally guaranteed as to the timely payment of principal and interest by a sovereign entity that is not assigned a zero percent risk weight, where the security is issued in the currency of the sovereign entity, is liquid and readily-marketable, and the bank holds the security in order to meet its net cash outflows in the jurisdiction of the sovereign entity, as a level 1 high quality liquid asset.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (6); Page 344 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 c v Certain Foreign Sovereign Debt Securities; Page 67 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral - Certain Foreign Sovereign Debt Securities for Issuer As Level 1	This rule reclassifies a security, which can be substituted by a bank's counterparty for an existing mitigant, issued by a sovereign entity that is not assigned a zero percent risk weight, where the sovereign entity issues the security in its own currency, the security is liquid and readily-marketable, and the bank holds the security in order to meet its net cash outflows in the jurisdiction of the sovereign entity, as a level 1 high quality liquid asset.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (6); Page 344 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 c v Certain Foreign Sovereign Debt Securities; Page 67 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral - United States Government Securities For Issuer As Level 1 Assets	This rule reclassifies the following securities which can be substituted by a bank's counterparty for an existing mitigant, as level 1 high quality liquid assets: • A security issued by the U.S. Department of the Treasury • A security issued by any other U.S. government agency whose obligations are fully and explicitly guaranteed by the full faith and credit of the U.S. government, provided that they are liquid and readily-marketable.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (3) and (4); Page 343 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 c iii United States Government Securities; Page 64 – 65 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral - United States Government Securities For Guarantor As Level 1 Assets	This rule reclassifies a security received as a mitigant that is unconditionally guaranteed as to the timely payment of principal and interest by, the U.S. Department of the Treasury, as a level 1 high quality liquid asset.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (3) and (4); Page 343 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 c iii United States Government Securities; Page 64 – 65 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Collateral- Crtn Svrgn and Multilateral Org Securities for Issuer as Level1 Asset	This rule reclassifies a security, which can be substituted by a bank's counterparty for an existing mitigant, issued by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 1 high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (5); Page 343 – 344 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 c iv Certain Sovereign and Multilateral Organization Securities; Page 65 – 67 Section II C 3 f v Collateral Substitution; Page 188 – 189

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Substitutable Colla - Crtn Svrgn and Multilateral Org Securities for Guarantor as Level1 Asset	This rule reclassifies a security, which can be substituted by a bank's counterparty for an existing mitigant, unconditionally guaranteed as to the timely payment of principal and interest by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, European Community, or a multilateral development bank, as a level 1 high quality liquid asset, if it meets the criteria specified below: • It is assigned a zero percent risk weight • It is liquid and readily-marketable • It is issued or guaranteed by an entity whose obligations have a proven record as a reliable source of liquidity in repurchase or sales markets during stressed market conditions; and • It is not an obligation of a financial sector entity and not an obligation of a consolidated subsidiary of a financial sector entity	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (a) Level 1 liquid assets (5); Page 343 – 344 Subpart D § __.32 Outflow amounts (f) Collateral outflow amount (6); Page 364 – 366 **Supplementary Information:** Section II B 2 c iv Certain Sovereign and Multilateral Organization Securities; Page 65 – 67 Section II C 3 f v Collateral Substitution; Page 188 – 189
13	LRM - US LCR Post - HQLA Classification	LRM - Instrument - Transferability Restriction Flag Update For Equity	This computation rule updates the transferability restriction flag as Yes for level 2B common equities held by a legal entity which is a consolidated subsidiary of a depository institution. Common equities held by such subsidiary entities are restricted during consolidation i.e. allowed to be consolidated only to the extent required to cover their own net cash outflows. This flag is updated for bank's own assets and for assets placed as collateral by the bank.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (2) (vi); Page 347 **Supplementary Information:** Section II B 2 e ii Publicly Traded Shares of Common Stock; Page 81 – 82

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Instruments - Meets HQLA Operational Requirements Flag Update	This computation rule identifies those assets classified as HQLA that meet all the operational requirements which are set forth by the regulator to be considered for inclusion in the stock of HQLA. It is derived based on the Operational Capability to Monetize HQLA and Controlled by Treasury Flags. This flag is updated for bank's own assets and for assets placed as collateral by the bank as Yes, if they meet all the operational requirements and No, if they do not.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (a) Operational requirements for Eligible HQLA; Page 350 – 352 **Supplementary Information:** Section II B 3 Requirements for Inclusion as Eligible HQLA; Page 102 – 110
		LRM - Instruments - Meets Generally Applicable HQLA Criteria Flag	This computation rule identifies those unencumbered or partially encumbered assets that fulfill all the generally applicable HQLA criteria specified by the regulator to be considered for inclusion in the stock of HQLA. This flag is updated for bank's own assets which are unencumbered and partially encumbered as Yes, if they meet all the generally applicable HQLA criteria and No, if they do not.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA; Page 352 – 354 **Supplementary Information:** Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Instruments - Eligible High Quality Liquid Assets Flag Update	This computation rule identifies those unencumbered or partially encumbered assets classified as HQLA that fulfill both the HQLA operational requirements and generally applicable criteria and marks them as eligible for inclusion in the stock of HQLA. This flag is updated for bank's own assets which are unencumbered and partially encumbered.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets; Page 350 – 354 **Supplementary Information:** Section II B 3 Requirements for Inclusion as Eligible HQLA; Page 102 – 110 Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Instruments - Meets Generally Applicable HQLA Criteria on Unwind Flag Update	This computation rule identifies those encumbered assets that fulfill all the generally applicable HQLA criteria specified by the regulator to be considered for inclusion in the stock of HQLA on unwind of the transaction which resulted in the assets' encumbrance. This flag is updated for bank's own assets placed as collateral as Yes, if they meet all the generally applicable HQLA criteria except for encumbrance status and No, if they do not.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts; Page 349 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA; Page 352 – 354 **Supplementary Information:** Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118 Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Instruments - Eligible High Quality Liquid Assets on Unwind Flag Update	This computation rule identifies those encumbered assets classified as HQLA that fulfill both the HQLA operational requirements and generally applicable criteria, with the exception of being unencumbered. It marks such assets as eligible for inclusion in the stock of HQLA on unwind of the transaction which resulted in the assets' encumbrance. This flag is updated for bank's own assets which are unencumbered and partially encumbered.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts; Page 349 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets; Page 350 – 354 **Supplementary Information:** Section II B 3 Requirements for Inclusion as Eligible HQLA; Page 102 – 110 Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118 Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - Transferability Restriction Flag Update For Equity	This computation rule updates the transferability restriction flag as Yes for level 2B common equities received as mitigants and held by a legal entity which is a consolidated subsidiary of a depository institution. Common equities held by such subsidiary entities are restricted during consolidation i.e. allowed to be consolidated only to the extent required to cover their own net cash outflows. This flag is updated for assets received as mitigants.	**Common Rule:** Subpart C § __.20 High-Quality Liquid Asset Criteria (c) Level 2B liquid assets (2) (vi); Page 347 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information:** Section II B 2 e ii Publicly Traded Shares of Common Stock; Page 81 – 82 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - Meets HQLA Operational Requirements Flag Update	This computation rule identifies those mitigants classified as HQLA that meet all the operational requirements which are set forth by the regulator to be considered for inclusion in the stock of HQLA. It is derived based on the Operational Capability to Monetize HQLA and Controlled by Treasury Flags. This flag is updated for mitigants as Yes, if they meet all the operational requirements and No, if they do not.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (a) Operational requirements for Eligible HQLA; Page 350 – 352 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information:** Section II B 3 Requirements for Inclusion as Eligible HQLA; Page 102 – 110 Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - Meets Generally Applicable HQLA Criteria Flag Update	This computation rule identifies those mitigants, where the bank has re-hypothecation rights but are not re-hypothecated, that fulfill all the generally applicable HQLA criteria specified by the regulator to be considered for inclusion in the stock of HQLA. This flag is updated for re-hypothecable mitigants that have not been re-hypothecated or have been partially re-hypothecated as Yes, if they meet all the generally applicable HQLA criteria and No, if they do not.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA; Page 352 – 354 **Supplementary Information:** Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118
		LRM - Mitigants - High Quality Liquid Assets Eligibility Flag Update	This computation rule identifies those mitigants classified as HQLA, where the bank has re-hypothecation rights but are not re-hypothecated, that fulfill both the HQLA operational requirements and generally applicable criteria and marks them as eligible for inclusion in the stock of HQLA. This flag is updated for mitigants which are not re-hypothecated or are partially re-hypothecated	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets; Page 350 – 354 **Supplementary Information:** Section II B 3 Requirements for Inclusion as Eligible HQLA; Page 102 – 110 Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Counterparty Assets - Meets Generally Applicable HQLA Criteria on Unwind Flag Update	This computation rule identifies those re-hypothecated mitigants that fulfill all the generally applicable HQLA criteria specified by the regulator to be considered for inclusion in the stock of HQLA on unwind of the transaction which resulted in the mitigant assets' encumbrance. This flag is updated for assets received as mitigants, that are placed by the bank as collateral as Yes, if they meet all the generally applicable HQLA criteria except for encumbrance status and No, if they do not.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts; Page 349 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA; Page 352 – 354 **Supplementary Information:** Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118 Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Mitigants - Eligible High Quality Liquid Assets on Unwind Flag Update	This computation rule identifies those re-hypothecated mitigants classified as HQLA that fulfill both the HQLA operational requirements and generally applicable criteria, with the exception of being unencumbered. It marks such mitigants as eligible for inclusion in the stock of HQLA on unwind of the transaction which resulted in the mitigant assets' encumbrance. This flag is updated for mitigant received under re-hypothecation rights which have been either fully or partially re-hypothecated.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts; Page 349 Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets; Page 350 – 354 **Supplementary Information:** Section II B 3 Requirements for Inclusion as Eligible HQLA; Page 102 – 110 Section II B 4 Generally Applicable Criteria for Eligible HQLA; Page 110 – 118 Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126
14	LRM - Underlying Account Attribute Population	LRM - Downgrade Impact Amount for Other Liabilities	This rule calculates the Downgrade Impact Amount for product other then Derivatives. The computation logic is EOP minus the value of underlying collateral received.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
15	LRM - US LCR Stock Calculation	LRM - Instruments - Hedge Termination Cost Adjusted Value	This computation rule identifies all high quality liquid assets that have a hedge associated with them and computes the value of the unencumbered portion of such assets to be included in the stock as less of the hedge termination cost.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (a) (3) **Supplementary Information:** Section II B 3 a iii. Termination of Transaction Hedging HQLA; Page 108
		LRM - Mitigants - Value to be Included in the Stock of HQLA	This rule computes the value of mitigants, classified as high quality liquid assets, to be included in the stock by multiplying it with the portion of the mitigant which is not re-hypothecated.	**Common Rule:** Subpart C § __.22 Requirements for Eligible High-Quality Liquid Assets (b) Generally applicable criteria for eligible HQLA (5); Page 354 **Supplementary Information:** Section II B 4 f Exclusion of Certain Rehypothecated Assets; Page 118
		LRM - Reserves and Term Deposits - Value to be Included in the Stock of HQLA	This rule computes the value of central bank reserves to be included in the stock of level 1 assets less of pass-through reserves, if any. Additionally, it computes the value of term deposits classified as level 1 assets as less of withdrawal penalty, if any.	**Common Rule:** Subpart A § __.3 Definitions; Page 336 – 337 **Supplementary Information:** Section II B 2 c i Reserve Bank Balances; Page 60 – 63

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Total Cash Received from Repo Transaction	This rule computes the total value of cash received from repurchase transactions where the underlying asset is a high quality liquid asset.	**Supplementary Information:** Section II B 4 b Segregated Client Pool Securities; Page 113 – 114
		LRM - Vault Cash Updation	This rule computes the total value of vault cash that is to be deducted from the stock of level 1 liquid assets.	**Supplementary Information:** Section II B 2 c i Reserve Bank Balances; Page 63
16	LRM - US LCR Determining Revised Maturity	LRM - Conservative Approach for Outflows	This Rule determines the maturity for all the Outflows as per the US final Rules "Determining maturity "section.	**Common Rule:** Subpart D § __.31 Determining Maturity; Page 356-358 **Supplementary Information:** Section II C 2 Determining Maturity; page 147-154
		LRM - Conservative Approach for Inflows	This Rule determines the maturity for all the Inflows as per the US final Rules "Determining maturity "section.	**Common Rule:** Subpart D § __.31 Determining Maturity; Page 356-358 **Supplementary Information:** Section II C 2 Determining Maturity; page 147-154

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Revised Maturity - Exception For Conservative Approach - Debt Securities	This Rule determines the maturity for all the Exceptions for conservative approach for debt securities as per the US final Rules "Determining maturity "section.	**Common Rule:** Subpart D § __.31 Determining Maturity; Page 356-358 **Supplementary Information:** Section II C 2 Determining Maturity; page 147-154
		LRM - Exception For Conservative Approach	This Rule determines the maturity for all the Exceptions for conservative approach for Borrowings as per the US final Rules "Determining maturity "section.	**Common Rule:** Subpart D § __.31 Determining Maturity; Page 356-358 **Supplementary Information:** Section II C 2 Determining Maturity; page 147-154
		LRM - Updating Revised Maturity Date Surrogate Key With Maturity Date Surrogate Key	This Rule updates the Revised Maturity Date to Original Maturity Date.	
		LRM - Revised Maturity Time Bucket	The Rule updates the Time Bucket Surrogate Key for Revised Maturity.	
		LRM - Updating Columns Using Revised Maturity Date	This Rule updates Effective Residual Maturity Band Surrogate Key, Residual Maturity Band Surrogate Key and Residual Maturity Time Bucket Using Revised Maturity Date.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
17	LRM - US LCR Adjustment Reclassification	LRM - Adjustments to Level 2B-Secured Lending Transaction	This rule identifies all the secured lending transactions maturing within the LCR horizon, which are to be unwound where the mitigant received is a level 2B high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (3); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 2B-Secured Funding Transaction	This rule identifies all the secured funding transactions maturing within the LCR horizon, which are to be unwound where the collateral posted is a level 2B high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (3); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 d Unwind Treatment of Collateralized Deposits; Page 126 – 130 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 2B-Collateralized Derivatives Transaction-Deduction	This rule identifies all the collateralized derivatives transactions maturing within the LCR horizon, which are to be unwound where the mitigant received is a level 2B high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (3); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 2B-Collateralized Derivatives Transaction-Addition	This rule identifies all the collateralized derivatives transactions maturing within the LCR horizon, which are to be unwound where the collateral posted is a level 2B high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (3); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 2B-Asset Exchange Deduction	This rule identifies all the high quality liquid asset exchange transactions maturing within the LCR horizon, which are to be unwound where the asset received by the bank is a level 2B high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the asset received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (3); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 2B-Asset Exchange Addition	This rule identifies all the high quality liquid asset exchange transactions maturing within the LCR horizon, which are to be unwound where the asset provided by the bank is a level 2B high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the asset provided by the bank as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (3); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 2A-Secured Lending Transaction	This rule identifies all the secured lending transactions maturing within the LCR horizon, which are to be unwound where the mitigant received is a level 2A high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (2); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 2A-Secured Funding Transaction	This rule identifies all the secured funding transactions maturing within the LCR horizon, which are to be unwound where the collateral posted is a level 2A high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (2); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 d Unwind Treatment of Collateralized Deposits; Page 126 – 130 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 2A-Collateralized Derivatives Transaction-Deduction	This rule identifies all the collateralized derivatives transactions maturing within the LCR horizon, which are to be unwound where the mitigant received is a level 2A high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (2); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 2A-Collateralized Derivatives Transaction-Addition	This rule identifies all the collateralized derivatives transactions maturing within the LCR horizon, which are to be unwound where the collateral posted is a level 2A high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (2); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 2A-Asset Exchange Deduction	This rule identifies all the high quality liquid asset exchange transactions maturing within the LCR horizon, which are to be unwound where the asset received by the bank is a level 2A high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the asset received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (2); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 2A-Asset Exchange Addition	This rule identifies all the high quality liquid asset exchange transactions maturing within the LCR horizon, which are to be unwound where the asset provided by the bank is a level 2A high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (2); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	**Process Name**	**Task Name**	**Regulatory Requirement Addressed**	**Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014** **Reference**
		LRM - Adjustments to Level 1-Secured Lending Transaction-Deduction	This rule identifies all the secured lending transactions maturing within the LCR horizon, which are to be unwound where the mitigant received is a level 1 high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the collateral received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 1-Secured Lending Transaction-Addition	This rule identifies all the secured lending transactions maturing within the LCR horizon, which are to be unwound where the mitigant received is a high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the outstanding amount extended by the bank to the counterparty as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 1-Secured Funding Transaction-Deduction	This rule identifies all the secured funding transactions maturing within the LCR horizon, which are to be unwound where the collateral posted is a high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the outstanding amount extended by the counterparty to the bank as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 d Unwind Treatment of Collateralized Deposits; Page 126 – 130 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 1-Secured Funding Transaction-Addition	This rule identifies all the secured funding transactions maturing within the LCR horizon, which are to be unwound where the collateral posted is a level 1 high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the collateral posted as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 d Unwind Treatment of Collateralized Deposits; Page 126 – 130 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 1-Collateralized Derivatives Transaction-Deduction	This rule identifies all the collateralized derivatives transactions maturing within the LCR horizon, which are to be unwound where the mitigant received or collateral posted is a level 1 high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the level 1 collateral received as part of such a transaction and deduction of the amount received as part of a sell transaction where the mitigant received or collateral posted is a level 1 asset.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 1-Collateralized Derivatives Transaction-Addition	This rule identifies all the collateralized derivatives transactions maturing within the LCR horizon, which are to be unwound where the mitigant received or collateral posted is a level 1 high quality liquid asset. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the level 1 collateral posted as part of such a transaction and addition of the amount paid as part of a buy transaction where mitigant received or collateral posted is a level 1 asset.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
		LRM - Adjustments to Level 1-Asset Exchange Deduction	This rule identifies all the high quality liquid asset exchange transactions maturing within the LCR horizon, which are to be unwound where the asset received by the bank is a level 1 high quality liquid asset or cash. It updates the type of adjustment to the stock of HQLA due to such an unwind as deduction of the asset or cash received as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - Adjustments to Level 1-Asset Exchange Addition	This rule identifies all the high quality liquid asset exchange transactions maturing within the LCR horizon, which are to be unwound where the asset provided by the bank is a level 1 high quality liquid asset or cash. It updates the type of adjustment to the stock of HQLA due to such an unwind as addition of the asset or cash posted as collateral as part of such a transaction.	**Common Rule:** Subpart C § __.21 High-Quality Liquid Asset Amount (f) Calculation of adjusted liquid asset amounts (1); Page 349 **Supplementary Information:** Section II B 5 c Calculation of Adjusted Excess HQLA Amount; Page 123 – 126 Section II B 5 e Unwind Treatment of Transactions Involving Eligible HQLA; Page 130 – 132
18	LRM - FR2052A 5G - Inflows	LRM - FR2052A 5G - Onshore Indicator Update	This Rule classifies the line items to be reported for FR2052A 5G Inflows -Unsecured Info 'Onshore Placements and Offshore Placements' and Outflows - Wholesale Info 'Onshore Borrowing and Offshore Borrowing' section.	
		LRM - FR2052A 5G - Inflows - Unencumbered Assets	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unencumbered Assets section.	
		LRM - FR2052A 5G - Inflows - Capacity	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Capacity section.	
		LRM - FR2052A 5G - Inflows - Unrestricted Reserve Balances	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unrestricted Reserve Balances section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Inflows - Unrestricted Reserve Balances For Cash	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unrestricted Reserve Balances For Cash section.	
		LRM - FR2052A 5G - Inflows - Restricted Reserve Balances	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Restricted Reserve Balances section.	
		LRM - FR2052A 5G - Inflows - Restricted Reserve Balances For Cash	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unrestricted Reserve Balances For Cash section.	
		LRM - FR2052A 5G - Inflows - Unsettled Asset Purchases	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Restricted Reserve Balances For Cash section.	
		LRM - FR2052A 5G - Inflows - Unsecured - Other Loans	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unsecured - Other Loans section.	
		LRM - FR2052A 5G - Inflows - Unsecured	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unsecured section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Inflows - Unsecured - Excess Nostro Balances	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Unsecured - Excess Nostro Balances section.	
		LRM - FR2052A 5G - Inflows - Secured	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Secured section.	
		LRM - FR2052A 5G - Inflows - Other - Derivatives Receivables	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Other - Derivatives Receivables section.	
		LRM - FR2052A 5G - Inflows - Other - TBA Sales	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Other - TBA Sales section.	
		LRM - FR2052A 5G - Inflows - Other - Undrawn Committed Facilities	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Other - Undrawn Committed Facilities section.	
		LRM - FR2052A 5G - Inflows - Other - Lock-up Balance	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Other - Lock-up Balance section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Inflows - Other - Principal Payments Receivable	This Rule classifies the line items to be reported for FR2052A 5G Inflows-Other - Principal Payments Receivable section.	
19	LRM - FR2052A 5G - Outflows	LRM - FR2052A 5G - Outflows - Others - MTM Impact On Derivative Positions	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Others - MTM Impact On Derivative Positions section.	
		LRM - FR2052A 5G - Outflows - Wholesale - Other Unsecured Financing	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Wholesale - Other Unsecured Financing section.	
		LRM - FR2052A 5G - Wholesale Outflows	This Rule classifies the line items to be reported for FR2052A 5G Wholesale Outflows section.	
		LRM - FR2052A 5G - Outflows - Wholesale - Other Asset-Backed Financing	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Wholesale - Other Asset-Backed Financing section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G Outflows - Unsecured - Commercial Paper - On Off Shore Borrowings	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Unsecured - Commercial Paper - On Off Shore Borrowings section.	
		LRM - FR2052A 5G - Outflows - Wholesale - Unsecured - Long Term Debt - Unsecured - Structured Notes	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Wholesale - Unsecured - Long Term Debt - Unsecured - Structured Notes section.	
		LRM - FR2052A 5G - Outflows - Unsecured - Wholesale CD And Draws On Committed Lines	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Unsecured - Wholesale CD And Draws On Committed Lines section.	
		LRM - FR2052A 5G - Outflows - Secured - Other Secured Financing Transactions	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Secured - Other Secured Financing Transactions section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Outflows - Secured Except Collateral Swaps	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Secured Except Collateral Swaps section.	
		LRM - FR2052A 5G - Outflows - Secured - Collateral Swaps	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Secured - Collateral Swaps section.	
		LRM - FR2052A 5G - Outflows - Deposits - Transactional And Non-Transactional Accounts	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Deposits - Transactional And Non-Transactional Accounts section.	
		LRM - FR2052A 5G - Outflows - Deposits - Operational And Non-Operational And Escrow	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Deposits - Operational And Non-Operational And Escrow section.	
		LRM - FR2052A 5G - Outflows - Deposits - Reciprocal - Non-Reciprocal	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Deposits - Reciprocal - Non-Reciprocal section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Outflows - Deposits - Affiliated - Non-Affiliated And Other Sweep	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Deposits - Affiliated - Non-Affiliated And Other Sweep section.	
		LRM - FR2052A 5G - Outflows - Deposits - Other Third-Party Deposits	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Deposits - Other Third-Party Deposits section.	
		LRM - FR2052A 5G - Outflows - Others	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Others section.	
		LRM - FR2052A 5G Outflows - Others - Facilities And Retail Mortgage Commitments	This Rule classifies the line items to be reported for FR2052A 5G Outflows - Others - Facilities And Retail Mortgage Commitments section.	
20	LRM - FR2052A 5G - Supplemental Info	LRM - FR2052A 5G - Supplemental Info Initial Margin Posted - House	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Initial Margin Posted - House section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Supplemental Info Initial Margin Posted - Customer	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Initial Margin Posted - Customer section.	
		LRM - FR2052A 5G - Supplemental Info Variation Margin Posted - House	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Variation Margin Posted - House section.	
		LRM - FR2052A 5G - Supplemental Info Variation Margin Posted - Customer	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Variation Margin Posted - Customer section.	
		LRM - FR2052A 5G - Supplemental Info Margin Received	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Initial Margin Received section.	
		LRM - FR2052A 5G - Supplemental Info Variation Margin Received	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Variation Margin Received section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Supplemental Info Collateral Disputes Deliverables	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Collateral Disputes Deliverables section.	
		LRM - FR2052A 5G - Supplemental Info Collateral Disputes Receivables	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Collateral Disputes Receivables section.	
		LRM - FR2052A 5G - Supplemental Info Sleeper Collateral Receivables	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Sleeper Collateral Receivables section.	
		LRM - FR2052A 5G - Supplemental Info Sleeper Collateral Deliverables	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Sleeper Collateral Deliverables section.	
		LRM - FR2052A 5G - Supplemental Info Derivative Collateral Substitution Risk	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Derivative Collateral Substitution Risk section.	

Sl. No.	Process Name	Task Name	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
		LRM - FR2052A 5G - Supplemental Info Other Collateral Substitution Risk	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Other Collateral Substitution Risk section.	
		LRM - FR2052A 5G - Supplemental Info Derivative Collateral Substitution Capacity	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Derivative Collateral Substitution Capacity section.	
		LRM - FR2052A 5G - Supplemental Info Other Collateral Substitution Capacity	This Rule classifies the line items to be reported for FR2052A 5G Supplemental Info Other Collateral Substitution Capacity section.	
		LRM - FR2052A 5G - Structured and Non Structured Debt Issued	This Rule classifies the line items to be reported for FR2052A 5G Structured and Non Structured Debt Issued section.	

2.1.4.1.2 US Liquidity Coverage Ratio Run

The list of pre-configured rules to the regulatory requirement that it addresses is provided in the following table:

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
1	LRM - Propagating Effect Of Assumptions On Cash Outflows And Inflows	LRM - Propagating Effect Of Assumptions On Cash Outflows And Inflows	This Rule adds the adjusted cash flow to original cash flow when changing balance is selected from Run Management window and if original balance is selected there is no impact to the actual cash flow amount.
2	LRM - US LCR Adjustment Computation	LRM - Level 1-Asset Exchange- Adjusted Amount Calculation	This Rule identifies the amount to be added to and deducted from the stock of level 1 high quality liquid assets due to the unwinding of each asset exchange transaction.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - Level 1- Collateralized Derivatives Transaction - Adjusted Amount Calculation	This Rule identifies the amount to be added to or deducted from the stock of level 1 high quality liquid assets due to the unwinding of each Collateralized Derivatives transaction.
		LRM - Level 1- Secured Funding Transaction- Adjusted Amount Calculation	This Rule identifies the amount to be added to and deducted from the stock of level 1 high quality liquid assets due to the unwinding of each Secured Funding transaction.
		LRM - Level 1- Secured Lending Transaction- Adjusted Amount Calculation	This Rule identifies the amount to be added to and deducted from the stock of level 1 high quality liquid assets due to the unwinding of each Secured Lending transaction.
		LRM - Level 2B Adjusted Amount Calculation	This Rule identifies the amount to be added or deducted from the stock of level 2B high quality liquid assets due to the unwinding of each transaction.
		LRM - Level 2A Adjusted Amount Calculation	This rule identifies the amount to be added or deducted from the stock of level 2A high quality liquid assets due to the unwinding of each transaction.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - Level 1-Collateralized Derivatives Transaction - Adjusted Amount Paid Calculation	This rule identifies the amount paid to be added from the stock of level 1 high quality liquid assets due to the unwinding of each Collateralized Derivatives transaction.
3	LRM - Peak Net Cashflow Computation	LRM - Cash flows for LCR Computation	This Rule populates the cash flows for every eligible legal entity for calculation of unmodified liquidity coverage ratio and stores at a Legal entity and currency combination in FCT_LRM_LE_SUMMARY table.
		LRM - Cash flows for LCR Computation for handling cash comingling	This Rule populates the comingled cash flows for every eligible legal entity for calculation of unmodified liquidity coverage ratio and stores at a Legal entity and currency combination in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR NCOF Computation	This Rule populates the net cash flows for every eligible legal entity for calculation of unmodified liquidity coverage ratio and stores at a Legal entity and currency combination in FCT_LRM_LE_SUMMARY table.
		LRM_CUMM_CASHFLOW_CALC	This DT calculates the cumulative cash flows in FSI_PEAK_NET_CASH_OUTFLOW after excluding all the Intercompany Transactions.
		LRM - Total Aggregated Cashflows Computation	This Rule calculates the Add-On amount in FSI_PEAK_NET_CASH_OUTFLOW table.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - Net Cash Outflows Amount Computation	This Rule calculates the Net Cumulative Cash Outflow amount in FSI_PEAK_NET_CASH_OUTFLOW table.
		LRM - 24 Month Derivative Amount Computation	This rules computes outflow amount due to potential derivative valuation changes. This amount is the absolute value of the largest 30-consecutive calendar day cumulative net mark-to-market collateral outflow or inflow realized during the preceding 24 months resulting from derivative transaction valuation changes.
4	LRM - US LCR Adjusted Stock Calculation	LRM - US LCR Level 1 Adjustments Amount Calculation	This Rule calculates the Adjustment Amount for Asset Level 1 in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Level 2A Adjustments Amount Calculation	This Rule calculates the Adjustment Amount for Asset Level 2A in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Level 2B Adjustments Amount Calculation	This Rule calculates the Adjustment Amount for Asset Level 2B in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Level 1 Adjusted Asset Amount Calculation	This Rule calculates the Adjusted Asset Amount post Adjustment for Asset Level 1 in FCT_LRM_LE_SUMMARY table.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - US LCR Level 2A Adjusted Asset Amount Calculation	This Rule calculates the Adjusted Asset Amount post Adjustment for Asset Level 2A in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Level 2B Adjusted Asset Amount Calculation	This Rule calculates the Adjusted Asset Amount post Adjustment for Asset Level 2B in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Adjusted Level 2 Cap Excess Amount Calculation	This Rule calculates the Adjusted Level 2 Cap Excess Amount in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Adjusted Level 2B Cap Excess Amount Calculation	This Rule calculates the Adjusted Level 2B Cap Excess Amount in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Adjusted Excess HQLA Calculation	This Rule calculates the Adjusted Excess HQLA Amount in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Unadjusted Level 2 Cap Excess Amount Calculation	This Rule calculates the Unadjusted Level 2 Cap Excess Amount in FCT_LRM_LE_SUMMARY table.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - US LCR Unadjusted Level 2B Cap Excess Amount Calculation	This Rule calculates the Unadjusted Level 2B Cap Excess Amount in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Unadjusted Excess HQLA Calculation	This Rule calculates the Unadjusted Excess HQLA Amount in FCT_LRM_LE_SUMMARY table.
5	LRM - US LCR Ratio Computation	LRM - US SHQLA Computation	This Rule calculates the Stock of HQLA in FCT_LRM_LE_SUMMARY table.
		LRM - US LCR Computation	This Rule calculates the Liquidity Coverage Ratio in FCT_LRM_LE_SUMMARY table.
6	LRM - FR2052A 5G - Inflows – Computation	LRM - FR2052A 5G - Unencumbered Assets And Capacity Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Unencumbered Assets And Capacity section.
		LRM - FR2052A 5G - Unrestricted Reserve Balances Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Unrestricted Reserve Balances section.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - FR2052A 5G - Inflows - Unrestricted Reserve Balances - Cash Balances Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Unrestricted Reserve Balances - Cash Balances section.
		LRM - FR2052A 5G - Restricted Reserve Balances Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Restricted Reserve Balances section.
		LRM - FR2052A 5G - Unsettled And Forward Asset Purchases Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Unsettled And Forward Asset Purchases section.
		LRM - FR2052A 5G - Inflows - Unsecured Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Unsecured section.
		LRM - FR2052A 5G - Excess Nostro Balances Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Excess Nostro Balances section.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - FR2052A 5G - Inflows - Secured Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Secured section.
		LRM - FR2052A 5G - Inflows - Others Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Inflows- Others section.
7	LRM - FR2052A 5G - Outflows – Computation	LRM - FR2052A 5G - Outflows - Others MTM Impact on Derivative Positions Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Others MTM Impact on Derivative Positions section.
		LRM - FR2052A 5G - Wholesale And Other Unsecured Financing Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Wholesale And Other Unsecured Financing section.
		LRM - FR2052A 5G - Outflows - Wholesale - Unsecured Computation	This Rule computes the reporting amount and reporting time bucket FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Wholesale - Unsecured section.
		LRM - FR2052A 5G - Outflows - Secured Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Secured section.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - FR2052A 5G - Outflows - Deposits - Non-Transactional Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Deposits - Non-Transactional section.
		LRM - FR2052A 5G - Outflows - Deposits - Operational Escrow Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Deposits - Operational Escrow section.
		LRM - FR2052A 5G - Outflows - Deposits - Reciprocal And Sweep Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Deposits - Reciprocal And Sweep section.
		LRM - FR2052A 5G - Outflows - Deposits - Third Party Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Outflows - Deposits - Third Party section.
		LRM - FR2052A 5G - Outflows - Others Computation	This Rule computes the reporting amount and reporting time bucket FSI_LRM_INSTRUMENT for FR2052A 5G Outflows- Others section.
8	LRM - FR2052A 5G - Supplemental – Computation	LRM - FR2052A 5G - Supplemental Margin Posted Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Supplemental Margin Posted section.

Sl. No.	Process Name	Rule Name	Regulatory Requirement Addressed
		LRM - FR2052A 5G - Collateral Deliverables And Receivables Computation	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Collateral Deliverables And Receivables section.
		LRM - FR2052A 5G - Debt Maturing In Greater Than Thirty days Computation – Primary Market Maker	This Rule computes the reporting amount and reporting time bucket in FSI_LRM_INSTRUMENT for FR2052A 5G Structured and Non Structured Debt Issued section.

2.1.4.2 Regulation Addressed through Business Assumptions

The application supports multiple assumptions with pre-configured rules and scenarios based on regulator specified scenario parameters such as inflow rates, outflow rates, run-offs and haircuts and so on. The list of pre-configured business assumptions and the corresponding reference to the regulatory requirement that it addresses is provided in the following table:

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
1	High Quality Liquidity Asset	US LCR - High Quality Liquidity Asset Haircut	The haircuts to be applied on high quality liquid assets are pre-defined as part of this assumption.	**Common Rule**: Subpart C § __.3 Definitions; Page 325 – 340

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
	Haircut		This assumption specifies the fair value, as determined under U.S. generally accepted accounting principles (GAAP), of a covered company's level 2A liquid assets and level 2B liquid assets are subject to haircuts of 15 and 50 percent.	Subpart C § __.20 High-Quality Liquid Asset Criteria; Page 343 – 347 **Supplementary Information**: Section II B 2 Qualifying Criteria for Categories of HQLA; Page 46 – 102
2	Asset Exchange Cash Inflows	US LCR - Asset Exchange Cash Inflows	The inflow rates to be applied on asset exchange transactions are pre-defined as part of this assumption. This assumption specifies the regulation on LCR and asset exchange inflow rates which depend on the level of assets the covered company receives at maturity and covered company must post at maturity.	**Common Rule**: Subpart C § __.33(f) Secured lending and asset exchange cash inflow amount.; Page 375 **Supplementary Information**: Section II C 4(f) Secured lending and asset exchange cash inflow amount page 275-288

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
3	Asset Exchange Cash Outflows Non Re-hypothecated Collateral	US LCR - Asset Exchange Cash Outflows where collateral re-hypothecation maturity date <= 30 days	The outflow rates to be applied on asset exchange transactions where the underlying collateral is not re-hypothecated are pre-defined as part of this assumption. This assumption specifies the regulation on LCR and asset exchange outflow rates which depend on the level of assets the covered company receives at maturity and covered company must post at maturity.	**Common Rule**: Subpart C § __.32(j) Secured funding and asset exchange outflow amount Page 369 **Supplementary Information**: Section II C 3(j) Secured Funding Transactions and Asset Exchange Outflow Amounts page 240 -261
4	Asset Exchange Cash Outflows Re-hypothecated Collateral	Asset Exchange Cash Outflows Re-hypothecated Collateral	The outflow rates to be applied on asset exchange transactions where the underlying collateral is re-hypothecated are pre-defined as part of this assumption. This assumption specifies the rule regulation on LCR and asset exchange outflow rates which depend on level of assets the covered company receives at maturity and covered company must post at maturity.	**Common Rule**: Subpart C § __.32(j) Secured funding and asset exchange outflow amount ;Page 369 **Supplementary Information**: Section II C 3(j) Secured Funding Transactions and Asset Exchange Outflow Amounts page 240 -261
5	Collateral Outflow Derivative Collateral substitution	US LCR - Collateral outflow due to collateral substitution collateral in derivatives	The outflow rates due to collateral substitution on derivatives are pre-defined as part of this assumption. This assumption specifies the outflow rates which depend on level of collateral pledged to the covered company by the counterparty and the level of substitutable collateral which the counterparty may replace without the consent of the bank.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
6	Collateral Outflow Derivative Collateral Valuation Change	US LCR - collateral outflow due to derivative collateral potential valuation changes	The outflow rates due to collateral valuation change on derivatives are pre-defined as part of this assumption. This assumption specifies 20 percent outflow on the fair value of any collateral securing a derivative transaction pledged to counterparty by the bank that is not a level 1 liquid asset.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194
7	Collateral Outflow Derivative contractually due Collateral	US LCR - Collateral Outflow due to contractually due collateral in derivatives	The outflow rates due to collateral that the covered company has to maintain with counterparty on derivatives are pre-defined as part of this assumption. This assumption specifies 100 percent outflow on the fair value of the collateral that the bank is contractually required to pledge to counterparty.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
8	Collateral Outflow Derivative Excess Collateral	US LCR - Collateral Outflow due to excess collateral in derivatives	The outflow rates due to excess collateral that counterparty has maintained with covered company on derivatives are pre-defined as part of this assumption. This assumption specifies that on the excess collateral, 100 percent of the fair value of collateral that the bank requires must be returned to the counterparty. This is because the collateral pledged to the bank exceeds the current collateral requirement of the counterparty under the governing contract. It also specifies that it cannot be re-hypothecated because it is not excluded as eligible HQLA by the bank.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194
9	Collateral Outflow Downgrade Trigger	US LCR - Collateral outflow due change in financial condition	The outflow rates due to rating downgrade are pre-defined as part of this assumption. This assumption specifies 100 percent outflow of all additional amounts of collateral that the bank is contractually required to pledge or to fund under the terms of any transaction. This results change in the bank’s financial condition.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
10	Collateral Outflow Secured Lending Collateral substitution	US LCR - Collateral outflow due to collateral substitution in secured lending	The outflow rates due to collateral substitution on secured lending transactions are pre-defined as part of this assumption. This assumption specifies that on the collateral substitution, the outflow rates depend on the level of collateral pledged to the covered company by the counterparty. It also specifies the level of substitutable collateral which the counterparty may replace without the consent of the bank.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194
11	Collateral Outflow Secured Lending contractually due Co	US LCR - Collateral Outflow due to contractually due collateral in secured funding	The outflow rates due to collateral that the covered company has to maintain with counterparty on secured lending transactions are pre-defined as part of this assumption. This assumption specifies 100 percent of the fair value of collateral that the bank is contractually required to pledge to counterparty.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
12	Collateral Outflow Secured Lending Excess Collateral	US LCR - Collateral Outflow due to excess collateral in secured Lending	The outflow rates due to excess collateral that counterparty has maintained with covered company on secured lending transactions are pre-defined as part of this assumption. This assumption specifies that on the excess collateral, 100 percent of the fair value of collateral must be returned to a counterparty by the bank as the collateral pledged to the bank exceeds the current collateral requirement of the counterparty under the governing contract. It also specifies that it cannot be re-hypothecated and it is not excluded as eligible HQLA by the bank.	**Common Rule**: Subpart C § __.32(f) collateral outflow amount; Page 369 **Supplementary Information**: Section II C3(f) Collateral outflow amount. page 183-194
13	Commitment Outflow Depository Institutions	US LCR - commitment credit and liquidity facility extended to depository institutions	The outflow rates for committed liquid and credit facilities extended to depository institutions are pre-defined as part of this assumption. This assumption specifies the outflow rate which varies depending on the affiliation of the depository institution to the covered company. If the depository institution is an affiliate of the covered company then outflow rate is zero percent where as fifty percent for other depository institutions.	**Common Rule**: Subpart C § __.32 Commitment Outflow Amount; Page 361 **Supplementary Information**: Section II C(e) Commitment Outflow Amount. page 169 -184

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
14	Commitment Outflow for Issuing CP or Security	US LCR - Commitment Outflow amount for issuing CP or Security excluding equity	The outflow rates for committed liquid and credit facilities extended for issuing CP or security are pre-defined as part of this assumption. This assumption specifies 100 percent of the undrawn amount of all committed credit and liquidity facilities extended to a special purpose entity that issues or has issued commercial paper or securities (other than equity securities issued to a company of which the special purpose entity is a consolidated subsidiary) to finance its purchases or E28operations.	**Common Rule**: Subpart C § __.32 Commitment Outflow Amount; Page 361 **Supplementary Information**: Section II C(e) Commitment Outflow Amount. page 169 -184
15	Commitment Outflow Retail Customers	US LCR - Committed credit and liquidity facility extended to retail customers	The outflow rates for committed liquid and credit facilities extended to retail customers are pre-defined as part of this assumption. This assumption specifies 5 percent of the undrawn amount of all committed credit and liquidity facilities extended by the covered company to retail customers or counterparties.	**Common Rule**: Subpart C § __.32 Commitment Outflow Amount; Page 361 **Supplementary Information**: Section II C(e) Commitment Outflow Amount. page 169 -184

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
16	Commitment Outflow Wholesale Customers	US LCR - Committed credit and liquidity facility extended to whole sale customers	The outflow rates for committed liquid and credit facilities extended other wholesale customers are pre-defined as part of this assumption. This assumption specifies the outflow rates for other wholesale customers vary depending on type of facility (liquidity or credit) and whether customer is a financial sector entity or not.	**Common Rule**: Subpart C § __.32 Commitment Outflow Amount; Page 361 **Supplementary Information**: Section II C(e) Commitment Outflow Amount. page 169 -184
17	Debt Security Outflow Amount	US LCR - Outflow Rates for debt securities where bank is the primary market maker	The outflow rates debt securities issued by the covered company are pre-defined as part of this assumption. This assumption specifies the outflow amount for debt securities issued by the bank which matures more than 30 calendar days after the calculation date. The bank or a consolidated subsidiary of the bank is the primary market maker in such debt securities and this includes 3 percent of all such debt securities that are not structured securities and 5 percent of all such debt securities that are structured securities.	**Common Rule**: Subpart C § __.32 Debt Security Outflow Amount; Page 369 **Supplementary Information**: Section II C(i) Debt Security Outflow Amount; page 237-240

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
18	Exclusions for Inflows - Credit and Liquidity Facility	US LCR - Exclusions for Inflows - Credit, Liquidity or other Facilities to be excluded	The cash flows from credit and liquidity facility provided to the covered company are excluded as part of this assumption. This assumption specifies that the amounts arising from any credit or liquidity facility extended to a covered company are excluded from the denominator of the proposed LCR.	**Common Rule**: Subpart C § __.33 Items Not Included as Inflows; Page 373 **Supplementary Information**: Section II C 4(a) Items Not Included as Inflows; page 266-271
19	Exclusions for Inflows - Derivative Mortgage commitments	US LCR - Exclusions for Inflows Derivative Mortgage commitments, Forward Sale Mortgages	The cash flows from derivative mortgage commitments are excluded as part of this assumption. This assumption specifies that the amount that a covered company expects to receive or is contractually entitled to receive from derivative transactions which are due to forward sales of mortgage loans and any derivatives that are mortgage commitments are excluded from the denominator of the proposed LCR.	**Common Rule**: Subpart C § __.33 Items Not Included as Inflows; Page 373 **Supplementary Information**: Section II C 4(a) Items Not Included as Inflows; page 266-271

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
20	Exclusions for Inflows - Non Performing Assets	Exclusions for Inflows - Non Performing Assets	The cash flows from non performing assets are excluded as part of this assumption. This assumption specifies that the cash flows from non-performing assets are excluded from the denominator of the proposed LCR in the following cases, when the amount payable to the covered company or any outstanding exposure to a customer or counterparty that is a non performing asset as of a calculation date or that the covered company has a reason to expect becomes a non performing exposure in 30 calendar days or less from a calculation date.	**Common Rule**: Subpart C § __.33 Items Not Included as Inflows; Page 373 **Supplementary Information**: Section II C 4(a) Items Not Included as Inflows; page 266-271
21	Exclusions for Inflows - Open Maturity	US LCR - Exclusions for Inflows - Open Maturity	The cash flows from open maturity products are excluded as part of this assumption. This assumption specifies the items that have no contractual maturity date or items that mature more than 30 calendar days after a calculation date are excluded from the denominator of the proposed LCR.	**Common Rule**: Subpart C § __.33 Items Not Included as Inflows; Page 373 **Supplementary Information**: Section II C 4(a) Items Not Included as Inflows; page 266-271

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
22	Exclusions for Inflows - Operational Deposits	US LCR - Exclusions for Inflows - Operational Deposits of Financial Sector Entities	The cash flows from operational deposits placed by the covered company are excluded as part of this assumption. This assumption specifies that the covered company's inflows derived from any operational deposits at another regulated financial companies are excluded from the denominator of the proposed LCR.	**Common Rule**: Subpart C § __.33 Items Not Included as Inflows; Page 373 **Supplementary Information**: Section II C 4(a) Items Not Included as Inflows; page 266-271
23	Less Stable Retail Outflows	US LCR - Retail outflow amount for less stable portion of the deposits	The outflow rate for less stable portion of retail deposits which are not brokered deposits are pre-defined as part of this assumption. This assumption specifies that a bank's retail funding outflow amount as of the calculation date includes (regardless of maturity or collateralization) 3 percent of all stable retail deposits held at the bank and 10 percent of all other retail deposits held at the bank.	**Common Rule:** Subpart C § __.32 Funding Outflow Amount; Page 359 **Supplementary Information:** Section II C3(a) Retail Funding Outflow Amount; page 155-161

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
24	Mortgage Commitment Outflow Amount	US LCR - Outflow rates for mortgage commitments	The outflow rates for commitments extended for mortgage loans are pre-defined as part of this assumption. This assumption specifies that the mortgage commitment outflow amount as of a calculation date is 10 percent of the amount of funds the bank has contractually committed for its own origination of retail mortgages. This can be drawn upon 30 calendar days or less from such calculation date.	**Common Rule**: Subpart C § __.32 Mortgage commitment outflow amount; Page 361 **Supplementary Information**: Section II C 3(d) Mortgage commitment page 168-169
25	Net Derivatives Receivables or Payables	US LCR - Net Derivatives Receivables or Payables	The cash flow movements for derivative transactions are pre-defined as part of this assumption. This assumption specifies that the determination of total net cash outflow using the add-on approach, the net derivatives cash inflow and outflow is not part of add on computations. Hence these cash flows are moved to open maturity bucket.	**Common Rule**: Subpart C § __.30 Total net cash outflow amount; Page 354-356 **Supplementary Information**: Section II C 1(a) Peak Day Approach; page 137-144
26	Non Maturing Deposits Placed	US LCR- Non Maturing Deposits cash flows maturity to be considered in day1	The maturity adjustments are pre-defined as part of this assumption. This assumption specifies that the transactions, except for operational deposits, that do not have maturity dates are considered to have a maturity date on the first calendar day after the calculation date.	**Common Rule**: Subpart C § __.31 Determining Maturity; Page 356-358 **Supplementary Information**: Section II C 2 Determining Maturity; page 147-154

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
27	Other Cash Inflows - Retail and Wholesale	US LCR - Other Cash Inflows which are not included in any inflow assumptions	This business assumption is used to exclude cash inflows from retail and wholesale customers which are non-performing. This assumption specifies that any amounts payable to the bank from an obligation of a customer or counterparty that is a non-performing asset must be made as per the calculation date.	**Common Rule:** Subpart C § __.33 Items Not Included as Inflows; Page 373 **Supplementary Information:** Section II C 4(a) Items Not Included as Inflows; page 266-271
28	Other Cash Inflows - Revolving Credit	US LCR - Other Cash Inflows which are not included in any of the Inflow assumptions	The inflow rates for revolving credit which are secured are pre-defined as part of this assumption. This assumption specifies that any other inflows which are not included need to be given a zero percent inflows. This assumption is defined to include zero percent of inflows coming for revolving credit which are secured.	**Common Rule:** Subpart C § __.33 Other Cash Inflow Amounts; Page 379 **Supplementary Information:** Section II C 4(a) Other Cash Inflow Amounts; page 290
29	Other Retail Outflows	US LCR - Retail funding from retail customer that is not a retail deposit	The outflow rates from retail customers other than retail deposits are pre-defined as part of this assumption. This assumption specifies the outflow rates from retail customers which are 40 percent of all funding from a retail customer or counterparty that is not a retail deposit or a brokered deposit provided by a retail customer or counterparty; or a debt instrument issued by the bank that is owned by a retail customer or counterparty.	**Common Rule**: Subpart C § __.32 Retail Funding Outflow Amount; Page 359 **Supplementary Information**: Section II C(a) Retail Funding Outflow Amount; page 155-161

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
30	Retail Brokered Other Maturity Deposits	US LCR - Brokered deposit outflow for maturity deposits (not reciprocal or sweep)	The outflow rates for retail brokered (non reciprocal, non sweep) non maturity deposits are pre-defined as part of this assumption. This assumption specifies the brokered deposit outflow amount for retail customers or counterparties as of the calculation date. This includes 100 percent of all brokered deposits provided by a retail customer or counterparty that are not brokered sweep or reciprocal deposits and which matures in 30 calendar days or less from the calculation date. This also includes 10 percent of all brokered deposits provided by a retail customer or counterparty that are not brokered sweep or reciprocal deposits and which mature later than 30 calendar days from the calculation date.	**Common Rule**: Subpart C § __.32 Brokered Deposit Outflow Amount; Page 366 **Supplementary Information**: Section II C(g) Brokered Deposit Outflow Amount; Page 194 - 214

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
31	Retail Brokered Other Non Maturity Deposits	US LCR - Brokered deposit outflow for non-maturity deposit (not reciprocal or sweep)	The outflow rates for retail brokered (non reciprocal, non sweep) maturity deposits are pre-defined as part of this assumption. This assumption specifies the brokered deposit outflow amount for retail customers or counterparties as of the calculation date which includes 20 percent of all brokered deposits that are not brokered sweep or reciprocal deposits which are held in a transactional account with no contractual maturity date, where the entire amount is covered by deposit insurance and 40 percent of all brokered deposits that are not brokered sweep or reciprocal deposits which are held in a transactional account with no contractual maturity date, where less than the entire amount is covered by deposit insurance.	**Common Rule**: Subpart C § __.32 Brokered Deposit Outflow Amount; Page 366 **Supplementary Information**: Section II C(g) Brokered Deposit Outflow Amount; Page 194 - 214
32	Retail Brokered Reciprocal Deposits	US LCR - Outflow rates for brokered reciprocal deposits from retail customers	The outflow rates for retail brokered reciprocal deposits are pre-defined as part of this assumption. This assumption specifies the brokered deposit outflow amount for retail customers or counterparties as of the calculation date which includes 10 percent of all reciprocal brokered deposits, where the entire amount is covered by deposit insurance and 25 percent of all reciprocal brokered deposits where less than the entire amount is covered by deposit insurance.	**Common Rule**: Subpart C § __.32 Brokered Deposit Outflow Amount; Page 366 **Supplementary Information**: Section II C(g) Brokered Deposit Outflow Amount; Page 194 - 214

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
33	Retail Brokered Sweep Deposits	US LCR - Outflow rates for brokered sweep deposits from retail customers	The outflow rates for retail brokered sweep deposits are pre-defined as part of this assumption. This assumption specifies the brokered sweep deposit outflow amount for retail customers or counterparties as of the calculation date which includes 10 percent in cases where deposit originating company is subsidiary or affiliate of the covered company. Here the entire amount of the deposits is covered by deposit insurance and 25 percent in cases where deposit originating company is subsidiary or affiliate of the covered company. The entire amount of the deposits is covered by deposit insurance and 40 percent where less than the entire amount of the deposit balance is covered by deposit insurance.	**Common Rule**: Subpart C § __.32 Brokered Deposit Outflow Amount; Page 366 **Supplementary Information**: Section II C(g) Brokered Deposit Outflow Amount; Page 194 - 214
34	Retail Cash Inflows	US LCR - Retail Cash Inflow Amount	The inflow rates from retail customers are pre-defined as part of this assumption. This assumption specifies that the retail cash inflow amount as of the calculation date includes 50 percent of all payments contractually payable to the bank from retail customers or counterparties.	**Common Rule**: Subpart C § __.33 Retail Cash Inflow Amount; Page 375 **Supplementary Information**: Section II C 4(c) Retail Cash Inflow Amount; page 272-273

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
35	Secured Lending Cash Inflows - Collateral Non- Re-hypothecated	US LCR -Secured Lending Cash Inflows where the underlying Collateral is Non- Re-hypothecated	The inflow rates from secured lending transactions where collateral is re-hypothecated are pre-defined as part of this assumption. This assumption specifies the outflow rate of secured lending transactions which depends on the collateral securing the lending transaction which is either re-hypothecated or not. If collateral is re-hypothecated and cannot be returned to the counterparty within 30 days then outflow is zero percent of all contractual payments.	**Common Rule**: Subpart C § __.33(f) Secured lending and asset exchange cash inflow amount.; Page 375 **Supplementary Information**: Section II C 4(f) Secured lending and asset exchange cash inflow amount page 275-288

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
36	Secured Lending Cash Inflows - Collateral Re-hypothecated	Secured Lending Cash Inflows - Collateral Re-hypothecated	The inflow rates from secured lending transactions where collateral is not re-hypothecated are pre-defined as part of this assumption. This assumption specifies if the collateral securing the transaction is not re-hypothecated then: 1. 0 percent of all contractual payments, to the extent that the payments are secured by level 1 liquid asset. 2. 15 percent of all contractual payments, to the extent that the payments are secured by level 2A liquid assets. 3. 50 percent of all contractual payments, to the extent that the payments are secured by level 2B liquid assets. 4. 100 percent of all contractual payments, to the extent that the payments are secured assets that are not HQLA. 5. 50 percent of all contractual payments, to the extent that the payments are secured assets that are not HQLA and payments pursuant to collateralized margin loans.	**Common Rule**: Subpart C § __.33(f) Secured lending and asset exchange cash inflow amount.; Page 375 **Supplementary Information**: Section II C 4(f) Secured lending and asset exchange cash inflow amount page 275-288

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
37	Secured Lending Cash Inflows - Underlying is Eligible HQLA	US LCR - Secured Lending Cash Inflows - Underlying is part of Eligible HQLA	The inflow rates from secured lending transactions where collateral is eligible HQLA are pre-defined as part of this assumption. This assumption specifies 100 percent of all contractual payments due to the covered company which are secured lending transactions, to the extent that the payments are secured by assets that are not eligible HQLA and not re-hypothecated.	**Common Rule**: Subpart C § __.33(f) Secured lending and asset exchange cash inflow amount.; Page 375 **Supplementary Information**: Section II C 4(f) Secured lending and asset exchange cash inflow amount page 275-288
38	Secured Wholesale Funding Outflow Amount	US LCR - Secured funding outflow based on asset level of the underlying collateral	The outflow rates from secured funding transactions are pre-defined as part of this assumption. This assumption specifies the secured funding outflow rates for the wholesale customers. This depends on asset level of collateral which secures the secured funding transaction.	**Common Rule**: Subpart C § __.32(j) Secured funding and asset exchange outflow amount Page 369 **Supplementary Information**: Section II C 3(j) Secured Funding Transactions and Asset Exchange Outflow Amounts page 240 -261

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
39	Securities Cash Inflows	US LCR - Securities Cash Inflow Amount	The inflow rates from securities are pre-defined as part of this assumption. This assumption specifies the securities cash inflow amount as of the calculation date which includes 100 percent of all contractual payments that are due to the bank on securities. These are not eligible HQLA.	**Common Rule**: Subpart C § __.33 Securities cash inflow amount; Page 375 **Supplementary Information**: Section II C 4(e) Securities cash inflow amount; page 274-275
40	Segregated Account Inflows	US LCR- Broker Dealer Segregated Account Inflows	The inflow rates for broker-dealer segregated accounts are pre-defined as part of this assumption. This assumption specifies the segregated inflow amount to be calculated based on the difference between the fair value of the required balance (as of the calculation date) and customer reserve account (as of 30 calendar days) from the calculation date.	**Common Rule**: Subpart C § __.33 Broker-Dealer Segregated account inflow amount; Page 378-379 **Supplementary Information**: Section II C 4(g) Segregated Account Inflow Amount; Page 287-290
41	Stable Retail Outflows	US LCR - Retail outflow amount for sable portion of the retail deposits	The outflow rates for stable portion of non brokered retail deposits are pre-defined as part of this assumption. This assumption specifies that a bank's retail funding outflow amount as of the calculation date includes (regardless of maturity or collateralization 3 percent of all stable retail deposits held at the bank and 10 percent of all other retail deposits held at the bank.	**Common Rule**: Subpart C § __.32 Retail Funding Outflow Amount; Page 359 **Supplementary Information**: Section II C(a) Retail Funding Outflow Amount; page 155-161

<table>
<tr><th>Sl. No.</th><th>Assumption Name</th><th>Assumption Description</th><th>Regulatory Requirement Addressed</th><th>Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014

Reference</th></tr>
<tr><td>42</td><td>Structured Transaction Outflow Amount</td><td>US LCR - Outflow amount where bank is the sponsor of a structured transaction</td><td>The outflow rates for debt securities sponsored by the covered company are pre-defined as part of this assumption.

This assumption specifies that the structured transaction outflow is the greater in the following cases:

• When 100 percent of the amount of all debt obligations of the issuing entity which matures ≤ 30 calendar days and commitments made by the issuing entity to purchase assets within ≤ 30 calendar days from such calculation date

• When the maximum contractual amount of funding the banking organization may be required to provide the issuing entity which is ≤ 30 calendar days from such calculation date through a liquidity facility.</td><td>Common Rule:
Subpart C § __.32Structured Transaction Outflow Amount; Page 359

Supplementary Information:
Section II C(b) Structured Transaction Outflow Amount; page 161-166</td></tr>
</table>

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
43	Third Party Placed Retail Outflows	US LCR - Retail deposit outflow amount for the third placed deposits	The outflow rates for non brokered retail deposits placed by third party are pre-defined as part of this assumption. This assumption specifies that a bank's retail funding outflow amount as of the calculation date includes (regardless of maturity or collateralization) 20 percent of all deposits placed at the bank by a third party on behalf of a retail customer or counterparty that are not brokered deposits. The retail customer or counterparty owns the account and where less than the entire amount is covered by deposit insurance. And, 40 percent of all deposits placed at the bank by a third party on behalf of a retail customer or counterparty that is not brokered deposits. The retail customer or counterparty owns the account and where less than the entire amount is covered by deposit insurance.	**Common Rule**: Subpart C § __.32 Funding Outflow Amount; Page 359 **Supplementary Information**: Section II C(a) Retail Funding Outflow Amount; page 155-161
44	Unsecured Wholesale Cash Inflows - Revolving Credit	US LCR - Unsecured Wholesale Cash Inflows - Exclusion of Revolving Credit	The inflow rates from revolving credit which are not secured are pre-defined as part of this assumption. This assumption specifies the credit facilities, the amount of existing loan which is not included in the unsecured wholesale cash inflow amount.	**Common Rule**: Subpart C § __.33(f) Unsecured Wholesale Cash inflow Amount; Page 375 **Supplementary Information**: Section II C 4(b)Unsecured Wholesale Cash inflow Amount; page 275-288

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
45	Unsecured Wholesale Cash Inflows-Financial Sector entity	US LCR- Unsecured Wholesale Cash Inflows-Financial Sector entity	The inflow rates from financial sector entity are pre-defined as part of this assumption. This assumption specifies the inflow rates which are 100 percent of all payments contractually payable to the bank from financial sector entities, or from a consolidated subsidiary or central banks and 50 percent of all payments contractually payable to the bank from wholesale customers or counterparties that are not financial sector entities or consolidated subsidiaries.	**Common Rule**: Subpart C § __.33(f) Unsecured Wholesale Cash inflow Amount; Page 375 **Supplementary Information**: Section II C 4(b)Unsecured Wholesale Cash inflow Amount; page 275-288
46	Unsecured Wholesale Deposit Non Operational and Non Brokered	US LCR - Unsecured wholesale funding from non-operational and Non brokered deposits	The outflow rates from wholesale non-operational and non brokered deposits are pre-defined as part of this assumption. This assumption specifies that the unsecured wholesale funding is not an operational deposit and it is not provided by a financial sector entity or a consolidated subsidiary. Here, 20 percent of all such funding and the entire amount are covered by deposit insurance and the funding is not a brokered deposit. Also, 40 percent of all such funding is less than the entire amount and it is covered by deposit insurance or the funding is a brokered deposit.	**Common Rule**: Subpart C § __.32 Unsecured wholesale funding outflow amount; page 367-368 **Supplementary Information**: Section II C(h) Unsecured wholesale funding outflow amount; page 219-235

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
47	Unsecured Wholesale Non Operational Brokered Deposit	US LCR - Unsecured whole funding from non-operational brokered deposits	The outflow rates from wholesale non-operational, brokered deposits are pre-defined as part of this assumption. This assumption specifies that the unsecured wholesale funding is not an operational deposit and is not provided by a financial sector entity or consolidated subsidiary. Here, 20 percent of all such funding and the entire amount are covered by deposit insurance and the funding is not a brokered deposit. Also, 40 percent of all such funding is less than the entire amount and is covered by deposit insurance or the funding is a brokered deposit.	**Common Rule**: Subpart C § __.32 Unsecured wholesale funding outflow amount; page 367-368 **Supplementary Information**: Section II C(h) Unsecured wholesale funding outflow amount; page 219-235
48	Unsecured Wholesale Operational Deposits	US LCR - Unsecured wholesale funding outflow from operational deposits.	The outflow rates from wholesale operational deposits are pre-defined as part of this assumption. This assumption specifies that 5 percent of all operational deposits, other than operational deposits that are held in escrow accounts are covered by deposit insurance.	**Common Rule**: Subpart C § __.32 Unsecured wholesale funding outflow amount; page 367-368 **Supplementary Information**: Section II C(h) Unsecured wholesale funding outflow amount; page 219-235

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
49	Adjustments to Secured Non-operational Brokered Deposits	Adjustments to Secured Non-operational Brokered Deposits	The adjustments to secured non-operational and brokered deposits are pre-defined as part of this assumption. This assumption specifies that the secured deposit outflow rates cannot be higher than the corresponding unsecured deposit outflow rates.	**Common Rule**: Subpart C § __.32(j) Secured funding and asset exchange outflow amount Page 369 **Supplementary Information**: Section II C 3(j) Secured Funding Transactions and Asset Exchange Outflow Amounts page 240 -261
50	Adjustments to Secured Non-operational Non-brokered Deposits	US LCR - adjustments to Non-operational Non-brokered secured deposits	The adjustments to secured non-operational and brokered deposits are pre-defined as part of this assumption. This assumption specifies that the secured deposit outflow rates cannot be higher than the corresponding unsecured deposit outflow rates.	**Common Rule**: Subpart C § __.32(j) Secured funding and asset exchange outflow amount Page 369 **Supplementary Information**: Section II C 3(j) Secured Funding Transactions and Asset Exchange Outflow Amounts page 240 -261

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulation WW, Final Rule, Liquidity Coverage Ratio: Liquidity Risk Measurement Standards, Sep 2014 Reference
51	Adjustments to Secured Operational Deposits	US LCR - adjustments to secured operational deposits	The adjustments to secured operational deposits are pre-defined as part of this assumption. This assumption specifies that the secured deposit outflow rates cannot be higher that the corresponding unsecured deposit outflow rates.	**Common Rule**: Subpart C § __.32(j) Secured funding and asset exchange outflow amount Page 369 **Supplementary Information**: Section II C 3(j) Secured Funding Transactions and Asset Exchange Outflow Amounts page 240 -261
52	Asset Exchange Adjustments	Open maturity collateral swap cash flows moving to corresponding maturity buckets	This business assumption moves the asset exchange cash flows from open maturity bucket to corresponding residual maturity bucket. This assumption specifies the determination of total net cash outflow using the Add-On approach. The asset exchange cash inflows and outflows are not part of add-on computations. Hence these cash flows are moved to open maturity bucket.	**Common Rule**: Subpart C § __.30 Total net cash outflow amount; Page 354-356 **Supplementary Information**: Section II C 1(a) Peak Day Approach; page 137-144

2.2 Modified Liquidity Coverage Ratio Calculation

2.2.1 Overview

The modified LCR calculation is prescribed by US Federal Reserve for smaller banks, which requires the stock of HQLA to be sufficient to cover net cash outflows over a liquidity horizon of 30 days. These banks are required to compute a less stringent LCR, because of their relatively small size and lower complexity. The inflow and outflow rates for such banks are 70% of those prescribed under the LCR approach.

2.2.2 Process Flow

2.2.2.1 Changes vis-à-vis Liquidity Coverage Ratio Calculation

The changes in the modified LCR calculations vis-a-vis US Fed LCR calculations are as follows:

a. 30-day LCR horizon, which means HQLA adjustments, cash inflows and outflows are based on transactions that mature in 30 days.
b. 70% of the LCR outflow and inflow rates are used in the modified LCR calculations. HQLA haircut values remain unchanged.
c. Denominator is calculated in accordance with the BIS approach and not based on the add-on approach.

All other conditions remain unchanged between LCR and modified LCR calculations.

2.2.2.2 Calculation of Net Cash Outflows (NCOF)

As per the US Federal Reserve, the net cash outflow calculated on a cumulative basis on the last day of the liquidity horizon is taken as the denominator value in case of the modified LCR calculations. The liquidity horizon prescribed by the US Federal Reserve for the calculation of modified LCR is 30 calendar days.

a. Numerical example for Net Cash Outflow Calculation – Modified LCR: The table below illustrates the modified LCR approach. For computational convenience we have taken the liquidity horizon as 10 days instead of 30 days.

Calculation Day	Non-Maturity Cash Outflows	Cash Outflows with Maturity equal to Calculation Day	Cash Inflows with Maturity equal to Calculation Day
Day 1	200	100	90
Day 2	200	20	5
Day 3	200	10	5

Calculation Day	Non-Maturity Cash Outflows	Cash Outflows with Maturity equal to Calculation Day	Cash Inflows with Maturity equal to Calculation Day
Day 4	200	15	20
Day 5	200	20	15
Day 6	200	0	0
Day 7	200	0	0
Day 8	200	10	8
Day 9	200	15	17
Day 10	200	25	40
Total	200	215	200

Table 6 Net Cash Outflow Calculation – Modified LCR

Cumulative Cash Outflows = 200+215 = 415

Net Cash Outflows = 415 – Min (0.75* 415, 200) = 215

2.2.2.2.1 Consolidation as per Modified LCR Approach

Consolidation for a modified BHC is done as per the procedure detailed in the following sections.

a. In case of US Consolidated Subsidiaries Subject to Modified LCR Requirements

   In case of a US based legal entity that is a consolidated subsidiary of a modified LCR parent company, consolidation is done as follows:

   i. The application identifies whether the subsidiary is a US consolidated subsidiary.

ii. If condition (i) is fulfilled, it identifies whether the US consolidated subsidiary is subject to modified LCR requirement that is, whether the subsidiary in question is a regulated entity.

iii. If condition (ii) is fulfilled, then it calculates the net cash outflow based on the US Federal Reserve modified LCR approach that is, based on the cumulative cash flows on the 30th day, eliminating inter-company transactions at the level of the consolidated subsidiary.

iv. Consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow that is, to the extent required to satisfy modified LCR requirements of that subsidiary as part of the modified parent company's HQLA.

v. Consolidates the entire amount of post-haircut unrestricted HQLA held at the consolidated subsidiary as part of the modified parent company's HQLA.

vi. Consolidates all cash inflows and outflows which are part of the net cash flow calculation.

b. In case of US Consolidated Subsidiaries Not Subject to Modified LCR Requirements

i. The application identifies whether the subsidiary is a US consolidated subsidiary.

ii. If condition (i) is fulfilled, it identifies whether the US consolidated subsidiary is subject to modified LCR requirement that is, whether the subsidiary in question is a regulated entity.

iii. If condition (ii) is not fulfilled, it eliminates all inter-company transactions till the level of the immediate parent of the consolidated subsidiary and then calculates the net cash outflow based on the US Federal Reserve modified LCR approach that is, based on the cumulative cash flows on the 30th day.

iv. Consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow and the entire amount of post-haircut unrestricted HQLA as part of the modified parent company's HQLA.

v. Consolidates all cash inflows and outflows which are part of the net cash flow calculation.

c. In case of Non-US Consolidated Subsidiaries

i. The application identifies whether the subsidiary is a US consolidated subsidiary.

ii. If condition (i) is not fulfilled, it eliminates all inter-company transactions till the level of the immediate parent of the consolidated subsidiary and then calculates the net cash outflow based on the US Federal Reserve modified LCR approach that is, based on the cumulative cash flows on the 30th day.

iii. The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow and the entire amount of post-haircut unrestricted HQLA as part of the modified parent company's HQLA.

iv. The application consolidates all cash inflows and outflows which are part of the net cash flow calculation.

These steps are repeated for each level in the organization structure, till the final consolidation level as selected in the Run is reached. The Consolidated HQLA calculated at the level of the immediate subsidiary of the BHC is added to the HQLA held by the BHC. All intercompany cash flows are eliminated and the LCR is calculated in accordance with the modified LCR approach.

2.2.2.3 Other Calculations

2.2.2.3.1 Calculation of Effective Drawdown Date

The funding start date, end date and draw notice period are used to determine the effective drawdown date for outflow of cash flows in case of loans or commitments provided by the bank to its customers. The application calculates the effective drawdown date for assets that have a drawdown associated with them as follows:

a. If funding start date > as of date, effective drawdown date = funding start date.

b. If funding start date < as of date, funding end date < as of date, draw notice period > 0 and funding end date + draw notice period > as of date, effective drawdown date = funding end date + draw notice period.

c. If funding start date < as of date, funding end date < as of date, draw notice period > 0 and funding end date + draw notice period <= as of date, effective drawdown date = as of date.

d. If funding start date < as of date, funding end date < as of date and draw notice period = 0, effective drawdown date = funding end date.

NOTE: The outflow rates are applied to cash outflows based on the effective drawdown date computed as above. If the effective drawdown date is < LCR horizon, the appropriate drawdown rates are applied based on other regulatory criteria.

2.2.2.3.2 Treatment of Commingled Securitization Cash Flows

If the commingling indicator is ‘Yes’ for a particular securitization then all cash flows of such a securitization are commingled with the cash flows of its parent entity. Such commingled cash flows are treated as available for use by the parent entity under normal conditions that is, when there is no downgrade.

In case of a ratings downgrade that results in the activation of the downgrade trigger for the securitization, all access to commingled cash flows by the parent company becomes restricted and these are segregated from the parent company’s cash flows. In this case, all cash inflows and outflows related to the securitization are completely removed from the calculation of the net cash outflow, except the downgrade impact amount which is posted as an outflow.

In a consolidated Run, the application treats commingled securitization cash flows as follows:

a. The application checks if the commingling indicator value for securitizations from SPV/SIV which is part of the consolidated entity's organization structure. If the commingling indicator is 'No', the application treats the SPV/SIV as a standalone entity and does not commingle the cash flows. The regular consolidation process is followed, refer section Regulatory Calculations as Per US Federal Reserve for more information.

b. If commingling indicator is 'Yes' and Run type is Contractual Run, the cash inflows and outflows of the securitization are commingled with the parent company's cash flows. Separate identification of the legal entity of such cash flows that is, SPV/SIV information is maintained.

c. If commingling indicator is Yes and Run type is BAU or stress Run, the application checks if ratings downgrade is specified as part of the business assumption included in the Run. If downgrade is not specified, the cash flows continue to remain commingled.

d. If ratings downgrade is specified, the application checks if a downgrade trigger exists for the securitization. If there is no downgrade trigger, the cash flows continue to remain commingled.

e. If a downgrade trigger exists, the application checks if the trigger is activated based on the ratings downgrade specified as part of the business assumption included in the Run. If the downgrade trigger is not activated, the cash flows continue to remain commingled.

f. If downgrade trigger is activated based on the downgrade specified, the application segregates and excludes all the securitization cash inflows and outflows from computation of net cash outflows and posts the downgrade impact amount calculated as per the procedure detailed as part of the above section *Downgrade Impact Amount for Securitizations* as an outflow.

NOTE: In a Solo Run, the application does not include any cash flows from commingled securitizations in the parent company's calculations. These are included only when calculations are done on a consolidated basis.

2.2.2.3.3 Treatment of Central Bank Reserves and Deposits

Central bank reserves are deposits with the central bank with the Product Type as Central Bank Reserves. These are obtained in the Correspondent Accounts table. In addition to the product type, such reserves have an additional attribute, Reserve Requirement, captured. Excess reserve at each Central Bank is calculated as follows:

$$\boldsymbol{Excess\ Central\ Bank\ Reserve = Central\ Bank\ Reserve\ Balance - Minimum\ Reserve\ Requirement}$$

Central bank reserves and excess central bank reserves do not have a maturity associated with them and are bucketed in the first time bucket that is, Day 1 bucket in case of FR2052b reporting.

NOTE: Banks may place deposits with their Central Bank which has a maturity associated with them. Such deposits are bucketed based on their respective maturities for FR 2052a and b reporting.

2.2.2.3.4 Substitutable Collateral

The attributes required for reclassification of substitutable collateral to HQLA level is taken at a less granular level. Currently, the application expects specific details of the asset substitutable as collateral such as the instrument code, issuer code, guarantor code and so on. Since such a substitution has not yet occurred, a generic set of attributes is defined within the contract for the assets substitutable in the future. For instance, the contract states the issuer type, guarantor type and product of the asset which are substituted. In the event of substitution, the specific assets which is substituted has these broad attributes along with asset specific details. The broad characteristics are sufficient for HQLA classification.

2.2.2.3.5 Operating Expenses

Operational expenses are expenses such as salaries, rents and so on incurred at frequent intervals for the purpose of the day-to-day running of the business. These are essentially income statement line items and the forecasted values of such expenses are reported as part of FR 2052b template. Download for these items is across multiple tenors specified as days, each of which is bucketed appropriately based on a 30/360 convention.

The items in FR 2052b that are treated in a manner similar to operational expenses include:

a. 14.3 Operating Cash Inflows

b. 16.1 Common Dividends

c. 16.2 Operating Expenses

For instance, operating expenses are provided 100 in 1 day, 200 in 5 days, 300 in 10 days and 400 in 60 days. They are bucketed in FR 2052b as follows:

Time Bucket	Time Bucket Size (in Days)	Time Bucket Start Day	Time Bucket End Day	Operating Expenses
Day 1	1	1	1	100
> 1 Day <= 1 month	29 [=(30*1) – 1]	2	30 [=30*1]	500 [=200+300]
> 1 month <= 3 months	60 [=(30*3) – 30]	31	90 [=30*3]	400

NOTE: Day count convention of 30/360 is used where 1 Month = 30 days and 1 Year = 360 Days.

2.2.2.3.6 CDS Spread

CDS spread is reported in FR 2052b template is the spread associated with the legal entity itself. This is not the instrument level spread of the counterparty. Currently the spread is taken at an instrument level. This is taken at a legal entity and tenor (in days) combination. In consolidated reporting, the spread associated with the consolidation entity is reported. If the 5 year CDS spread is unavailable, the spread for the tenor closest to 5 years must be reported.

2.2.2.3.7 Funding Pricing Curves

The funding price and funding amount is captured for ABCP multi-seller funding curve, ABCP single seller funding curve, unsecured bank funding curve and unsecured holding company funding curve at a legal entity and tenor granularity. These values are directly reported as part of line items 20 and 21 in FR 2052b reporting template.

If multiple funding prices are available that are bucketed in a single time bucket, a weighted average of the funding price is calculated based on the funding amount. For instance unsecured bank funding curve information is provided as follows:

Tenor (in Days)	Funding Price (in %)	Funding Amount
40	4	100

Tenor (in Days)	Funding Price (in %)	Funding Amount
60	5	150
90	6	250

In this case, all 3 tenors occur in the > 1 month <= 3 months bucket for FR 2052b reporting. In such a case, the weighted average of these prices must be reported.

Total funding amount = 100 + 150 +250 = 500

Weights are calculated as follows:

Funding Price	4	5	6
Weight	0.2 [=100/500]	0.3 [=150/500]	0.5 [=250/500]
Weighted Price	0.8 [=4*0.2]	1.5 [=5*0.3]	3 [=6*0.5]

Weighted average price = 0.8 + 1.5 + 3 = 5.3

2.2.2.3.8 Lendable Value

The lendable haircut is available at a product level and not at an account level as currently expected by the application. This is updated in the business processor that computes the lendable value.

2.2.2.3.9 Placed Collateral

Secured funding transactions require covered company to place collateral for the borrowings which are received from the counterparty. Secured funding are borrowings from repurchase transactions, Federal Home Loan Bank advances, secured deposits from municipalities or other public sector entities (which typically require collateralization in the United States), loans of collateral to effect customer short positions, and other secured wholesale funding arrangements with Federal Reserve Banks, regulated financial companies, non-regulated funds, or other counterparties. Secured funding could give rise to cash outflows or increased collateral requirements in the form of additional collateral or higher quality collateral to support a given level of secured debt. Collaterals are also placed for some derivatives transactions such as collateral swap, futures, forwards, and securitization and so on.

The information required at the placed collateral level is as follows:

a. Placed collateral are securities or other assets such as credit cards, loans and so on.
b. All the attributes required for the HQLA classification and collateral amount is provided as download for each placed collateral.
c. The mapping of placed collateral and corresponding secured funding transactions are provided as download.
d. The underlying asset level, underlying asset amount, contractually required collateral amount, downgrade impact amount are computed for each secured funding transactions.
   i. Collateral posted or the underlying amount is the sum of the value of all collaterals placed for the secured funding.

$$\boldsymbol{Underlying\ collateral\ Amount} = \sum_{\boldsymbol{i=1}}^{\boldsymbol{n}} \boldsymbol{collateral\ amount\ of\ the\ placed\ collateral}$$

   ii. Underlying asset level: the asset level of the placed collateral for the secured funding. In cases where the multiple collaterals were placed for a secured funding transaction with varying asset levels, the asset level corresponding to lowest liquidity value is assigned as underlying asset level for the secured funding transaction. For example, if Level 1 and Level 2A assets are placed as collateral for FHLB borrowing, the underlying asset level for the FHLB borrowings is Level 2A.

$$\boldsymbol{Contractually\ due\ collateral} = \boldsymbol{Max}[\boldsymbol{0}, (\boldsymbol{EOP\ Balance} - \boldsymbol{Collateral\ Posted})]$$

   Note: The contractually due collateral calculation for derivative transactions is specified in ‘Net Exposure’ section.

   iii. The downgrade impact amount computations are explained in ‘Calculation of Downgrade Impact Amount’ section.

2.3 Regulation YY Liquidity Risk Calculation

2.3.1 Overview

The U.S. Federal Reserve issued the Final Rule for Regulation YY, i.e. Enhanced Prudential Standards for Bank Holding Companies and Foreign Banking Organizations, required to be established under Dodd-Frank guidelines. This rule covers requirements around liquidity risk, capital planning, stress testing, risk-based capital, leverage requirements among many others. OFS Liquidity Risk Management covers the liquidity risk related aspects of Regulation YY for both US bank holding companies (BHC) as well as foreign banking organizations (FBO).

As part of Regulation YY, banks are expected to compute their buffer requirement i.e. net cash flow need under stress scenarios across multiple stress horizons. The regulatory stress horizons include overnight, 30 days, 90 days and 1 year. The method of computing net stressed cash flow need differs for US BHCs and FBOs. Additionally, banks are expected to maintain sufficient quantity of buffer assets to meet the buffer requirements under stress conditions. US BHCs and US intermediate holding companies of FBOs are required to main sufficient buffer to cover a 30-day stress scenario while US branches and agencies of FBOs are expected to maintain buffer to cover a 14-day stress scenario.

OFS LRM supports both approaches for computing buffer and buffer requirement thus addressing the needs of both US BHCs and FBOs.

2.3.2 Process Flow

Regulation YY states that assets designated as HQLA as per US LCR can be considered liquidity buffer eligible assets under most conditions. Hence the application leverages the existing HQLA identification rules for identifying liquidity buffer making regulation YY specific changes wherever required. Additionally, it computes all interim metrics such as insured amount, stable amount, operational amount, downgrade impact amount etc. required as part of US LCR in order to make it available for the purpose of defining regulation YY stress scenarios. The process flow is detailed below:

- Identification of Liquid and Readily Marketable Assets
- Identification of Eligible Buffer Assets
- Calculation of Available Liquidity Buffer
- Calculation of Interim Measures
- Identification of Intercompany, Internal and External Transactions
- Calculation of Buffer Requirement
- Consolidation

2.3.2.1 Identification of Liquid and Readily Marketable Assets

Regulation YY allows highly liquid assets to be included in the available buffer. Highly liquid assets are assets that:

a. Have low credit and market risk

b. Are traded in an active secondary two-way market that has observable market prices, committed market makers, a large number of market participants, and a high trading volume

c. Are types of assets that investors historically have purchased in periods of financial market distress during which liquidity has been impaired

This definition is very similar to the US LCR definition of liquid and readily marketable assets and so the application re-uses these classification rules. Please refer to section

Identification of Assets as Liquid and Readily Marketable for further details on this.

2.3.2.2 Identification of Eligible Buffer Assets

The following assets can be classified as liquidity buffer assets as per Regulation YY provided they are liquid and readily marketable:

a. Cash

b. Securities issued or guaranteed by US government, US government agency or US government sponsored enterprise

c. Any asset classified as HQLA under the US LCR, provided the bank demonstrates to the regulator that it merits inclusion

The application re-uses the US LCR HQLA classification rules for determining eligible buffer assets refer sections Identification and Treatment of Level 1 Assets, Identification and Treatment of Level 2A Assets and Identification and Treatment of Level 2B Assets for details). Cash, in US LCR, is used for determining the value of reserves, while it gets a separate treatment in regulation YY. As per regulation YY, all securities issued by US government, government agencies or GSEs are classified as buffer assets provided they are liquid and readily marketable. In US LCR, there are additional parameters for inclusion of such securities. The application has taken these changes vis-à-vis US LCR into account while re-using the US LCR HQLA classification rules for buffer asset classification.

Additionally, an asset must meet the following criteria to be considered buffer eligible:

a. Unencumbered, including any asset held as a hedge

b. Bank has demonstrated the capability to monetize the asset

c. Must be sufficiently diversified

These criteria are similar to the US LCR criteria that an asset must meet operational requirements and generally applicable HQLA criteria to be included in the stock of HQLA. The application re-uses these rules for identifying liquidity buffer assets that are eligible to be included in the available liquidity buffer. Please refer section Identifying Eligible HQLA for details on classification of an asset as meeting HQLA operational requirements and generally applicable HQLA criteria.

The application supports this classification for banks own unencumbered assets, mitigants received under re-hypothecation rights, placed collateral and substitutable collateral.

2.3.2.3 Calculation of Available Liquidity Buffer

An asset identified as buffer eligible based on the criteria specified in section XXX above, is included as part of the available liquidity buffer. The application provides users the ability to define and apply haircuts under multiple stress scenarios. The haircuts are applied to the buffer eligible assets to determine the available liquidity buffer. The application determines the value to be included in the available liquidity buffer as follows:

a. Cash
   The EOP balance of cash, both restricted and unrestricted, is included.
b. Central bank reserves
   In case of Federal Reserve Bank Balances and Foreign Withdrawable Reserves, the value is calculated as follows:
   {(Reserve EOP Balance - Pass-through Balance) + (Excess Reserve EOP Balance - Pass-through Balance) + (Fair Value of Term Deposit - Withdrawal Penalty)} – Minimum Reserves
c. All other assets
   The fair value of all other buffer eligible assets is included.
   The available liquidity buffer is calculated as the sum of the haircut-adjusted values of all buffer eligible assets.

NOTE:

The application does not adjust the available liquidity buffer for unwinding of transactions which is required as part of US LCR. The regulator does not specify this as requirement in Regulation YY.

The application does not provide pre-configured haircuts for YY calculations as the values are not explicitly specified by the regulator. These are required to be specified by banks as per their own requirements through the business assumptions UI supported by OFS LRM.

If any asset is used as a hedge, then the hedge termination cost is deducted from the value of such asset prior to inclusion in the available liquidity buffer.

2.3.2.4 Calculation of Interim Measures

The application computes all the other measures supported as part of US LCR such a downgrade impact amount, contractually due collateral, excess collateral and so on. You can view other LCR related measure and apply business assumptions based on these measures. The list of all the interim measures that are computed and stored are as follows:

- Contractually Due Collateral

- Excess Collateral Due
- Contractually Receivable Collateral
- Excess Collateral Receivable
- Downgrade Impact Amount
- Stable Amount
- Uninsured Amount
- Highly Stable Amount
- Insured Amount
- Less Stable Amount
- Downgrade Impact Amount
- Excess Mitigant Value
- Deficit Mitigant Value In Reporting Currency
- Maximum 30 Days Cumulative Collateral Amount Over 24 Month

NOTE: These measures are only being computed and stored for the purpose of applying business assumptions.

2.3.2.5 Identification of Intercompany, Internal and External Transactions

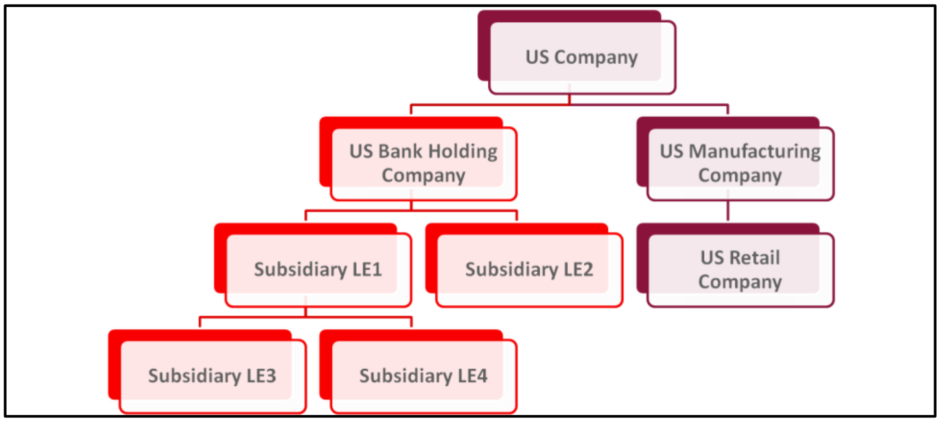
The application identifies intercompany, internal and external transactions based on the consolidation level for which the Run is executed as per the following approach:

1. Any transactions between entities within the immediate organization structure of the consolidation entity are considered intercompany transactions and are eliminated during calculations.
2. Any transactions between an entity within the immediate structure of the consolidation entity and an entity outside the immediate structure of the consolidation entity but within the larger organization structure of which the consolidation entity is a part are considered internal transactions.
3. Any transactions between an entity within the immediate structure of the consolidation entity and an entity outside the larger organization structure of which the consolidation entity is a part, i.e. third party entities, are considered external transactions.

This is illustrated with the help of organization structure charts below:

Illustration 1: Intercompany Transaction Identification for US BHC

The organization structure of a US BHC is given below where the US BHC itself is the consolidation level for calculations:

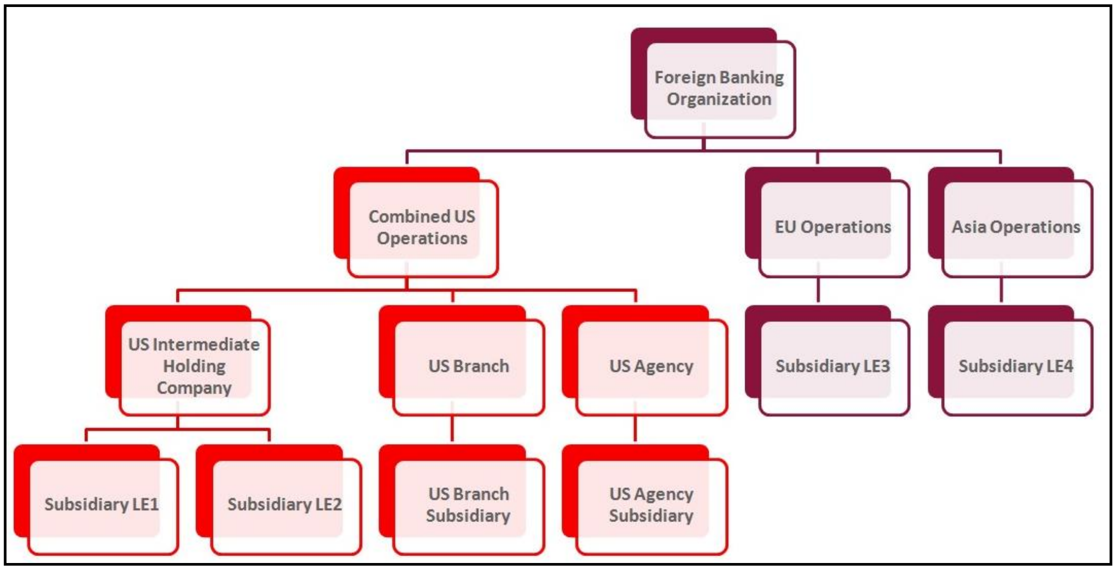


In this case, any transactions between entities highlighted in red color i.e. entities within the immediate structure of the consolidation entity, are considered intercompany transactions and are eliminated during calculations. Any transactions between an entity highlighted in red color and an entity highlighted in purple color are considered internal transactions. Any transactions between an entity highlighted in red color and any other entity not part of this organization structure are treated as external transactions.

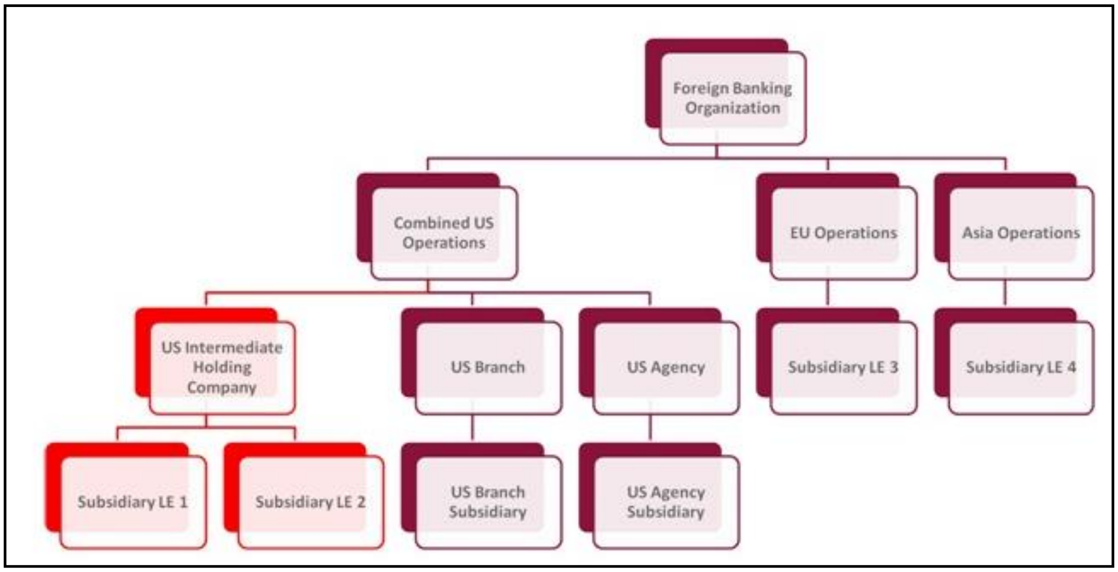
Illustration 2: Intercompany Transaction Identification for US FBOs

Suppose an FBO has an Intermediate Holding Company, a Branch as well as Agency within the US. The identification of intercompany, internal and external transactions when the consolidation entity differs is highlighted below. In each example, the transactions between entities highlighted in red color are considered intercompany transactions. The transactions between an entity highlighted in red color and an entity highlighted in purple color are considered internal transactions. All other transactions are considered external.

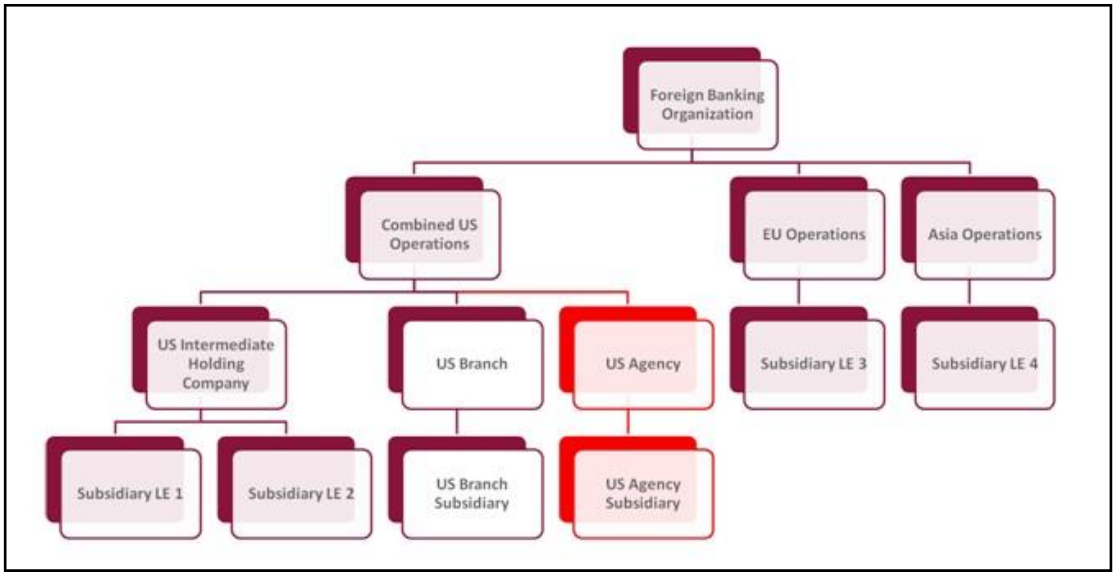
1. When consolidation entity US Combined Operations



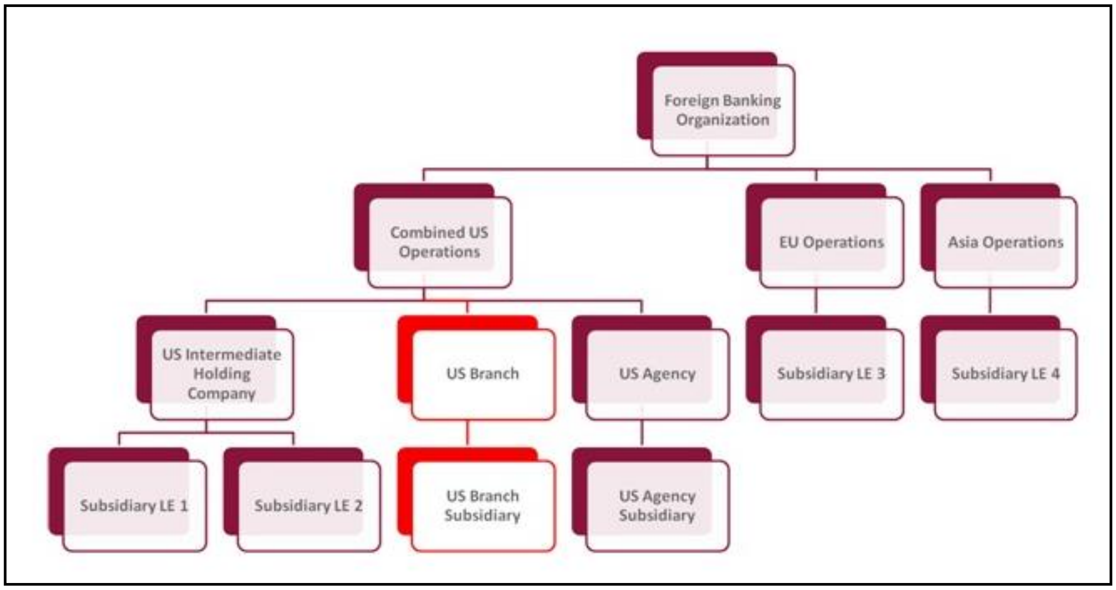
2. When consolidation entity is US IHC



3. When consolidation entity is US Agency



4. When consolidation entity is US Branch


Foreign Banking Organization
Combined US Operations
EU Operations
Asia Operations
US Intermediate Holding Company
US Branch
US Agency
Subsidiary LE 3
Subsidiary LE 4
Subsidiary LE 1
Subsidiary LE 2
US Branch Subsidiary
US Agency Subsidiary

2.3.2.6 Calculation of Buffer Requirement

As per the Dodd-Frank guidelines, Bank Holding Companies (BHCs) and Foreign Banking Organizations (FBOs) are expected to conduct stress tests across multiple horizons to assess the potential impact of liquidity stress scenarios on their cash flows, liquidity position, profitability, and solvency. The buffer requirement is computed based on the stressed cash flows. US BHCs must maintain a minimum buffer equal to the net stressed cash flow need across 30 days. And US IHCs of FBOs must maintain a minimum buffer equal to the net stressed cash flow need across 30 days while US Branches and Agencies of FBOs must maintain a minimum of buffer equal to the net stressed cash flow need across 14 days. In case of FBOs, the external stressed cash flow sources must only be used to cover the external stressed cash flow needs. OFS LRM supports the calculation of buffer requirement for US BHCs as well as FBOs as per the procedure given below. Since these calculations differ, the application identifies whether the BHC is US based or is an FBO by looking up the domicile of the BHC and then automatically selects the relevant computational process.

2.3.2.6.1 Computation of Buffer Requirement for US BHCs:

The application computes buffer requirement for US BHCs and all its subsidiaries as follows:

a. The application obtains the contractual cash flows.

b. Intercompany transactions are identified separately and eliminated during calculations.

c. The cash flows from internal and external sources are bucketed based on the time bucket definition selected as part of the Contractual Run.

d. The application computes all the other measures supported as part of US LCR calculations such a downgrade impact amount, contractually due collateral, excess collateral and so on. These are calculated and stored for the purpose of applying business assumptions.

e. The BAU and stress assumptions are applied to bucketed cash flows as part of the BAU or Stress Run. OFS LRM supports a range of business assumptions for the purpose of defining BAU and Stress Runs. The application does not provide pre-configured scenario values for the Regulation YY Liquidity Risk Calculation, but requires users to create their own assumptions, as part of Business Assumption window, with the relevant inflow and outflow rates. For detailed information on each business assumption supported by OFS LRM, refer Chapter 6 Business Assumption; section Business Assumption Definition in the Oracle Financial Services Liquidity Risk Management User Guide in the OHC Documentation Library.

f. The net stressed cash flow need is computed for each user-specified stress horizon as follows:

$$\textit{Net Stressed Cash Flow Need} = Abs\left[Min\left\{0, \left(\sum_{i=0}^{n} \textit{Stressed Cash Flow Sources} - \sum_{i=0}^{n} \textit{Stressed Cash Flow Needs}\right)\right\}\right]$$

Where,

i	=	Period from open maturity to horizon
n	=	Horizon in days
Cash Flow Sources	=	Cash inflows post business assumptions
Cash Flow Needs	=	Cash outflows post business assumptions

The liquidity buffer requirement is equal to the net stressed cash flow need calculated for each stress horizon.

The net stressed cash flow need calculation for BHCs is illustrated below considering 3 stress horizons 1 day, 5 days and 10 days:

	Level 0 Time Buckets									
	Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**Day 6**	**Day 7**	**Day 8**	**Day 9**	**Day 10**
Cash Flow Sources (Inflows)										
Housing Loan	20	18	11	24	17	19	14	10	19	23
Credit Card	13	15	15	12	13	15	10	12	13	11
Balances With Banks	12	10	12	9	9	5	10	6	12	11
Total Cash Flow Sources	**45**	**43**	**38**	**45**	**39**	**39**	**34**	**28**	**44**	**45**
Cumulative Cash Flow Sources (a)	45	88	126	171	210	249	283	311	355	400
Cash Flow Needs (Outflows)										
Deposits	15	23	24	30	28	17	19	11	21	12
Borrowings	16	6	16	10	23	10	17	20	14	18
Funding Lines	6	6	5	5	6	7	6	7	5	5
Total Cash Flow Needs	**37**	**35**	**45**	**45**	**57**	**34**	**42**	**38**	**40**	**35**
Cumulative Cash Flow Needs (b)	37	72	117	162	219	253	295	333	373	408
Net Stressed Cash Flow Need For Each Horizon (Abs(Min(0,a – b))	**0**				**9**					**8**

2.3.2.6.2 Computation of Buffer Requirement for FBOs

The application computes internal and external stressed cash flow need for US IHC, US Branches, US Agencies and their respective subsidiaries as follows:

a. The application obtains the contractual cash flows.

b. Intercompany, internal and external transactions are identified separately. Intercompany transactions are eliminated during calculations.

c. The cash flows from internal and external sources are bucketed separately based on the time bucket definition selected as part of the Contractual Run.

d. The application computes all the other measures supported as part of US LCR calculations such a downgrade impact amount, contractually due collateral, excess collateral and so on. These are calculated and stored for the purpose of applying business assumptions.

e. The BAU and stress assumptions are applied to bucketed cash flows as part of the BAU or Stress Run. OFS LRM supports a range of business assumptions for the purpose of defining BAU and Stress Runs. The application does not provide pre-configured scenario values for the Regulation YY Liquidity Risk Calculation, but requires users to create their own assumptions, as part of Business Assumption window, with the relevant inflow and outflow rates. For detailed information on each business assumption supported by OFS LRM, refer Chapter 6 Business Assumption; section Business Assumption Definition in the Oracle Financial Services Liquidity Risk Management User Guide in the OHC Documentation Library.

f. The net external stressed cash flow for each day within each horizon is calculated as follows:

$$\textbf{Net External Stressed Cash Flow Need}_n = \textbf{Abs}\left[\textbf{Min}\left\{0, \left(\sum_{i=0}^{n} \textbf{External Stressed Cash Flow Sources} - \sum_{i=0}^{n} \textbf{External Stressed Cash Flow Needs}\right)\right\}\right]$$

Where,

i	:	0 to n i.e. each day in the period from open maturity to horizon
n	:	Horizon in days
External Stressed Cash Flow Sources	:	Cash inflows from external counterparties post business assumptions

External Stressed Cash Flow Needs : Cash outflows from external counterparties post business assumptions

g. The application computes the net stressed intra-group cash flow for each day within each horizon as follows:

$$\textit{Net Stressed Intragroup Cash Flow}_i = \textit{Stressed Intragroup Cash Flow Sources}_i - \textit{Stressed Intragroup Cash Flow Need}_i$$

Stressed Intra-group Cash Flow Sources : Total cash inflows from internal counterparties post business assumptions for each day

Stressed Intra-group Cash Flow Needs : Total cash outflows from internal counterparties post business assumptions for each day

h. The application computes the daily cumulative net stressed intra-group cash flow as follows:

$$\textit{Daily cumulative net stressed intragroup cash flow}_i = \sum_{i=1}^{n} \textit{Net Stressed Intragroup Cash Flow}$$

i. If the daily cumulative net stressed intra-group cash flow for any day is a negative value, it is considered as a daily cumulative net stressed intra-group cash flow need.

j. The absolute value of the largest negative daily cumulative net stressed intra-group cash flow occurring during the horizon is considered the net internal stressed cash flow need

k. The application computes the net stressed cash flow need or the liquidity buffer requirement as follows:

$$\textit{Net Stressed Cash Flow Needs}_n = \textit{Net External Stressed Cash Flow Need}_n + \textit{Net Internal Stressed Cash Flow Need}_n$$

The net stressed cash flow need calculation for BHCs is illustrated below considering 3 stress horizons 1 day, 5 days and 10 days:

	Level 0 Time Buckets									
	Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**Day 6**	**Day 7**	**Day 8**	**Day 9**	**Day 10**
External cash flow sources (Inflows)										
Housing Loan	7	10	7	3	8	4	9	6	10	9
Credit Card	2	2	3	4	3	6	4	3	4	7
Total external cash flow sources	**9**	**12**	**10**	**7**	**11**	**10**	**13**	**9**	**14**	**16**
Cumulative external cash flow sources (a)	9	21	31	38	49	59	72	81	95	111

	Level 0 Time Buckets									
	Day 1	**Day 2**	**Day 3**	**Day 4**	**Day 5**	**Day 6**	**Day 7**	**Day 8**	**Day 9**	**Day 10**
External cash flow needs (Outflows)										
Deposits	9	7	7	10	14	11	7	9	5	15
Borrowings	8	9	7	6	9	6	6	5	8	8
Total external cash flow needs	**17**	**16**	**14**	**16**	**23**	**17**	**13**	**14**	**13**	**23**
Cumulative external cash flow needs (b)	17	33	47	63	86	103	116	130	143	166
Net external stressed cash flow need for each horizon [c = {Abs(Min(0,a – b)}]	**8**				**37**					**55**
Internal cash flow sources (Inflows)										
Loan to Parent	6	4	9	6	6	3	4	15	5	9
Loan to non-U.S. entities	4	3	8	3	4	5	1	4	13	14
Total internal cash flow sources (d)	**10**	**7**	**17**	**9**	**10**	**8**	**5**	**19**	**18**	**23**
Intragroup cash flow needs (Outflows)										
Borrowings from parent	8	6	2	5	8	4	2	9	7	4
Borrowings from non-U.S. entities	4	7	4	7	7	11	5	8	1	5
Total internal cash flow needs (e)	**12**	**13**	**6**	**12**	**15**	**15**	**7**	**17**	**8**	**9**
Net intra-group stressed cash flow (d – e)	**-2**	**-6**	**11**	**-3**	**-5**	**-7**	**-2**	**2**	**10**	**14**
Daily cumulative net stressed intra-group cash flow (f)	**-2**	**-8**	**3**	**0**	**-5**	**-12**	**-14**	**-12**	**-2**	**12**
Daily cumulative net stressed intra-group cash flow need (If f < 0 then f, else 0)	**-2**	**-8**	**0**	**0**	**-5**	**-12**	**-14**	**-12**	**-2**	**0**
Greatest daily cumulative net stressed intra-group cash flow need for each horizon (g)	**-2**				**-8**					**-14**
Net internal stressed cash flow need for each horizon [g = Abs(g)]	**2**				**8**					**14**
Net stressed cash flow need for each horizon (c + g)	**10**				**45**					**69**

NOTE:

The application computes the buffer requirement for multiple horizons which are provided by the user as part of the stress horizons parameter in the Run Execution window. . At a minimum, buffer requirement is to be computed for a horizon of 30 days in case of US BHCs and US IHCs of FBOs. Buffer requirement is to be computed for a horizon of 14 days, at a minimum, in case of US Branches and Agencies of FBOs.

Buffer requirement is calculated on Solo as well as Consolidated basis.

The calculation of net cash outflows is done at the granularity of level 0 buckets which are part of the time bucket definition selected in the Run Management window. Users must ensure that the level 0 buckets are specified on a daily basis till the highest horizon for which buffer requirement is to be computed within a Run for accuracy of calculations. In this illustration, the level 0 time buckets must be defined on a daily basis till day 10.

2.3.2.7 Consolidation

2.3.2.7.1 Calculation of Consolidated Buffer Assets

The transferability restrictions on buffer assets of subsidiaries are taken into account while computing consolidated liquidity buffer. Restricted subsidiary assets designated as liquidity buffer are available to the parent company only to the extent that they are required to off-set cash flow needs of its subsidiary on a consolidated basis. The unrestricted subsidiary assets are freely available for the parent company's use.

The application computes the transferable liquid assets buffer from subsidiary to parent in a manner similar to that followed in US LCR as follows:

a. The application eliminates all intercompany transactions at an account level up to the immediate parent as per the approach followed in US LCR for Foreign subsidiaries. Refer section Identification of Intercompany, Internal and External Transactions for information on intercompany transactions identification process for BHCs and FBOs. The internal cash flows must not be eliminated. It is possible to perform the following:

    - To view all intercompany transactions separately for each consolidation level.
    - To view internal and external cash outflows and inflows for US IHC, US Branches and US Agencies of FBOs after excluding intercompany transactions.
    - To view cash outflows and inflows for US BHCs after excluding intercompany transactions

b. The application computes the net stressed cash flow needs for each legal entity, for leaf level on a solo basis and each node level on a consolidated basis. The method for computing net stressed cash flow needs varies for BHCs and FBOs. Refer section Calculation of Buffer Requirement for more information.

c. The application identifies the transferable portion of restricted buffer assets. The application transfers the restricted portion of liquidity buffer of a legal entity to parent to the extent of its net stressed cash flow needs. The out of the box transfer sequence for restricted assets is as follows:

    - Cash
    - Security issued or guaranteed by US Government, US Government Agency or US Government Sponsored Enterprise (GSE) that is liquid and readily marketable

- Other buffer assets classified as HQLA Level 1 Assets
- Other buffer assets classified as HQLA Level 2A Assets
- Other buffer assets classified as HLQA Level 2B Assets
- Other buffer assets classified as Other Assets

This is done at each level of the consolidation entity's organization structure.

You can view the transferable and non-transferable portion of restricted buffer assets from each subsidiary entity.

You can change the sequence of restricted assets consideration in the table DIM_LIQ_BUFFER_COMPONENTS, column N_RANK. The ranks in the column N_RANK are considered in ascending order, with the lowest rank being considered first.

d. The application transfers the unrestricted portion of liquidity buffer fully to the parent. This is done at each level of the consolidation entity's organization structure. You can view the unrestricted buffer assets transferred from each subsidiary entity.

e. You must perform steps (a) to (d) till the highest consolidation level is reached.

Note:

- The approach to consolidation is similar to that followed in US LCR. However, the computation of buffer and buffer requirement is based on YY guidelines.
- The consolidated buffer is calculated at each consolidation entity as per the following formula:

$$\begin{aligned} \mathbf{Consolidated\ Available\ Buffer}_{Consolidation\ Entity} &= \mathbf{Buffer\ Assets}_{Consolidation\ Entity} \\ &+ \mathbf{Transferred\ Restricted\ Buffer\ Assets}_{Subsidiaries} \\ &+ \mathbf{Unrestricted\ Assets}_{Subsidiaries} \end{aligned}$$

- You can view the consolidated buffer assets and their corresponding HQLA asset level at the following levels:
  - Restricted buffer assets of each entity that are consolidated with the parent entity and their corresponding HQLA asset level
  - Restricted buffer assets of each entity that are not consolidated with the parent entity and their corresponding HQLA asset level

- Unrestricted buffer assets of each entity that are consolidated with the parent entity and their corresponding HQLA asset level
- All of the above calculations across multiple stress scenarios

2.3.2.7.2 Calculation of Consolidated Buffer Requirement:

As per Regulation YY, BHCs are required to maintain buffer to meet its consolidated buffer requirement. Also, FBOs are required to maintain sufficient buffer to meet their consolidated buffer requirement at the following levels:

- Consolidated US Operations
- Consolidated IHC Operations
- Consolidated US Branch/Agency Operations

The application computes the buffer requirement across multiple horizons in a consolidated manner as follows:

a. The application eliminates all intercompany transactions up to the legal entity selected as the consolidation entity. Refer section Identification of Intercompany, Internal and External Transactions for more information on identification of intercompany transactions and the difference between intercompany and internal transactions.
b. The application computes the total stressed cash inflows and outflows, both internal and external, on a consolidated basis for the consolidation entity and all its subsidiaries.
c. The application computes the net stressed cash flow needs at the level of the consolidation entity based on the methods prescribed for BHCs and FBOs by US Federal Reserve as per Regulation YY. Refer section Calculation of Buffer Requirement for more information.

Note:

- These calculations are done for multiple horizons in a single Run.
- You can view the net stressed cash flow needs and its components at the following levels:
  - Each solo legal entity and consolidation entities in a single Run
  - Across multiple horizons in a single Run
  - Across multiple stress scenarios

3 Regulatory Calculations as Per Reserve Bank of India

3.1 Liquidity Coverage Ratio Calculation

3.1.1 Overview

The RBI Liquidity Coverage Ratio calculations address the final guidelines on the LCR, Liquidity Risk Monitoring Tools and LCR Disclosure Standards that were published by Reserve Bank of India in June 2014. Additionally, the calculations cater to the amendments published subsequently up to March 2016. Major amendments include additional classification rules for Level 2B assets, identification and treatment of lien marked deposits and inclusion and treatment of new counterparties such as Hindu Undivided family (HUF) and Association of persons (AoP).

3.1.2 Inputs

Inputs required for Liquidity Coverage Ratio calculated by the LRM Application are:

- Liquidity haircut for each asset level should be provided through business assumption with assumption category as valuation change and assumption sub category as haircut.
- Business assumption which defines the outflow percentage should be defined through appropriate business assumptions. For example, retail deposit Run off is defined through business assumption with category as incremental cash flow and sub category as Run-off.
- Business assumption which defines the inflow percentage should be defined through appropriate business assumptions. For example, Roll over reverse repo is defined through business assumption with category as cash flow movement and sub category as roll over.
- Liquidity Horizon is specified as the Run time parameter.

3.1.3 Process Flow

- Identification of Asset Levels
- Identification of Eligible HQLA

- Calculation of Stock of HQLA
- Classification of Operational Deposits
- Identification of Deposit Stability
- Treatment of Lien Marked Deposits
- Calculation of Net Cash Outflows
- Consolidation
- Calculation of Liquidity under Alternative Liquidity Approaches
- Calculation of Liquidity Coverage Ratio
- Liquidity Risk Monitoring Tools

The application supports an out-of-the-box RBI LCR which has the regulatory scenario with associated HQLA haircuts, inflow and outflow percentage / rates pre-configured in the form of business assumptions.

3.1.3.1 Identification of Asset Levels

High Quality Liquid Assets (HQLA) are assets that can be easily sold or used as collateral to obtain funds at little or no loss of value even under stress scenarios, All assets, whether owned by the bank or received from counterparties as collateral, that meet the high quality liquid asset criteria specified by RBI, are classified by the application as follows:

- Level 1 Assets
- Level 2A Assets
- Level 2B Assets

Level1 assets can be included without limit and Level 2 assets can only comprise 40% of the stock of HQLA. Of this, Level 2B assets can only comprise of 15% of stock of HQLA. Any asset not classified as an HQLA is considered as Other Asset.

I. Identification and Treatment of Level 1 Assets

The application identifies the following assets as HQLA Level 1 assets:

1. Cash including cash reserves in excess of required Cash Reserve Ratio (CRR). For banks incorporated, these also include
    - Excess reserves held with foreign central banks, where an international rating agency has assigned a 0% risk weight to the foreign sovereign.
    - Excess reserves held with foreign central banks, where an international rating agency has assigned a non-0% risk weight to the foreign sovereign and a 0% risk weight has been assigned at national discretion under Basel II Framework, to the extent these balances cover the bank's stressed net cash outflows in that specific currency.

    Central bank excess reserves include the balance held by a bank at the central bank directly or through a correspondent bank less any minimum reserve requirement. It also includes overnight deposits or term deposits held with the central bank that meet the regulatory criteria. The value of eligible term deposits that is included is the amount net of any withdrawal penalty.
2. **Note:** The process of identifying the value to be included in the stock of HQLA up to the extent of a bank stressed net cash outflows in a particular currency is documented in the section below. Government securities in excess of the minimum Statutory Liquidity Ratio (SLR) requirement
3. Within the mandatory SLR requirement, government securities to the extent of 2% of NDTL are currently allowed under Margin Standing Facility (MSF).
4. Marketable securities, assigned a 0% risk weight under both Basel and by international rating agencies, which satisfy the following conditions:
    - Issuer type or guarantor type is a foreign sovereign
    - Traded in large, deep and active repo or cash markets characterized by a low level of concentration
    - Have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions
    - Not an obligation of a financial institution or any of its affiliated entities
5. Marketable securities, assigned a non-0% risk weight by international rating agencies and 0% risk weight at national discretion, which satisfy the following conditions:
    - Issuer type is a foreign sovereign or issuer type is a domestic sovereign and account is denominated in a foreign currency
    - Traded in large, deep and active repo or cash markets characterized by a low level of concentration

- Have a proven record as a reliable source of liquidity in the markets (repo or sale) even during stressed market conditions
- Not an obligation of a financial institution or any of its affiliated entities

Such marketable securities are included in the stock of HQLA only up to the extent of the bank's net stressed cash outflows in that currency arising from bank's operations in that foreign jurisdiction.

To meet this requirement the application identifies and updates the account country liquidity risk flag as follows:

i. The existence of bank's operations in a particular jurisdiction is identified. If the bank holds either liabilities or non-marketable assets in that jurisdiction, the application assumes that the bank has operations in that specific jurisdiction. This is identified at a country and currency combination.

ii. Next the application identifies whether the asset is held to meet the bank's net stressed cash outflows in that currency arising from bank's operations in that specific jurisdiction by checking the following conditions:

   a. If the issuer's country is the same as the account country

   b. If the issuer's country is the same as the country in which local operations are present in a particular jurisdiction as identified in step (i) above.

   c. If the account currency is the same as the currency in which local operations are present in a particular jurisdiction as identified in step (i) above.

   If all of the above criteria are met, the account country liquidity risk flag is updated as "Yes" which indicates that the particular asset is held to meet the net cash outflows in a particular jurisdiction.

iii. Finally, the application identifies the amount to be included in the stock of HQLA when account country liquidity risk flag = "Yes" as follows:

$$\boldsymbol{Amount\ to\ be\ Included\ in\ Stock\ Due\ to\ Local\ Operations\ Related\ Restrictions} \\ = \boldsymbol{Minimum}\left(\boldsymbol{Haircut\ Adjusted\ Market\ Value\ of\ Asset}_{\boldsymbol{Currency,Country}},\ \boldsymbol{Net\ Cash\ Outflows}_{\boldsymbol{Currency,Country}}\right)$$

Assets classified as HQLA Level1 are assigned a 0% haircut under the regulatory scenario prescribed by RBI.

II. Identification and Treatment of Level 2A Assets

The application identifies the following assets as HQLA Level 2A assets:

1. Marketable securities which satisfy the following conditions:
    - Issuer type or guarantor type is one of the following:
        - Sovereign
        - Public Sector Entity (PSE)
        - Multi-Lateral Development Bank (MDB)
    - Assigned a 20% risk-weight under the standardized Approach of Basel II
    - Not an obligation of a financial institution or any of its affiliated entities
    - Price has not decreased or haircut has not increased by more than 10% over a 30-day period during a relevant period of significant liquidity stress
2. Corporate debt securities, including commercial papers, which satisfy the following conditions:
    - Not an obligation of a financial institution or any of its affiliated entities
    - Assigned a long term rating of equal to or greater than AA- or an equivalent short term rating by an eligible credit rating agency
    - Not a complex structured product or subordinated debt
    - Price has not decreased or haircut has not increased by more than 10% over a 30 day period during a relevant period of significant liquidity stress which is specified by the bank

   Assets classified as HQLA Level2A are assigned a 15% haircut under the regulatory scenario prescribed by RBI.

III. Identification and Treatment of Level 2B Assets

The application identifies the following assets as HQLA Level 2B assets:

1. Marketable securities which satisfy the following conditions:
    - Issuer type or guarantor type is a sovereign
    - Assigned risk-weight greater than 20% but equal to or less than 50% under the standardized Approach of Basel II

- Price has not decreased or haircut has not increased by more than 20% over a 30 day period during a relevant period of significant liquidity stress

2. Common Equity Shares which satisfy the following conditions:
   - Not an obligation of a financial institution or any of its affiliated entities
   - Included in NSE CNX Nifty index and/or S&P BSE Sensex index
   - Price has not decreased or haircut has not increased by more than 40% over a 30 day period during a relevant period of significant liquidity stress
3. Corporate debt securities, including commercial papers, which satisfy the following conditions:
   - Not an obligation of a financial institution or any of its affiliated entities
   - Assigned a long term rating between A+ and BBB- or an equivalent short term rating by an eligible credit rating agency
   - Traded in large, deep and active repo or cash markets characterized by a low level of concentration
   - Price has not decreased or haircut has not increased by more than 10% over a 30 day period during a relevant period of significant liquidity stress which is specified by the bank

Assets classified as HQLA Level2B are assigned a 50% haircut under the regulatory scenario prescribed by RBI.

3.1.3.2 Identification of Eligible HQLA

The application identifies whether a bank's asset or a mitigant received under re-hypothecation rights meets all the operational requirements prescribed by BIS. If an asset classified as HQLA meets all the relevant operational criteria it is identified as eligible HQLA and included in the stock of HQLA.

The application checks for the following operational criteria:

a. Operational Capability to Monetize HQLA

An asset is considered HQLA only if the bank has demonstrated the operational capability to monetize such an asset and has periodically monetized such an asset. The application captures this information for each asset as a flag.

b. Unencumbered

The application looks at the encumbrance status and includes only those assets in the stock which are unencumbered. If partially encumbered, then the portion of the asset that is unencumbered is considered as HQLA and included in the stock. If an asset is pledged to the central bank or a PSE, but is not used, the unused portion of such an asset is included in the stock. The application assigns the usage of a pledged asset in the ascending order of asset quality i.e. the lowest quality collateral is marked as used first.

c. **Inclusion and Exclusion of Certain Re-hypothecated Assets**

Any asset received under re-hypothecation rights as part of reverse repo and securities financing transactions are considered eligible HQLA if they are not re-hypothecated. An asset pledged to central banks or PSEs, but not used is considered eligible HQLA. Any asset that a bank receives under a re-hypothecation right is not considered eligible HQLA if the counterparty or beneficial owner of the asset has a contractual right to withdraw the asset at any time within 30 calendar days.

d. **Unsegregated Assets**

The application includes unsegregated assets, received as collateral under re-hypothecation rights, for derivative transactions, in the stock of HQLA. Conversely, it excludes all segregated assets from the stock of HQLA.

e. **HQLA Under the Control of the Treasurer**

To be considered eligible HQLA the asset is required to be under the control of the management function of the bank that manages liquidity For example, Treasurer. The application captures this information for each asset as a flag.

f. **Termination of Transaction Hedging HQLA**

If a HQLA is hedged by a specific transaction, then the application considers the impact of closing out the hedge to liquidate the asset that is, the cost of terminating the hedge while computing the stock of HQLA. The hedge termination cost is deducted from the market value of the asset and the difference is included in the stock of HQLA.

3.1.3.3 Calculation of Stock of High Quality Liquid Assets

All unencumbered assets classified as Level 1, 2A or 2B, which meet the HQLA eligibility criteria, are included in the stock of high quality liquid assets (SHQLA). The formula for calculating SHQLA is as follows:

$$\begin{aligned}\boldsymbol{Stock\ of\ HQLA} &= \boldsymbol{Post\ Haircut\ Stock\ of\ Level\ 1\ Assets + Post\ Haircut\ Stock\ of\ Level\ 2A\ Assets + Post\ Haircut\ Stock\ of\ Level\ 2B\ Assets}\\ &\quad \boldsymbol{- Adjustment\ due\ to\ Cap\ on\ Level\ 2B\ Assets - Adjustment\ due\ to\ Cap\ on\ Level\ 2\ Assets}\end{aligned}$$

Where,

Adjustment due to Cap on Level 2B Assets	:	Adjustment for 15% cap
Adjustment due to Cap on Level 2 Assets	:	Adjustment for 40% cap

The application applies the relevant liquidity haircuts to the market value of each eligible HQLA based on the haircuts specified as part of a business assumption. The sum of haircut adjusted market value of all assets which are not 'other assets' and which are classified as 'eligible HQLA' comprises of the stock of HQLA. The stock includes bank's own assets which are unencumbered, i.e. not placed as collateral; as well as assets received from counterparties where the bank has a re-hypothecation right and where such assets are not re-hypothecated.

Note:

All calculations are based on the market value of assets.

The steps involved in computing the stock of HQLA are:

- Calculation of Stock of Liquid Assets
- Identification of Eligible HQLA on Unwind
- Unwinding of Transactions Involving Eligible HQLA
- Calculation of Adjusted Stock of HQLA
- Calculation of Adjustments to Stock of HQLA Due to Cap on Level 2 Assets

3.1.3.3.1 Calculation of Stock of Liquid Assets

1. **Calculation of Stock of Level 1 Assets**

   The stock of level 1 assets equals the market value of all level 1 liquid assets held by the bank as of the calculation date that are eligible HQLA, less the amount of the minimum/mandatory reserves less hedge termination costs (if any), less withdrawal penalty on time deposits (if any).

2. **Calculation of Stock of Level 2A Assets**

   The stock of level 2A liquid assets equals 85 percent of the market value of all level 2A liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).

3. **Calculation of Stock of Level 2B Assets**

The stock of level 2B liquid asset amount equals 50 percent of the market value of all level 2B liquid assets held by the bank as of the calculation date that are eligible HQLA, less hedge termination costs (if any).

3.1.3.3.2 Identification of Eligible HQLA on Unwind

The application identifies the assets that are placed as collateral which are eligible HQLA if they are not encumbered. Placed collateral is marked as eligible HQLA on unwind if it fulfills all of the following criteria:

- Asset Level is level 1, 2A or 2B asset
- Meets HQLA Operational Requirements on Unwind

3.1.3.3.3 Unwinding of Transactions Involving Eligible HQLA

The application identifies all transactions maturing within the LCR horizon where HQLA is placed or received. These transactions include repos, reverse repos, secured lending transactions, collateral swaps and so on. Such transactions are unwound that is, the original position is reversed and the cash or stock of HQLA is adjusted accordingly. This is done to avoid inclusion of any asset in the stock that may have to be returned to its owner before the end of the LCR horizon. The unwinding of transactions results in adjustments to the stock of HQLA, i.e. additions to or deductions from the stock of HQLA.

3.1.3.3.4 Calculation of Adjusted Stock of HQLA

1. **Adjusted Stock of Level 1 Assets**

The formula for calculating adjusted stock of level 1 assets is as follows:

$$\boldsymbol{Adjusted\ Stock\ of\ Level\ 1\ Assets = Post\ Haircut\ Stock\ of\ Level\ 1\ Assets + Post\ Haircut\ Adjustments\ to\ Stock\ of\ Level\ 1\ Assets}$$

Note:

Adjustments relate to the cash received or paid and the eligible level 1 assets posted or received as collateral or underlying assets as part of secured funding, secured lending and asset exchange transactions.

2. **Adjusted Stock of Level 2A Assets**

The formula for calculating adjusted stock of level 2A assets is as follows:

$$\boldsymbol{Adjusted\ Stock\ of\ Level\ 2A\ Assets = Post - Haircut\ Level\ 2A\ Assets + Post\ Haircut\ Adjustments\ to\ Stock\ of\ Level\ 2A\ Assets}$$

Note:

Adjustments relate to eligible level 2A assets posted or received as collateral or underlying assets as part of secured funding, secured lending and asset exchange transactions.

3. Adjusted Stock of Level 2B Assets

The formula for calculating adjusted stock of level 2B assets is as follows:

$$\boldsymbol{Adjusted\ Stock\ of\ Level\ 2B\ Assets = Post - Haircut\ Stock\ of\ Level\ 2B\ Assets + Post\ Haircut\ Adjustments\ to\ Stock\ of\ Level\ 2B\ Assets}$$

NOTE: Adjustments relate to eligible level 2B assets posted or received as collateral or underlying assets as part of secured funding, secured lending and asset exchange transactions.

3.1.3.3.5 Calculation of Adjustments to Stock of HQLA Due to Cap on Level 2 Assets

1. Adjustment Due to Cap on Level 2B Assets

Level 2B assets can only constitute up to 15% of the stock of HQLA after taking into account the impact of unwinding transactions maturing within the LCR horizon. Adjustment to stock of HQLA due to cap on Level 2B assets i.e. adjustment for 15% cap is calculated as follows:

$$\boldsymbol{Adjustment\ due\ to\ Cap\ on\ Level\ 2B\ Assets = Maximum\left[\left\{Adjusted\ Level\ 2B\ Assets - \left(\frac{15}{85} \times (Adjusted\ Level\ 1\ Assets + Adjusted\ Level\ 2A\ Assets)\right)\right\}, \left\{Adjusted\ Level\ 2B\ Assets - \left(\frac{15}{60} \times Adjusted\ Level\ 1\ Assets\right)\right\}, 0\right]}$$

2. Adjustment Due to Cap on Level 2 Assets

Level 2 assets can only constitute up to 40% of the stock of HQLA after taking into account the impact of unwinding transactions maturing within the LCR horizon. Adjustment to stock of HQLA due to cap on Level 2 assets i.e. adjustment for 40% cap is calculated as follows:

$$\boldsymbol{Adjustment\ due\ to\ Cap\ on\ Level\ 2\ Assets = Maximum\left[\left\{Adjusted\ Level\ 2A\ Assets + Adjusted\ Level\ 2B\ Assets - Adjustment\ due\ to\ Cap\ on\ Level\ 2B\ Assets - \left(\frac{2}{3} \times Adjusted\ Level\ 1\ Assets\right)\right\}, 0\right]}$$

3.1.3.4 Classification of Operational Deposits

Operational deposits are those deposits placed by customers with a bank in order to meet their payment and settlement needs and make other payments. The application classifies accounts as operational if they meet the following criteria:

1. They are held in specifically designated accounts that is held as operational accounts, by the customers at the bank.
2. They are priced without giving economic incentive to the customer to leave excess funds in the account.
3. They arise out clearing, custody or cash management relationship with the bank.
4. They do not arise out of correspondent banking services or in the context of prime brokerage services.
5. The termination of such agreements requires a minimum notice period of 30 days.
6. If the agreement can be terminated within 30 days, the customer has to pay significant switching or termination costs to the bank.

Any excess balances held in an account classified as an operational deposit over and above that which is required to meet operational needs of the customer is assigned a higher outflow rate by the regulator. The application supports a methodology for computing the portion of the balance held for operational purposes which is truly required to meet operational needs of the customer. For details see Appendix C: Generic Calculations.

3.1.3.5 Identification of Deposit Stability

The steps involved in identifying deposits stability are:

- Identification of Insurance Eligible Accounts
- Allocation of Deposit Insurance
- Identification of Deposit Stability

3.1.3.5.1 Identification of Insurance Eligible Accounts

The identification of insurance eligible accounts involves looking at the inclusion as well as the exclusion criteria. The application requires users to provide the following inclusion criteria:

1. **Ownership Category**

OFS LRM allocates the insurance limit separately for each ownership category level. Ownership categories include single accounts, joint accounts, trusts and so on. As per DICGC, a separate limit is assigned to a unique depositor combination based on the ownership category of accounts and hence users are required to provide the ownership categories that get a separate limit. If a particular customer gets a single limit irrespective of whether the accounts are held as single, joint or a combination, the ownership category should have a single default value.

2. **Product Type**

   This is a list of product types that are covered under the respective jurisdiction's deposit insurance scheme. The insurance limit is allocated to only those accounts of a customer whose product types matches those that are covered by the deposit insurance. In case of India, DICGC covers all types of deposits such as current accounts, savings accounts, recurring deposits and term deposits, which need to be provided as inputs.

3. **Product Type Prioritization**

   The sequence in which the insured amount is to be allocated to each product type is captured. For instance, the product prioritization may be specified as current account, savings account and term deposit. This indicates that the insured amount is allocated first to a current account held by the customer. After current accounts have been fully covered, the remaining amount is allocated to savings accounts and finally to term deposits.

NOTE: In case product type prioritization is not specified, the default allocation will be proportionate to the EOP balance of each account irrespective of the product type.

4. **Currency Eligibility for Insurance**

   This is a list of currencies in which the accounts are denominated that are eligible for insurance coverage under a deposit insurance scheme. Some jurisdictions cover foreign currency deposits under their deposit insurance schemes. If eligible currencies are specified for the purpose of insurance, then the insured balance is allocated to all accounts belonging to the particular legal entity which have the associated attributes required for assigning the insured balance. For instance, if DICGC insures only INR denominated, the eligible currency against DICGC insurance scheme should be provided as Indian Rupees.

   The application includes insurance exemption criteria covering deposits of foreign sovereigns, central and state governments, and banks and so on. The deposits that are eligible for insurance under a particular insurance scheme are identified based on the inclusion and exclusion criteria as specified by the users.

3.1.3.5.2 Allocation of Deposit Insurance

As part of the RBI Run, the application allocates the deposit insurance to accounts based on the guidelines specified by the Deposit Insurance and Credit Guarantee Corporation (DICIGC) of India. The insurance limit captured against each deposit insurance scheme is allocated to the insurance eligible accounts under that scheme based on the ownership category and the unique depositor combination.

The insurance limit, that is the maximum deposit balance covered by an insurance scheme per customer, is captured against each insurance scheme – ownership category combination. Customers having account in multiple legal entities get a separate deposit insurance limit per legal entity. In case of DICGC insurance scheme, the limit amount needs to be provided in Stage Insurance Scheme Master table at the granularity of insurance scheme. The insurance limit is allocated to accounts as per the procedure given below:

1. The application identifies the unique depositor combination for each owner ship category and legal entity combination.
2. All insurance eligible accounts with a particular unique depositor combination are identified and arranged in the descending order of their outstanding balances.
3. The insurance limit available, is allocated to account 1 to n – 1 as per the formula given below:

   $$\boldsymbol{Insured\ Amount} = \boldsymbol{If}\ [\{(\boldsymbol{Insurance\ Limit\ Available} - \boldsymbol{Outstanding\ Balance}) \geq \mathbf{0}\}; \boldsymbol{Outstanding\ Balance\ else}\ \mathbf{0}]$$

   Where,

Insurance Limit Available	:	Limit available post allocation to previous accounts
	=	Insurance Limit Available$_{x-1}$ – Insured Amount $_{x-1}$
x	:	Number of accounts up to the current account to which insured amount is to be allocated
n	:	Total number of accounts of a customer which are eligible for insurance coverage under a given ownership category

4. The remaining available insurance is allocated to the last account i.e. account n for which insurance was not allocated.

An illustration of this procedure is provided below considering an INR 1,00,000 insurance limit for each unique depositor combination under each ownership category for each legal entity. The inputs to this calculation, including account details and customer details are provided below, along with the unique depositor combination, as identified by OFS LRM as per DICGC guidelines.

Legal Entity	Account Number	Account Balance	Ownership Category	Primary Holder	Secondary Holder 1	Secondary Holder 2	Secondary Holder 3	Unique Depositor Combination
Legal Entity 1	100001	49965	Single	Customer A				1
Legal Entity 1	100002	36903	Joint	Customer A	Customer B	Customer C		1
Legal Entity 1	100003	33762	Partnership	Customer ABC				1
Legal Entity 1	100004	40681	Company	Customer XYZ				1
Legal Entity 1	100005	7355	Company	Customer XYZ				1
Legal Entity 1	100006	44995	Joint	Customer B	Customer A	Customer C		2
Legal Entity 1	100007	35614	Joint	Customer A	Customer B	Customer C		1
Legal Entity 1	100008	7568	Joint	Customer C	Customer B	Customer A		5
Legal Entity 1	100009	37205	Single	Customer A				1
Legal Entity 1	100010	7337	Partnership	Customer ABC				1
Legal Entity 1	100011	45016	Company	Customer YZX				2
Legal Entity 1	100012	6574	Partnership	Customer BC				2
Legal Entity 1	100013	4759	Company	Customer XYZ				1
Legal Entity 1	100014	20517	Company	Customer ZXY				3
Legal Entity 1	100015	24254	Joint	Customer B	Customer C	Customer A		4
Legal Entity 1	100016	68691	Joint	Customer B	Customer A	Customer C	Customer D	3
Legal Entity 1	100017	20565	Joint	Customer C	Customer B	Customer A		5

Legal Entity	**Account Number**	**Account Balance**	**Ownership Category**	**Primary Holder**	**Secondary Holder 1**	**Secondary Holder 2**	**Secondary Holder 3**	Unique Depositor Combination
Legal Entity 2	200001	34042	Single	Customer A				1
Legal Entity 2	200002	3100	Joint	Customer A	Customer B	Customer C		1
Legal Entity 2	200003	43096	Single	Customer B				2
Legal Entity 2	200004	42522	Joint	Customer A	Customer B	Customer C		1
Legal Entity 2	200005	32457	Joint	Customer A	Customer B	Customer C		1
Legal Entity 2	200006	33075	Joint	Customer A	Customer B	Customer C		1

The application allocates the insurance limit of INR 1,00,000 to all eligible accounts held by each unique depositor combination as follows:

Legal Entity	**Account Number**	**Account Balance (a)**	**Ownership Category**	**Unique Depositor Combination**	**Limit Applicable**	**Available Limit ($b = b_{t-1} - c_{t-1}$)**	**Insured Amount [c = As per Step (3)]**	Uninsured Amount (a – c)
Legal Entity 1	100004	40681	Company	1	100000	100000	40681	0
Legal Entity 1	100005	7355	Company			59319	7355	0
Legal Entity 1	100013	4759	Company			51964	4759	0
Legal Entity 1	100011	45016	Company	2	100000	100000	45016	0
Legal Entity 1	100014	20517	Company	3	100000	100000	20517	0
Legal Entity 1	100002	36903	Joint	1	100000	100000	36903	0
Legal Entity 1	100007	35614	Joint			63097	35614	0
Legal Entity 1	100006	44995	Joint	2	100000	100000	44995	0

Legal Entity	Account Number	Account Balance (a)	Ownership Category	Unique Depositor Combination	Limit Applicable	Available Limit ($b = b_{t-1} - c_{t-1}$)	Insured Amount [c = As per Step (3)]	Uninsured Amount (a – c)
Legal Entity 1	100016	68691	Joint	3	100000	100000	68691	0
Legal Entity 1	100015	24254	Joint	4	100000	100000	24254	0
Legal Entity 1	100017	20565	Joint	5	100000	100000	20565	0
Legal Entity 1	100008	7568	Joint			79435	7568	0
Legal Entity 1	100003	33762	Partnership	1	100000	100000	33762	0
Legal Entity 1	100010	7337	Partnership			66238	7337	0
Legal Entity 1	100012	6574	Partnership	2	100000	100000	6574	0
Legal Entity 1	100001	49965	Single	1	100000	100000	49965	0
Legal Entity 1	100009	37205	Single			50035	37205	0
Legal Entity 2	200004	42522	Joint	1	100000	100000	42522	0
Legal Entity 2	200006	33075	Joint			57478	33075	0
Legal Entity 2	200005	32457	Joint			21303	21303	11154
Legal Entity 2	200002	3100	Joint			24403	3100	0
Legal Entity 2	200001	34042	Single	1	100000	100000	34042	0
Legal Entity 2	200003	43096	Single	2	100000	100000	43096	0

3.1.3.5.3 Identification of Deposit Stability

Once the insurance limit is allocated at an account level, the application determines the deposit stability as follows:

1. **Stable Deposits**

   A stable deposit is that portion of a deposit which is covered by deposit insurance provided by an effective deposit insurance scheme or a public guarantee that provides equivalent protection and which satisfies one of the following conditions:

   - It is held in a transactional account by the depositor

     Or

   - The depositor has an established relationship with the reporting legal entity.

   The application identifies the existence of an established relationship if the depositor meets one of the following criteria:

     - Depositor holds more than one account with the bank, of which at least one account should be of a typed other than a deposit.

     Or

     - The bank has assigned a customer relationship manager to the depositor.

   If a deposit is partially covered by insurance and meets the other criteria, the insured portion of such deposits is treated as stable while the uninsured portion is treated as less stable. Stable deposits receive a 5% run-off rate.

2. **Less Stable Deposits**

   All insured and uninsured deposit or funding balances that do not meet the stable deposits criteria specified earlier are classified as less stable deposits: This includes:

   - Uninsured balance of deposits meeting stable deposits criteria
   - Insured balance of deposits which are not transactional account and the customer has no established relationship with the bank
   - Deposit balance where the insurance coverage status is Uninsured

   Less stable deposits receive a 10% run-off rate.

3.1.3.6 Treatment of Lien Marked Deposits

A bank does lien marking of a deposit when the bank’s own deposit(s) is placed as a security against a loan(s) extended by the bank. It indicates that, when a customer receives a loan from a bank and contractually places the deposits held within the same bank as collateral, then the bank marks the respective deposits as lien marked deposits.

For lien marked deposits, the deposit proceeds are paid out only when the loan against the deposit is repaid in full. This indicates that the deposit placed against the loan, is encumbered for the entire term of the loan, until it is repaid. Given this nature, only deposits with a fixed maturity i.e. term deposits are eligible for lien marking. Also, multiple deposits can be placed against multiple lien, such as loans, line of credit, guarantees and so on forming a many to many relationship.

The RBI amendments (2016) allows for certain exceptions with respect to outflows calculation when it comes to lien marked deposits. The guidelines state that outflows for lien marked deposits which will not mature within the LCR horizon may be excluded from the LCR calculation if the following conditions are met:

- The loan will not mature or settle in the next 30 days
- The pledge arrangement is subject to a legally enforceable contract disallowing withdrawal of the deposit before the loan is fully settled or repaid
- The amount of deposit to be excluded cannot exceed the outstanding balance of the loan

3.1.3.6.1 Identification of Lien Marked Deposits

Lien marked deposits are identified in the staging area against Term deposits by a flag called lien marked indicator. The mapping between term deposits which are lien marked and lien against it is of many to many nature and is a download for the application.

3.1.3.6.2 Treatment of Lien Marked Deposits

When all the conditions mentioned in the guidelines are satisfied, the encumbered portion of lien marked deposits is excluded and hence receives a 0% factor. The unencumbered portion of the lien marked deposits is included and receives appropriate run off rate as applicable.

Outflow factors as for other products and dimensional combinations are defined in the form of business assumptions. To cater to lien marked deposits, the following new based measures are introduced in the business assumptions.

- Unencumbered stable balance: This measure populates the minimum of unencumbered amount and stable amount.
- Unencumbered less stable balance: This measure populates the minimum of unencumbered amount and less stable amount.
- Encumbered balance: This measure populates the encumbered amount of the deposit.

See Regulations Addressed through Business Assumptions for details of the pre seeded assumptions on lien marked deposits.

3.1.3.7 Calculation of Net Cash Outflows

The net cash outflows are computed after applying the scenario specified by the user, as a set of business assumptions, to the contractual cash flows. The process of computing the net cash outflows is provided below:

1. **Calculation of Total Cash Inflows**

   The application applies the business assumptions, specified on products involving cash inflows, selected as part of the Run. The regulatory assumptions specified in section Regulations Addressed through Business Assumptions are pre-defined and packaged as part of the out-of-the-box Run to determine the inflows over the liquidity horizon. The business assumption adjusted cash inflows occurring over the liquidity horizon are summed up to obtain the total cash inflow. These include inflows from earning assets such as loans, assets that are not eligible for inclusion in the stock of HQLA, derivatives inflows and so on.

2. **Calculation of Total Cash Outflows**

   The application applies the business assumptions, specified on products involving cash outflows, selected as part of the Run. The regulatory assumptions specified in section Regulations Addressed through Business Assumptions are pre-defined and packaged as part of the out-of-the-box Run to determine the outflows over the liquidity horizon. The business assumption adjusted cash outflows occurring over the liquidity horizon are summed up to obtain the total cash outflow. These include outflows from liabilities, derivatives outflows, outflows due to changes in financial conditions such as ratings downgrade and valuation changes and so on.

3. **Calculation of Net Cash Outflow**

   Net cash outflow is computed as follows:

$$\boldsymbol{Net\ Cash\ Outflows_{LCR\ Horizon}} = \boldsymbol{Total\ Cash\ Outflows_{LCR\ Horizon}} - \boldsymbol{Minimum}\{\boldsymbol{Total\ Cash\ Inflows_{LCR\ Horizon}}, (\mathbf{75\%} \times \boldsymbol{Total\ Cash\ Outflows_{LCR\ Horizon}})$$

NOTE: The inflow and outflow rates as prescribed by RBI for the purpose of computing LCR are pre-defined within the application and ready to be used. Users are also allowed to define bank specific inflow and outflow rates and apply them to the contractual cash flows in order to view the stock of HQLA, net cash outflows and LCR across multiple scenarios.

3.1.3.8 Consolidation

The approach to consolidation as per LCR approach followed by OFS Liquidity Risk Management is detailed below:

a. **Identification and Treatment of Unconsolidated Subsidiary**

The application assess whether a subsidiary is to be consolidated or not by checking the regulatory consolidated flag F_REGULATORY_ENTITY_IND against each legal entity. OFS LRM considers the cash inflows and outflows of a subsidiary as part of the consolidated LCR calculation, only if the subsidiary is identified as a consolidated subsidiary for the purposes of regulatory calculations. If the entity is an unconsolidated subsidiary, the cash inflows and outflows from the operations of such subsidiaries are ignored (unless otherwise specifically included in the denominator of LCR per regulations) and only the equity investment in such subsidiaries is considered as the bank's asset and appropriately taken into the numerator or denominator based on the asset level classification.

For instance, legal entity 1 has 3 subsidiaries, legal entity 2, legal entity 3 and legal entity 4. The flag F_REGULATORY_ENTITY_IND for legal entity 4 is 'No'. In such a case, legal entity 4 is treated as a third party for the purpose of consolidation and its assets and cash flows are completely excluded from calculations. Legal entity 1's interest in legal entity 4 including common equity of legal entity 4 and assets and liabilities where legal entity 4 is the counterparty will not be eliminated as legal entity 4 is considered a third party during consolidation.

b. **HQLA Consolidation by Subsidiary Type**

The process of consolidating HQLA differs slightly based on whether the subsidiary is a material entity that is expected to report LCR separately from the parent or not. This is done to ensure consistency in the results when consolidating at a parent level and when calculating the LCR at the material subsidiary level as well. The methods followed for consolidating HQLA are:

i. In case of a material subsidiaries subject to individual LCR requirements, consolidation is done as follows:

- The application identifies whether the subsidiary is a consolidated subsidiary.
- If condition (a) is fulfilled, it identifies whether the consolidated subsidiary is subject to LCR requirement that is, whether the subsidiary in question is a regulated entity.
- If condition (b) is fulfilled, then it calculates the net cash outflow by eliminating inter-company transactions at the level of the consolidated subsidiary.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow that is, to the extent required to satisfy minimum LCR requirements of that subsidiary as part of the covered company's HQLA. Restricted HQLA are the assets that have a restriction on their transferability to the parent entity. They are allowed

to be included in the stock of HQLA to the extent required to meet that entity's net cash outflows, but the surplus HQLA is not allowed to be used to meet the parent's LCR requirements.

- It consolidates the entire amount of post-haircut unrestricted HQLA held at the consolidated subsidiary as part of the covered company's HQLA.
- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

ii. In case of subsidiaries not subject to individual LCR requirements, consolidation is done as follows:

- The application identifies whether the subsidiary is a consolidated subsidiary.
- If condition (a) is fulfilled, it identifies whether the consolidated subsidiary is subject to minimum LCR requirement that is, whether the subsidiary in question is a regulated entity.
- If condition (b) is not fulfilled, it eliminates all inter-company transactions till the level of the immediate parent of the consolidated subsidiary and then calculates the net cash outflow.
- The application consolidates post-haircut restricted HQLA to the extent of the consolidated subsidiary's net cash outflow and the entire amount of post-haircut unrestricted HQLA as part of the covered company's HQLA.
- It consolidates all cash inflows and outflows which are part of the net cash flow calculation.

c. **Consolidated LCR Calculation**

Consolidation is done on a step by step basis based on each level of the organization structure starting from the most granular level. This indicates that intercompany transactions are eliminated at each sub-consolidation level till the final level of the consolidation (generally BHC) is reached. The consolidated HQLA calculated at the level of the immediate subsidiary of the BHC is added to the HQLA held by the BHC. All intercompany cash flows are eliminated and the LCR is calculated in accordance with the LCR approach.

For instance a bank's organization structure is as follows:

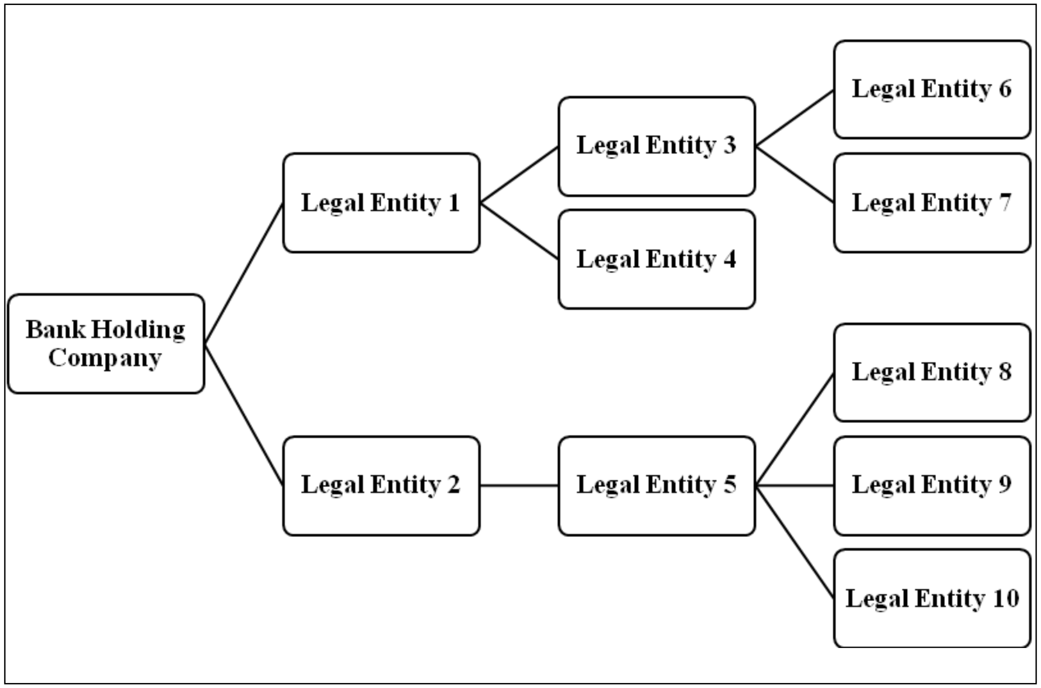


Figure 3 Organization Structure

In this case, at the first level of consolidation, calculation of net cash outflows and HQLA is done on a solo basis for legal entities 6, 7, 8, 9 and 10 as they do not have any subsidiaries. In case of regulated entities i.e. material entities, intercompany transactions are not eliminated; whereas in case of non-regulated entities, intercompany transactions are eliminated to the next level of consolidation that is, legal entities 3 and 5. The restricted HQLA from entities 6 and 7 are consolidated to the extent of their net cash outflows, while the unrestricted HQLA is transferred fully to legal entity 3. The cash inflows and outflows are consolidated to the full extent.

At the second level of consolidation that is, legal entity 3, intercompany transactions are eliminated till legal entity 1, if LE 3 is a non-regulated entity. The HQLA is calculated as a sum of the consolidated restricted and unrestricted HQLA of entities 6 and 7 and the HQLA of legal entity 3. The net cash outflow is calculated based on the cash flows of entities 3, 6 and 7, post elimination of intercompany transactions if applicable. The consolidated HQLA is calculated based on the procedure detailed in point 2 above.

This process continues in a step-by-step manner till the highest parent level i.e. the bank holding company in this example.

3.1.3.9 Calculation of Liquidity under Alternative Liquidity Approach

In order to meet any shortfalls in the LCR, RBI allows banks to avail a special liquidity facility termed as “Facility to Avail Liquidity for Liquidity Coverage Ratio” or FALLCR. This is allowed to be utilized only if a bank has exhausted all eligible HQLA held for meeting liquidity needs and as a last resort. The liquidity facility is provided by RBI to banks under certain conditions including:

1. Facility can be availed for a maximum of 90 days.
2. Liquidity against securities is available after applying the haircuts specified for availing MSF.
3. Rate of interest will be 200 basis points above the prevailing LAF rate or as specified by RBI.
4. The facility will be effective from 1, January 2015.

The application identifies FALLCR through the standard product type, line of credit received, the credit line purpose, Contractual Committed Facility Extended by Central Bank as Alternative Liquidity, and where the counterparty is a central bank. This is a standard facility extended by multiple regulators across jurisdictions and hence is captured in a manner that is consistent across jurisdictions. Only those credit lines received from the central bank with the specific credit line purpose are assumed to meet the conditions to avail FALLCR and therefore are included in the stock of HQLA in case of shortfalls. Such credit lines are excluded from the net cash outflow calculations.

The application utilizes the alternative liquidity approach to bridge the shortfall as follows:

i. The LCR is computed in each currency and the shortfall in HQLA is idenfied as follows:

$$\boldsymbol{HQLA\ Shortfall_{Currency}} = \boldsymbol{Minimum}[\mathbf{0}, (\boldsymbol{Net\ Cash\ Outflow_{Currency}} - \boldsymbol{Stock\ of\ HQLA_{Currency}})]$$

ii. The application checks whether a line of credit received from a central bank with the credit line purpose “Contractual Committed Facility Extended by Central Bank as Alternative Liquidity” exists in the particular shortfall currency.

iii. If such a line of credit exists, then the application computes the liquidity availed under the alternative liquidity approach as follows:

$$\boldsymbol{ALA_{Currency}} = \boldsymbol{Minimum}(\boldsymbol{ALA\ Committed\ Amount_{Currency}}, \boldsymbol{HQLA\ Shortfall_{Currency}})$$

Where,

ALA Committed Amount : Amount available to be drawn down under the Facility to Avail Liquidity for Liquidity Coverage Ratio

= Drawn + Undrawn Amount of the line of credit received with the credit line purpose “Contractual Committed Facility Extended by Central Bank as Alternative Liquidity”

iv. The value included in the stock of HQLA on a consolidated currency basis on availing FALLCR is computed as follows:

$$\boldsymbol{Total\ ALA\ Amount} = \sum_{1}^{n} \boldsymbol{ALA_{Currency}}$$

Where,

n : Number of currencies in which an HQLA shortfall is observed which are allowed to be bridged using the ALA.

3.1.3.10 Calculation of Liquidity Coverage Ratio

The liquidity coverage ratio is calculated for a legal entity on both solo and consolidated basis. The formula for calculating liquidity coverage ratio is as follows:

$$\boldsymbol{Liquidity\ Coverage\ Ratio} = \frac{\boldsymbol{Stock\ of\ High\ Quality\ Liquid\ Asset}\ (\boldsymbol{including\ Aternative\ Liquidity\ Approach\ Amount})}{\boldsymbol{Net\ Cash\ Outflow}}$$

3.1.4 Significant Currency Liquidity Coverage Ratio Calculation

Liquidity coverage ratio is also calculated for each legal entity at the level of each significant currency in order to identify potential currency mismatches. This is done by first identifying significant currencies for a legal entity, at a solo or consolidated level as specified in the Run, as follows:

$$\boldsymbol{Significant\ Currency} = \left[\frac{\boldsymbol{Total\ Liabilities_{Legal\ Entity,Currency}}}{\boldsymbol{Total\ Liabilities_{Legal\ Entity}}} \times \boldsymbol{100}\right] > 5\%$$

The application further computes and reports the stock of HQLA, net cash outflows and LCR for each currency identified as significant in the manner detailed in the earlier sections. This calculation is done on both solo and consolidated basis.

3.1.4.1 Liquidity Risk Monitoring Tools

The Basel III framework also prescribes five monitoring tools / metrics for better monitoring a bank's liquidity position. These metrics along with their objective and the prescribed returns are detailed below:

a. **Contractual Maturity Mismatch**

The contractual maturity mismatch profile identifies the gaps between the contractual inflows and outflows of liquidity for defined time bands. These maturity gaps indicate how much liquidity a bank potentially need to raise in each of these time bands if all outflows occurred at the earliest possible date. This metric provides insight into the extent to which the bank relies on maturity transformation under its current contracts.

b. **Concentration of Funding**

This metric is meant to identify those sources of funding that are of such significance, the withdrawal of which triggers liquidity problems. The metric thus encourages the diversification of funding sources recommended in the Basel Committee's Sound Principles. This metrics aims to address the funding concentration of banks by monitoring their funding from each significant counterparty, each significant product / instrument and each significant currency.

c. **Available Unencumbered Assets**

This metric provides supervisors with data on the quantity and key characteristics of banks' available unencumbered assets. These assets have the potential to be used as collateral to raise additional secured funding in secondary markets and / or are eligible at central banks.

d. **Market-related Monitoring Tools**

This includes high frequency market data that can serve as early warning indicators in monitoring potential liquidity difficulties at banks.

5. **Liquidity Coverage Ratio by Significant Currency**

This metric provides supervisors with data related to the liquidity indicators of the significant currency at the banks. A currency is considered as significant if the aggregate liabilities denominated in that currency amount to 5% or more of the bank’s total liabilities. This statement includes only those assets and liabilities which includes the contingent liabilities too which are denominated in the specific significant foreign currency.

3.1.5 Pre-configured Regulatory LCR Scenario as per RBI

OFS LRM supports an out-of-the-box RBI LCR which has the regulatory scenario with associated HQLA haircuts, inflow and outflow percentage/ rates pre-configured in the form of business assumptions. This section explains the business assumptions along with the corresponding regulatory reference.

NOTE:

This section provides only the contextual information about all the business assumptions. For more detailed information refer OFS LRM application (UI).

For detailed Processes and Tasks, refer the Run Chart.

The below table lists the Document Identifiers provided in the column Regulatory Reference of Regulations Addressed through Business Assumptions and Regulations Addressed through Business Rules.

Regulation Reference Number	Document Number	Document Name	Issued Date
MR1	DBOD.BP.BC.No.120 / 21.04.098/2013-14	Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards	9-Jun-14
MC	DBOD.BP.BC.No.120 / 21.04.098/2013-14	Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards	9-Jun-14
AR1	DBR.BP.BC.No.52/21.04.098/2014-15	Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards	28-Nov-14
AR2	DBR.No.BP.BC.80 /21.06.201/2014-15	Prudential Guidelines on Capital Adequacy and Liquidity Standards - Amendments	31-Mar-15
AR3	DBR. BP. BC. No. 77/21.04.098/2015-16	Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards	11-Feb-16

Regulation Reference Number	Document Number	Document Name	Issued Date
AR4	DBR.BP.BC.No.86/21.04.098/2015-16	Liquidity Risk Management & Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards	23-Mar-16
AR5	DBR.BP.BC.No.2/21.04.098/2016-17	Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standards	21-Jul-16
BLR1	Basel III Liquidity Returns	BLR 1: LCR	
AR6	DBR.No.Ret.BC.15/12.02.001/2016-17	Section 24 and Section 56 of the Banking Regulation Act, 1949 - Maintenance of Statutory Liquidity Ratio (SLR)	13-Oct-16
AR7	DBR.BP.BC.No. 81/21.04.098/2017-18	Basel III Framework on Liquidity Standards – Liquidity Coverage Ratio (LCR), Liquidity Risk Monitoring Tools and LCR Disclosure Standard	2-Aug-17
DICGC FAQ		A Guide to Deposit Insurance - Frequently Asked Questions	

The list of pre-configured business Rules and assumptions as well as the corresponding reference to the regulatory requirement that it addresses is provided in the tables listed in sections Regulations Addressed through Business Assumptions and Regulations Addressed through Business Rules.

The column Regulatory Reference for each rule or assumptions has reference to the name of the Document Identifiers such as MR1, MC, AR1, AR2 and so on, and should be read in conjunction with the Document Identifier listed in the above table.

3.1.5.1 Regulation Addressed through Business Rules

The application supports multiple pre-configured rules and scenarios based on RBI specified scenario parameters such as inflow rates, outflow rates, run-offs and haircuts and so on.

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
1	LRM - RBI - Excess and Contractually Due Collateral and Downgrade Trigger Amount Computation	This rule computes and updates the values of contractually due collateral, excess collateral due, contractually receivable collateral, excess collateral receivable, and downgrade impact amount for derivatives with netting agreements in the FSI_NETTING_AGREEMENT table.	The computation of collateral value that is contractually required to be posted to the counterparty, the excess collateral that can be recalled by the counterparty and the loss due to a ratings downgrade in case of derivative contracts with associated netting agreements is configured as part of this rule.	MC Appendix 1 Explanatory Note (ix) AR2 Part D Sr. No. 12 Explanatory Notes (ix), (xiii) and (xiv)
2	RBI LCR - Deposit Insurance Customer Exemption	This rule updates the insurance exempted indicator for all customers who are marked as exempt from being covered by deposit insurance.	The identification of customers who are not covered under the deposit insurance scheme is configured as part of this rule.	DICGC FAQ
3	Cust_Aggregated_Funding	This DT identifies whether a small business customer is treated as a retail customer for the purposes of liquidity ratio calculations as per RBI. The customer types that are in of accordance are of Small Medium Enterprise, Hindu Undivided Family, Partnership, Trust and Association of Persons which are of non - financial entity and that the aggregate funding amount associated with those customers should be greater than five crores.	The identification of wholesale customers treated as retail for the purposes of LCR is configured as part of this data transformation. The assessment is done for SMEs, HUFs, partnerships, AoPs and Trusts.	MC Appendix 1 Explanatory Note (v) AR2 Part D Sr. No. 9 AR4 Sr. No. 10

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
4	LRM - RBI - Country liquidity risk indicator for NCOF	This computation rule identifies if a legal entity, holding debt securities issued by a foreign sovereign in that foreign currency, has undertaken liquidity risk in that country. The rule checks if the legal entity has operations in a foreign country, other than those for purely trading purposes, and updates the account liquidity risk flag as Yes, if this condition is met.	The identification of whether a legal entity has liquidity risk in a particular foreign jurisdiction is configured as part of this rule. This is further used for classifying debt securities held by the bank, issued in foreign currencies by sovereigns assigned a non-zero risk weight by international rating agencies, as level 1 assets.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Appendix III Sections A (x) and C
5	LRM - RBI - Mitigant Country Liquidity Risk Indicator For NCOF	This computation rule identifies if a legal entity, holds mitigants issued by a foreign sovereign in that foreign currency, has undertaken liquidity risk in that country. The rule checks if the legal entity has operations in a foreign country, other than those for purely trading purposes, and updates the account liquidity risk flag for such mitigants as Yes, if this condition is met.	The identification of whether a legal entity has liquidity risk in a particular foreign jurisdiction is configured as part of this rule. This is further used for classifying debt securities, received as mitigants, issued in foreign currencies by sovereigns assigned a non-zero risk weight by international rating agencies, as level 1 assets.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Appendix III Sections A (x) and C
6	RBI_Ins_Unins_Amt_Calc	This DT calculates the insured and uninsured amounts updates this information at an account-customer combination in the FSI_LRM_ACCT_CUST_DETAILS table.	The allocation of the insurance limit and the computation of insured and uninsured amount at an account level are configured as part of this data transformation.	DICGC FAQ
7	LRM - Customer Established Relationship Assignment	This rule checks whether a customer has more than one active account with the bank and updates the established relationship flag	The identification of established relationship with each customer is configured as part of this rule.	MC Appendix 1 Explanatory Note (ii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		at an account-customer combination for such accounts in the FSI_LRM_ACCT_CUST_DETAILS table.		
8	LRM - RBI - Classification Of Operational Deposits And Non-Operational Balance Computation	This rule classifies accounts as operational deposits based on RBI guidelines and computes that portion of the EOP balance of such accounts which is truly operational in nature. These values are updated in the FSI_LRM_INSTRUMENT table.	The classification of an account as operational or non-operational as per RBI guidelines and the computation of the operational portion of the EOP balance are configured as part of this rule.	MC Appendix 1 Explanatory Note (vi) AR2 Part D Sr. No. 10
9	LRM - Stable Amount Calculation	This rule calculates the stable amount as per RBI guidelines.	The computation of the stable portion of a deposit is configured as part of this rule.	MC Appendix 1 Explanatory Note (ii)
10	LRM - Less Stable Amount Calculation	This rule calculates the less stable amount as per RBI guidelines.	The computation of the less stable portion of a deposit is configured as part of this rule.	MC Appendix 1 Explanatory Note (iii)
11	Unencumbered Stable And Less Stable Amount Calculation	This rule calulates the encumbered and unencumbered stable and less stable amounts for deposits based on the RBI regulatory guidelines. This is further used to provide appropriate run-off rates for the portion of lien marked deposits that are securing a loan.	The computation of the encumbered and unencumbered portion of the lien marked deposits securing loans which are classified as stable and less stable is configured as part of this rule.	AR4 Sr. No. 9

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
12	LRM_FSI_MTM_COLL_VALL_FLI_POP	This T2T populates the absolute value of the largest 30-consecutive calendar day cumulative net mark-to-market collateral between the outflows and inflows that are realized during the preceding 24 months resulting from derivatives transaction valuation changes. The data is populated in FSI_LRM_INSTRUMENT from FSI_MTM_COLL_VAL_CHANGE for those legal entities that are selected in the Run. In case of a consolidated Run, the data is moved only for the consolidated legal entity.	The computation of the additional liquidity needs due to market valuation changes based on a 24-month historical time window is configured as part of this data transformation.	MC Appendix 1 Explanatory Note (xi)
13	RBI LCR - HQLA Reclassification - Level 1 - Central Bank Reserves	This rule reclassifies reserves, held with the domestic central bank, to the extent that the central bank policies allow them to be drawn down in times of stress, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of reserves, held at the central bank domiciled in India, as HQLA level 1 asset is configured as part of this rule.	MC Paragraph 5.4 (i)
14	RBI LCR - HQLA Reclassification - Level 1 - Cash	This rule reclassifies cash, banknotes and restricted cash as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of cash as HQLA level 1 asset is configured as part of this rule.	MC Paragraph 5.4 (i)
15	RBI LCR - HQLA Reclassification - Level 1 - Zero Risk Weight Foreign Central Bank Reserves	This rule reclassifies reserves, held with foreign central banks assigned a zero risk weight by international rating agencies, as HQLA Level 1 assets in accordance with the	The classification of reserves, held at a central bank not domiciled in India and is assigned a zero risk weight by international rating agencies, as HQLA level 1 asset is	AR7 Paragraph 5.4 (i) (a)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		criteria specified by RBI.	configured as part of this rule.	
16	RBI LCR - HQLA Reclassification - Level 1 - Non-Zero Risk Weight Foreign Central Bank Reserves	This rule reclassifies reserves, held with foreign central banks assigned a non-zero risk weight by international rating agencies but a zero risk weight at national discretion, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of reserves, held at a central bank not domiciled in India and is assigned a non-zero risk weight by international rating agencies but a zero risk weight at national discretion, as HQLA level 1 asset is configured as part of this rule.	AR7 Paragraph 5.4 (i) (a)
17	RBI LCR - HQLA Reclassification - Level 1 - Marginal Standing Facility	This rule reclassifies the Marginal Standing Facility (MSF) as HQLA Level 1 asset.	The classification of marginal standing facility as HQLA level 1 asset is configured as part of this rule.	MC Paragraph 5.4 (iii)
18	RBI LCR - HQLA Reclassification - Level 1 - Market Asset-Issuer	This rule reclassifies securities, issued by zero risk weight foreign sovereigns, as HQLA Level 1 assets, in accordance with the criteria specified by RBI.	The classification of marketable securities, issued by zero risk weight foreign sovereigns securities, as HQLA Level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Appendix III Section C
19	RBI LCR - HQLA Reclassification - Level 1 - Market Asset-Guarantor	This rule reclassifies marketable securities, guaranteed by zero risk weight foreign sovereigns, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of marketable securities, guaranteed by zero risk weight foreign sovereigns, as HQLA Level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Appendix III Section C
20	RBI LCR - HQLA Reclassification - Level 1 - Debt Securities - Foreign Currency	This rule reclassifies marketable securities issued by zero risk weight sovereigns assigned a non-zero risk weight by international rating agencies, denominated in	The classification of marketable securities, issued by zero risk weight sovereigns assigned a non-zero risk weight by international rating agencies, denominated in	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Appendix III Sections A (x) and C

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		foreign currencies as HQLA Level 1 assets in accordance with the criteria specified by RBI.	foreign currencies as HQLA Level 1 assets is configured as part of this rule.	
21	RBI LCR - HQLA Level 1 for Excess SLR	This rule reclassifies government securities in excess of the minimum SLR requirement as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of government securities that exceed the minimum SLR requirement, as HQLA Level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (ii)
22	RBI LCR - HQLA Reclassification - Level 2A - Market Asset-Guarantor	This rule reclassifies marketable securities assigned a 20% risk weight and guaranteed by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of 20% risk weight marketable securities guaranteed by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (i) AR2 Part D Sr. No. 5, Appendix III Section C
23	RBI LCR - HQLA Reclassification - Level 2A - Market Asset-Issuer	This rule reclassifies marketable securities assigned a 20% risk weight and issued by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of 20% risk weight marketable securities issued by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (i) AR2 Part D Sr. No. 5, Appendix III Section C
24	RBI LCR - HQLA Reclassification - Level 2A - Non-Financial Corporate Bonds	This rule reclassifies debt securities, other than covered bonds and commercial papers, issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of corporate bonds, excluding covered bonds and commercial papers, as HQLA level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (ii) AR2 Part D Sr. No. 5, Appendix III Section C

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
25	RBI LCR - HQLA Reclassification - Level 2A - Non-Financial Commercial Papers	This rule reclassifies commercial papers issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of commercial papers, issued by non-financial corporates, as HQLA level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (ii) AR2 Part D Sr. No. 5, Appendix III Section C
26	RBI LCR - HQLA Reclassification - Level 2B - Market Asset-Guarantor	This rule reclassifies sovereign guaranteed marketable securities, assigned a risk weight between 20% and 50%, as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of marketable securities guaranteed by sovereigns and assigned a risk weight higher than 20% but equal to or lower than 50%, as HQLA level 2B assets is configured as part of this rule.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Appendix III Section C
27	RBI LCR - HQLA Reclassification - Level 2B - Market Asset-Issuer	This rule reclassifies sovereign issued marketable securities, assigned a risk weight between 20% and 50%, as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of marketable securities issued by sovereigns and assigned a risk weight higher than 20% but equal to or lower than 50%, as HQLA level 2B assets is configured as part of this rule.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Appendix III Section C
28	RBI LCR - HQLA Reclassification - Level 2B - Market Asset - Corporate Issuer	This rule reclassifies debt securities, other than covered bonds, issued by non-financial corporates as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of corporate bonds other than covered bonds, as HQLA level 2B assets is configured as part of this rule.	AR4 Sr. No. 3
29	RBI LCR - HQLA Reclassification - Level 2B Non-Financial Common Equities	This rule reclassifies common equities issued by non-financial corporates as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of common equities issued by non-financial entities as HQLA level 2B assets is configured as part of this rule.	MC Paragraph 5.5 (b) (ii) AR2 Part D Sr. No. 6, Appendix III Sections B to C

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
30	RBI LCR - Mitigant HQLA Reclassification - Level 1 - Cash	This rule reclassifies cash received as a mitigant as an HQLA Level 1 asset in accordance with the criteria specified by RBI.	The classification of cash as HQLA level 1 assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.4 (i) AR2 Part D Sr. No. 12 Explanatory Note (xvi), Appendix III Section D (iii)
31	RBI LCR - HQLA Mitigant Reclassification - Level 1 - Debt Securities - Foreign Currency	This rule reclassifies marketable securities received as mitigants, issued by zero risk weight sovereigns assigned a non-zero risk weight by international rating agencies, denominated in foreign currencies as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of marketable securities, issued by zero risk weight sovereigns assigned a non-zero risk weight by international rating agencies, denominated in foreign currencies as HQLA Level 1 assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections A (x), C and D (iii)
32	RBI LCR - HQLA Mitigant Reclassification - Level 1 - Market Asset-Guarantor	This rule reclassifies marketable securities received as mitigants, guaranteed by zero risk weight foreign sovereigns, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of securities received as mitigants, guaranteed by zero risk weight foreign sovereigns, as HQLA Level 1 assets, in accordance with the criteria specified by RBI. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
33	RBI LCR - HQLA Mitigant Reclassification - Level 1 - Market Asset-Issuer	This rule reclassifies securities received as mitigants, issued by zero risk weight foreign sovereigns, as HQLA Level 1 assets, in accordance with the criteria specified by RBI.	The classification of securities received as mitigants, issued by zero risk weight foreign sovereigns, as HQLA Level 1 assets, in accordance with the criteria specified by RBI. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)
34	RBI LCR - Mitigant HQLA Reclassification - Level 2A - Market Asset-Guarantor	This rule reclassifies marketable securities received as mitigants, assigned a 20% risk weight and guaranteed by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of 20% risk weight marketable securities received as mitigants, guaranteed by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5. (a) (i) AR2 Part D Sr. No. 5, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)
35	RBI LCR - Mitigant HQLA Reclassification - Level 2A - Market Asset-Issuer	This rule reclassifies marketable securities received as mitigants, assigned a 20% risk weight and issued by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of 20% risk weight marketable securities received as mitigants, issued by sovereigns, PSEs or multilateral development banks as HQLA Level 2A assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA	MC Paragraph 5.5. (a) (i) AR2 Part D Sr. No. 5, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
			provided they meet all the required criteria.	
36	RBI LCR - Mitigant HQLA Reclassification - Level 2A - Non-Financial Corporate Bonds	This rule reclassifies debt securities received as mitigants, other than covered bonds, issued by non-financial corporates as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of corporate bonds received as mitigants, excluding covered bonds, as HQLA level 2A assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5. (a) (ii) AR2 Part D Sr. No. 5, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)
37	RBI LCR - Mitigant HQLA Reclassification - Level 2B - Market Asset-Guarantor	This rule reclassifies sovereign guaranteed marketable securities received as mitigants, assigned a risk weight between 20% and 50% as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of marketable securities received as mitigants, guaranteed by sovereigns and assigned a risk weight higher than 20% but equal to or lower than 50%, as HQLA level 2B assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
38	RBI LCR - Mitigant HQLA Reclassification - Level 2B - Market Asset-Issuer	This rule reclassifies sovereign issued marketable securities received as mitigants, assigned a risk weight between 20% and 50% as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of marketable securities received as mitigants, issued by sovereigns and assigned a risk weight higher than 20% but equal to or lower than 50%, as HQLA level 2B assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)
39	RBI LCR - Mitigant HQLA Reclassification - Level 2B - Market Asset- Corporate Issuer	This rule reclassifies debt securities received as mitigants, other than covered bonds, issued by non-financial corporates as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of corporate bonds received as mitigants, excluding covered bonds, as HQLA level 2B assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	AR2 Part D Sr. No. 12 Explanatory Note (xvi), Appendix III Section D (iii) AR4 Sr. No. 3
40	RBI LCR - Mitigant HQLA Reclassification - Level 2B Non-Financial Common Equities	This rule reclassifies common equities received as mitigants, issued by non-financial corporates as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of common equities received as mitigants, issued by non-financial entities as HQLA level 2B assets is configured as part of this rule. It also addresses the requirement of considering assets received as collateral under re-hypothecation rights as HQLA provided they meet all the required criteria.	MC Paragraph 5.5 (b) (ii) AR2 Part D Sr. No. 6, Sr. No. 12 Explanatory Note (xvi), Appendix III Sections C and D (iii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
41	RBI LCR - Substitutable Collateral HQLA Reclassification - Level 1 - Cash	This rule reclassifies cash that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of cash that can potentially be substituted for existing collateral, as HQLA level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (i) AR2 Part D Sr. No. 12 Explanatory Note (xv)
42	RBI LCR - HQLA Substitutable Collateral Reclassification - Level 1 - Market Asset-Guarantor	This rule reclassifies marketable securities, guaranteed by zero risk weight foreign sovereigns that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of marketable securities, guaranteed by zero risk weight foreign sovereigns that can potentially be substituted for existing collateral, as HQLA Level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Sr. No. 12 Explanatory Note (xv), Appendix III Section C
43	RBI LCR - HQLA Substitutable Collateral - Level 1 - Debt Securities - Foreign Currency	This rule reclassifies marketable securities issued by zero risk weight sovereigns assigned a non-zero risk weight by international rating agencies, denominated in foreign currencies that can be contractually substituted for existing collateral received, as HQLA Level 1 assets in accordance with the criteria specified by RBI.	The classification of marketable securities, issued by zero risk weight sovereigns assigned a non-zero risk weight by international rating agencies, denominated in foreign currencies that can potentially be substituted for existing collateral, as HQLA Level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Sr. No. 12 Explanatory Note (xv), Appendix III Sections A (x) and C
44	RBI LCR - HQLA Substitutable Collateral Reclassification - Level 1 - Market Asset-Issuer	This rule reclassifies securities, issued by zero risk weight foreign sovereigns that can be contractually substituted for existing collateral received, as HQLA Level 1 assets, in accordance with the criteria specified by RBI.	The classification of marketable securities, issued by zero risk weight foreign sovereigns that can potentially be substituted for existing collateral, as HQLA Level 1 assets is configured as part of this rule.	MC Paragraph 5.4 (iv) AR2 Part D Sr. No. 4, Sr. No. 12 Explanatory Note (xv), Appendix III Section C

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
45	RBI LCR - Substitutable HQLA Reclassification - Level 2A - Market Asset-Guarantor	This rule reclassifies marketable securities assigned a 20% risk weight and guaranteed by sovereigns, PSEs or multilateral development banks that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of 20% risk weight marketable securities guaranteed by sovereigns, PSEs or multilateral development banks, that can potentially be substituted for existing collateral received, as HQLA Level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (i) AR2 Part D Sr. No. 5, Sr. No. 12 Explanatory Note (xv), Appendix III Section C
46	RBI LCR - Substitutable HQLA Reclassification - Level 2A - Market Asset-Issuer	This rule reclassifies marketable securities assigned a 20% risk weight and issued by sovereigns, PSEs or multilateral development banks that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of 20% risk weight marketable securities issued by sovereigns, PSEs or multilateral development banks, that can potentially be substituted for existing collateral received, as HQLA Level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (i) AR2 Part D Sr. No. 5, Sr. No. 12 Explanatory Note (xv), Appendix III Section C
47	RBI LCR - Substitutable HQLA Reclassification - Level 2A - Non-Financial Corporate Bonds	This rule reclassifies debt securities, other than covered bonds, issued by non-financial corporates that can be contractually substituted for existing collateral received, as HQLA Level 2A assets in accordance with the criteria specified by RBI.	The classification of corporate bonds, excluding covered bonds, that can potentially be substituted for existing collateral received, as HQLA level 2A assets is configured as part of this rule.	MC Paragraph 5.5. (a) (ii) AR2 Part D Sr. No. 5, Sr. No. 12 Explanatory Note (xv), Appendix III Section C
48	RBI LCR - Substitutable HQLA Reclassification - Level 2B - Market Asset-Guarantor	This rule reclassifies sovereign guaranteed marketable securities, assigned a risk weight between 20% and 50%, that can be contractually substituted for existing collateral received, as HQLA Level 2B assets in	The classification of marketable securities guaranteed by sovereigns and assigned a risk weight higher than 20% but equal to or lower than 50%, that can potentially be substituted for existing collateral received, as	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Appendix III Section C

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		accordance with the criteria specified by RBI.	HQLA level 2B assets is configured as part of this rule.	
49	RBI LCR - Substitutable HQLA Reclassification - Level 2B - Market Asset-Issuer	This rule reclassifies sovereign issued marketable securities, assigned a risk weight between 20% and 50%, that can be contractually substituted for existing collateral received, as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of marketable securities issued by sovereigns and assigned a risk weight higher than 20% but equal to or lower than 50%, that can potentially be substituted for existing collateral received, as HQLA level 2B assets is configured as part of this rule.	MC Paragraph 5.5 (b) (i) AR2 Part D Sr. No. 6, Appendix III Section C
50	RBI LCR - Substitutable HQLA Reclassification - Level 2B - Market Asset-Corporate Issuer	This rule reclassifies debt securities, other than covered bonds, issued by non-financial corporates that can be contractually substituted for existing collateral received, as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of corporate bonds, excluding covered bonds, that can potentially be substituted for existing collateral received, as HQLA level 2B assets is configured as part of this rule.	AR2 Part D Sr. No. 12 Explanatory Note (xv) AR4 Sr. No. 3
51	RBI LCR - Substitutable HQLA Reclassification - Level 2B Non-Financial Common Equities	This rule reclassifies common equities issued by non-financial corporates that can be contractually substituted for existing collateral received, as HQLA Level 2B assets in accordance with the criteria specified by RBI.	The classification of common equities issued by non-financial entities, that can potentially be substituted for existing collateral received, as HQLA level 2B assets is configured as part of this rule.	MC Paragraph 5.5 (b) (ii) AR2 Part D Sr. No. 6, Sr. No. 12 Explanatory Note (xv), Appendix III Sections B to C

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
52	LRM - RBI - Bank Own Assets - Meets HQLA Operational Requirements Flag Update	This rule identifies whether bank's own assets, both unencumbered assets as well as those placed as collateral, meet the operational requirements prescribed by RBI, except for being unencumbered in the case of placed collateral. In case of unencumbered assets, it updates the Meets HQLA Operational Requirements Flag. In case of placed collateral, it updates the Meets HQLA Operational Requirements on Unwind Flag.	The identification of whether an asset owned by the bank meets the operational requirements set forth by RBI for its inclusion in the stock of HQLA is configured as part of this rule.	MC Paragraph 5.6 to 5.7 AR2 Part D Sr. No. 3, Sr. No. 12 Explanatory Note (xvi), Appendix III Section D AR4 Sr. No. 7 AR6 Section A
53	LRM - RBI - Re-hypothecated Mitigants - Meets HQLA Operational Requirements Flag Update	This rule identifies whether a re-hypothecated mitigant meets the operational requirements prescribed by RBI, except for being unencumbered. It updates the Meets HQLA Operational Requirements on Unwind Flag for such mitigants.	The identification of whether a collateral received from a counterparty, that is further placed as collateral, meets the operational requirements set forth by RBI on unwind is configured as part of this rule.	MC Paragraph 5.6 to 5.7 AR2 Part D Sr. No. 3, Sr. No. 12 Explanatory Note (xvi), Appendix III Section D AR4 Sr. No. 7 AR6 Section A
54	LRM - RBI - Instruments - Eligible High Quality Liquid Assets Flag Update	This computation rule updates the Hqla Eligibility Flag for a bank's own unencumbered assets classified as HQLA that fulfill the HQLA operational requirements and therefore can be included in the stock of HQLA. It also updates the Eligible HQLA on Unwind flag for all assets placed as collateral that are classified as HQLA that fulfill the HQLA operational requirements on unwind	The identification of whether a bank's asset classified as an HQLA, meets all the operational criteria and is therefore eligible to be included in the stock of HQLA is configured as part of this rule.	MC Paragraph 5.6 to 5.7 AR2 Part D Sr. No. 3, Sr. No. 12 Explanatory Note (xvi), Appendix III Section D AR4 Sr. No. 7 AR6 Section A

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		and therefore are to be unwound.		
55	LRM - RBI - Mitigants - Meets HQLA Operational Requirements Flag Update	This rule identifies whether a mitigant meets the operational requirements prescribed by RBI, to be considered for inclusion in the stock of HQLA. It updates the Meets HQLA Operational Requirements Flag for such mitigants.	The identification of whether the collateral received from counterparty meets the operational requirements set forth by RBI is configured as part of this rule.	MC Paragraph 5.6 to 5.7 AR2 Part D Sr. No. 3, Sr. No. 12 Explanatory Note (xvi), Appendix III Section D AR4 Sr. No. 7 AR6 Section A
56	LRM - RBI - Mitigants - Eligible High Quality Liquid Assets Flag Update	This computation rule updates the Hqla Eligibility Flag for mitigants classified as HQLA that fulfill the HQLA operational requirements prescribed by RBI, and therefore can be included in the stock of HQLA.	The identification of whether the collateral received from counterparty, classified as an HQLA, meets all the operational criteria and is therefore eligible to be included in the stock of HQLA is configured as part of this rule.	MC Paragraph 5.6 to 5.7 AR2 Part D Sr. No. 3, Sr. No. 12 Explanatory Note (xvi), Appendix III Section D AR4 Sr. No. 7 AR6 Section A
57	LRM - Collateral Valuation Change Computation	This rule calculates the collateral valuation change amount for all liabilities including derivatives.	The computation of the value of placed collateral, not classified as HQLA level 1 asset, securing liabilities including derivatives, adjusted for any mitigant received is configured as part of this rule. This is further used to determine the increased liquidity needs related to the	MC Appendix 1 Explanatory Note (x) AR2 Part D Sr. No. 12 Explanatory Note (x)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
			potential for valuation changes on posted collateral.	
58	LRM - Downgrade Impact Amount for Other Liabilities	This rule calculates the downgrade impact amount for all liability products other than derivatives and securitizations as the difference between the EOP balance and the collateral received.	The computation of the loss due to a ratings downgrade, with respect to liabilities other than derivatives and securitizations, is configured as part of this rule.	MC Appendix 1 Explanatory Note (ix) AR2 Part D Sr. No. 12 Explanatory Note (ix)
59	LRM - Calculation of Contractual Inflow Amount And Minimum Due Amount	This rule calculates the sum of all cash inflows within the liquidity horizon for loans and leases. Additionally, it calculates the minimum amount due for products such as loans, leases, overdrafts and line of credit that do not have a specified maturity.	The identification of the minimum payments due on open maturity loans within the LCR horizon of 30 days is configured as part of this rule.	AR2 Part D Sr. No. 14 Explanatory Note (xxvi)
60	LRM - Calculation of Contractual Obligation Amount	This rule calculates the contractual obligation to extend funds to retail and non-financial customers.	The computation of the total contractual obligation to extend funds to retail and non-financial customers is configured as part of this rule.	AR2 Part D Sr. No. 12 Explanatory Note (xviii)
61	FN_CONTRCT_OBLIG_AMT_POP	This DT computes the excess contractual obligation amount as the difference between the contractual obligation to extend funds and 30-day contractual inflows and updates this value in the FSI_LRM_INSTRUMENT table.	The computation of the contractual obligation amount in excess of 50% of the total contractual inflows from retail and non-financial customers is configured as part of this rule.	AR2 Part D Sr. No. 12 Explanatory Note (xviii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
62	LRM - RBI - Contractually Due Collateral And Excess Collateral Receivable Update	This rule calculates and updates the contractually due collateral and excess collateral receivable amounts for derivatives without netting agreements and other liabilities in FSI_LRM_INSTRUMENT table.	The computation of the collateral required to be posted contractually on which the counterparty has not yet demanded the collateral is configured as part of this rule.	AR2 Part D Sr. No. 12 Explanatory Note (xiv) BLR1 Panel II Sr. No. A 4 (vi)
63	LRM - RBI - Contractually Receivable Collateral And Excess Collateral Due Update	This rule calculates and updates the contractually receivable collateral And excess collateral due amounts for derivatives without netting agreements and other assets in FSI_LRM_INSTRUMENT table.	The computation of the excess collateral held by the bank which could be called back by the counterparty at any time is configured as part of this rule.	AR2 Part D Sr. No. 12 Explanatory Note (xiii)
64	LRM - RBI - Instruments - Hedge Termination Cost Adjusted Value	This computation rule identifies all high quality liquid assets that have a hedge associated with them and computes the value of the unencumbered portion of such assets to be included in the stock as less of the hedge termination cost.	The computation of the market value of a high quality liquid asset adjusted for the outflow that would arise on the early termination of the hedge is configured as part of this rule. The hedge termination cost adjusted value of the asset is included in the stock of HQLA.	AR2 Appendix III Section D (vii)
65	LRM - RBI - Mitigants - Value to be Included in the Stock of Liquid Assets	This rule computes the unencumbered portion of the re-hypothecable mitigants, classified as high quality liquid assets, which can be included in the stock of HQLA.	The identification and computation of the value of the non-rehypothecated portion of HQLA collateral received under re-hypothecation rights is configured as part of this rule.	AR2 Appendix III Section D (iii)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
66	LRM - RBI - Instruments - Value to be included in Stock - Placed Collateral	This rule computes the unused portion of placed collaterals, classified as high quality liquid assets, which is eligible to be included in the stock as it is currently unencumbered.	The computation of the unused portion of high quality liquid assets that are pre-positioned or pledged but have not been used to generate liquidity is configured as part of this rule. The assets are encumbered in the order of lowest to highest quality in order to compute the unused portion of the placed collateral	AR2 Appendix III Section D iii
67	RBI LCR - Stock Adjustment Reclassification - Level 1 - Addition	This rule identifies all secured lending and asset exchange transactions involving HQLA that mature within the LCR horizon which are, therefore, required to be unwound and reclassifies them to the appropriate adjustment rule. In case of secured lending transactions, where the collateral received is a non-level 1 HQLA, the type of adjustment to the stock of HQLA due to such an unwind is updated as addition of the amount paid. In case of asset exchange transactions, where the collateral received is a non-level 1 HQLA and the collateral posted in a level 1 HQLA, the type of adjustment to the stock of HQLA due to such an unwind is updated as addition of the collateral posted.	The identification of secured lending and asset exchange transactions required to be unwound and the amount to be added to the stock of level 1 assets due to such an unwind is configured as part of this rule.	MC Paragraph 6.3 AR2 Part D Sr. No. 16, Appendix III Section E

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
68	RBI LCR - Stock Adjustment Reclassification - Level 1 - Deduction	This rule identifies all secured funding and asset exchange transactions involving HQLA that mature within the LCR horizon which are, therefore, required to be unwound and reclassifies them to the appropriate adjustment rule. In case of secured funding transactions, where the collateral posted is a non-level 1 HQLA, the type of adjustment to the stock of HQLA due to such an unwind is updated as deduction of the amount received. In case of asset exchange transactions, where the collateral posted is a non-level 1 HQLA and the collateral received in a level 1 HQLA the type of adjustment to the stock of HQLA due to such an unwind is updated as deduction of the collateral received.	The identification of secured funding and asset exchange transactions required to be unwound and the amount to be deducted from the stock of level 1 assets due to such an unwind is configured as part of this rule.	MC Paragraph 6.3 AR2 Part D Sr. No. 16, Appendix III Section E
69	RBI LCR - Stock Adjustment Reclassification - Level 2A - Addition	This rule identifies all secured funding and asset exchange transactions involving HQLA that mature within the LCR horizon which are, therefore, required to be unwound and reclassifies them to the appropriate adjustment rule. In case of secured funding transactions, where the collateral posted is a level 2A HQLA, the type of adjustment to the stock of HQLA due to such an unwind is	The identification of secured funding and asset exchange transactions required to be unwound and the amount to be added to the stock of level 2A assets due to such an unwind is configured as part of this rule.	MC Paragraph 6.4 AR2 Part D Sr. No. 17, Appendix III Section E

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		updated as addition of the collateral posted. In case of asset exchange transactions, where the collateral received is an HQLA and the collateral posted is a level 2A asset, the type of adjustment to the stock of HQLA due to such an unwind is updated as addition of the collateral posted.		
70	RBI LCR - Stock Adjustment Reclassification - Level 2A - Deduction	This rule identifies all secured lending and asset exchange transactions involving HQLA that mature within the LCR horizon which are, therefore, required to be unwound and reclassifies them to the appropriate adjustment rule. In case of secured lending transactions, where the collateral received is a level 2A HQLA, the type of adjustment to the stock of HQLA due to such an unwind is updated as deduction of the collateral received. In case of asset exchange transactions, where the collateral posted is an HQLA and the collateral received is a level 2A asset, the type of adjustment to the stock of HQLA due to such an unwind is updated as deduction of the collateral received.	The identification of secured lending and asset exchange transactions required to be unwound and the amount to be deducted from the stock of level 2A assets due to such an unwind is configured as part of this rule.	MC Paragraph 6.4 AR2 Part D Sr. No. 17, Appendix III Section E

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
71	RBI LCR - Stock Adjustment Reclassification - Level 2B - Addition	This rule identifies all secured funding and asset exchange transactions involving HQLA that mature within the LCR horizon which are, therefore, required to be unwound and reclassifies them to the appropriate adjustment rule. In case of secured funding transactions, where the collateral posted is a level 2B HQLA, the type of adjustment to the stock of HQLA due to such an unwind is updated as addition of the collateral posted. In case of asset exchange transactions, where the collateral received is an HQLA and the collateral posted is a level 2B asset, the type of adjustment to the stock of HQLA due to such an unwind is updated as addition of the collateral posted.	The identification of secured funding and asset exchange transactions required to be unwound and the amount to be added to the stock of level 2B assets due to such an unwind is configured as part of this rule.	MC Paragraph 6.5 AR2 Part D Sr. No. 18, Appendix III Section E
72	RBI LCR - Stock Adjustment Reclassification - Level 2B - Deduction	This rule identifies all secured lending and asset exchange transactions involving HQLA that mature within the LCR horizon which are, therefore, required to be unwound and reclassifies them to the appropriate adjustment rule. In case of secured lending transactions, where the collateral received is a level 2B HQLA, the type of adjustment to the stock of HQLA due to such an unwind is updated as deduction of the collateral	The identification of secured lending and asset exchange transactions required to be unwound and the amount to be deducted from the stock of level 2B assets due to such an unwind is configured as part of this rule.	MC Paragraph 6.5 AR2 Part D Sr. No. 18, Appendix III Section E

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		received. In case of asset exchange transactions, where the collateral posted is an HQLA and the collateral received is a level 2B asset, the type of adjustment to the stock of HQLA due to such an unwind is updated as deduction of the collateral received.		
73	RBI LCR - Stock Adjustment Rule	This rule computes the amount to be adjusted to the stock of HQLA for the adjustments that are been identified for each account requiring to be unwound and updates these amounts in FSI_LRM_INSTRUMENT table.	The identification of the amount to be added to or deducted from the stock of HQLA due to unwinding of a transaction involving high quality liquid assets is configured as part of this rule.	MC Paragraphs 6.3, 6.4 and 6.5 AR2 Part D Sr. Nos. 16, 17 and 18, Appendix III Section E
74	LRM_RBI_SIGNIFICANT_CURRENCY	This T2T identifies the significant currencies for each legal entity on a standalone basis as per the regulatory criteria and updates the list of significant currencies in the FCT_SIGNIFICANT_CURRENCY table. Significant currencies are those where the sum of liabilities in a given currency exceeds five percent of the total liabilities of the legal entity.	The identification of currencies deemed significant as per regulatory criteria is configured as part of this T2T.	MC Paragraph 7.1 (d)

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
75	RBI_LCR_DATA_POPULATION	This T2T computes and updates the restricted and unrestricted amounts for all HQLA levels in each significant currency as well as for the reporting currency at the level of each legal entity from FSI_LRM_INSTRUMENT table into FCT_LRM_LE_SUMMARY table. Restricted assets are assets that do not have transferability restrictions.	The identification and computation of the value of assets that have restrictions on their transfer and the assets that are freely transferable is configured as part of this rule.	AR2 Appendix III Section A (ii) to (iv)
76	RBI_HELD_TO_MEET_NCOF	The DT computes the value of high quality liquid assets that can be included in the stock of HQLA only to the extent of the stressed net cash outflows denominated in the foreign currency in the jurisdiction where the bank has undertaken liquidity risk. This value is updated in the FCT_LRM_LE_SUMMARY table.	The computation of the value of the foreign currency denominated level 1 assets that are allowed to be included in the stock of HQLA only to the extent of the stressed net cash outflows denominated in the foreign currency in the jurisdiction where the bank has undertaken liquidity risk is configured as part of this rule.	MC Paragraph 5.4 iv AR2 Part D Sr. No. 4, Appendix III Sections A (x), C
77	RBI LCR - Cashflows for LCR Computation	This rule updates the cash inflows and outflows adjusted for the regulatory rates as part of the business assumptions into the FCT_LRM_LE_SUMMARY table at a legal entity - significant currency combination.	The computation of total cash outflows and total cash inflows of an entity on a significant currency basis post applying regulatory outflow and inflow rates is configured as part of this rule.	MC Paragraphs 6.7
78	RBI LCR - Cash flows for LCR Computation at Entity Level	This rule updates the cash inflows and outflows adjusted for the regulatory rates as part of the business assumptions into the	The computation of total cash outflows and total cash inflows of an entity post applying regulatory outflow and inflow rates is	MC Paragraphs 6.7

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		FCT_LRM_LE_SUMMARY table at a legal entity level.	configured as part of this rule.	
79	LRM - NCOF Computation	This rule computes the net cash outflow over the liquidity horizon based on the regulatory formula at legal entity level as well legal entity - significant currency level and updates these values in the FCT_LRM_LE_SUMMARY table.	The computation of the net cash outflows as per the regulatory formula is configured as part of this rule.	MC Paragraphs 6.7
80	LRM_RBI_LCR_Consolidate	This DT identifies and eliminates intercompany transactions and computes the consolidated liquidity coverage ratio (LCR). It includes the assets with transferability restrictions held by subsidiaries into the consolidated calculation only to the extent of net cash outflows of that subsidiary and computes the consolidated stock of high quality liquid assets. Additionally, it computes the net cash outflow on a consolidated basis.	The computation of the consolidated net cash outflows and the stock of high quality liquid assets adjusted for asset transferability restrictions is configured as part of this data transformation.	MC Paragraph 3 AR2 Appendix III Section A
81	LRM - RBI LCR Adjustments Amount Calculation	This rule calculates the net amount to be adjusted against each high quality liquid asset level based on transactions required to be unwound and updates this amount in FCT_LRM_LE_SUMMARY table .	The computation of the net amount to be adjusted against the total stock of HQLA due to unwinding of transactions involving high quality liquid assets maturing within 30 days at a legal entity - currency combination is configurd as part of this rule.	MC Paragraphs 6.3, 6.4 and 6.5 AR2 Part D Sr. Nos. 16, 17 and 18, Appendix III Section E

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
82	LRM - RBI LCR Adjustments Amount Calculation at Entity Level	This rule calculates the net amount to be adjusted against each high quality liquid asset level based on transactions required to be unwound at a legal entity level, either standalone or consolidated, and updates this amount in FCT_LRM_LE_SUMMARY table .	The computation of the net amount to be adjusted against the total stock of HQLA due to unwinding of transactions involving high quality liquid assets maturing within 30 days at a legal entity level is configured as part of this rule.	MC Paragraphs 6.3, 6.4 and 6.5 AR2 Part D Sr. Nos. 16, 17 and 18, Appendix III Section E
83	RBI LCR - Adjusted Asset Amount Calculation	This rule calculates the adjusted stock of HQLA based on the transactions required to be unwound at a legal entity as well as legal entity - significant currency combination and updates this value in the FCT_LRM_LE_SUMMARY table.	The computation of the stock of HQLA adjusted for unwinding of unwinding of transactions involving high quality liquid assets maturing within 30 days is configured as part of this rule.	MC Paragraphs 6.3, 6.4 and 6.5 AR2 Part D Sr. Nos. 16, 17 and 18, Appendix III Section E
84	RBI LCR - Level 2B Asset Cap Amount Calculation	This rule calculates the adjusted level 2B asset cap amount as per the regulatory formula using the adjusted amounts of high quality liquid assets and updates it in the FCT_LRM_LE_SUMMARY table at both legal entity level and legal entity - significant currency level.	The computation of the adjustment for 15% cap on level 2B assets is configured as part of this rule	MC Paragraph 6.2 to 6.6 AR2 Part D Sr. No. 15
85	RBI LCR - Level 2 Asset Cap Amount Calculation	This rule calculates the adjusted level 2 asset cap amount as per the regulatory formula using the adjusted amounts of high quality liquid assets and the adjusted level 2B cap amount. This value is updated in the FCT_LRM_LE_SUMMARY table at both legal	The computation of the adjustment for 40% cap on level 2 assets is configured as part of this rule	MC Paragraph 6.2 to 6.6 AR2 Part D Sr. No. 15

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		entity level and legal entity - significant currency level.		
86	RBI LCR - SHQLA Computation	This rule calculates the stock of high quality liquid assets (HQLA) and updates the value in FCT_LRM_LE_SUMMARY table at both legal entity level and legal entity - significant currency level.	The computation of the stock of high quality liquid assets is configured as part of this rule.	MC Paragraph 6.2 to 6.6 AR2 Part D Sr. No. 15
87	RBI LCR - Liquidity Coverage Ratio Computation	This rule calculates the liquidity coverage ratio (LCR) at a legal entity level and legal entity – significant currency level on a solo and consolidated basis and updates the values in the FCT_LRM_LE_SUMMARY table.	The computation of the liquidity coverage ratio is configured as part of this rule.	MC Paragraph 4
88	RBI LCR - Option Amount Post Option 1 - Solo	This rule calculates the value of the liquidity facility extended by the central bank as alternative liquidity required to meet the shortfall in the stock of HQLA for a legal entity on a standalone basis.	The computation of the amount of FALLCR to be availed by a legal entity on a standalone basis due to a shortfall in the stock of HQLA as compared to the net cash outflows is configured as part of this rule.	AR1 Sr. No. 4 AR3 Sr. No. 3 AR5 Sr. No. 3
89	RBI LCR - Option Amount Post Option 1 - Consol	This rule calculates the value of the liquidity facility extended by the central bank as alternative liquidity required to meet the shortfall in the stock of HQLA, if any, for a legal entity on a consolidated basis.	The computation of the amount of FALLCR to be availed by a legal entity on a consolidated basis due to a shortfall in the stock of HQLA as compared to the net cash outflows is configured as part of this rule.	AR1 Sr. No. 4 AR3 Sr. No. 3 AR5 Sr. No. 3

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
90	LRM - SHQLA Computation Post Option 1	This rule calculates the stock of high quality liquid asset (HQLA) after the inclusion of the alternative liquidity facility, in case of a shortfall in the stock of HQLA, and updates this value in the FCT_LRM_LE_SUMMARY table.	The computation of the stock of HQLA inclusive of the FALLCR amount covering the HQLA shortfall is configured	AR1 Sr. No. 4 AR3 Sr. No. 3 AR5 Sr. No. 3
91	RBI LCR - Liquidity Coverage Ratio Computation Option 1	This rule calculates the liquidity coverage ratio after the inclusion of the alternative liquidity facility, in case of a shortfall in the stock of HQLA, and updates this value in the FCT_LRM_LE_SUMMARY table.	The computation of the liquidity coverage ratio after considering the FALLCR amount, in the event of a shortfall in the stock of HQLA, is configured as part of this rule.	AR1 Sr. No. 4 AR3 Sr. No. 3 AR5 Sr. No. 3

3.1.5.2 Regulation Addressed through Business Assumptions

The application supports multiple assumptions with pre-configured rules and scenarios based on regulator specified scenario parameters such as HQLA haircuts, inflow and outflow percentage / rates and so on. The list of pre-configured business assumptions and the corresponding reference to the regulatory requirement that it addresses is provided in the following table:

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
1	HQLAHaircutAssign	Haircuts for high quality liquid assets.	The haircuts on high quality liquid assets are pre-defined as part of this assumption. This assumption applies a 0% haircut on level 1 assets, 15% on level 2A assets and 50% on level 2B assets.	MR1 Paragraph 6.3, 6.4

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
Outflows				
1	RBI- Non lien marked stable retail deposits	Run-offs on the stable portion of non-lien marked deposits from retail customers and unsecured wholesale funding from SMEs treated as retail.	The run-off rates on the stable portion of non-lien marked deposits from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 5% run-off on the stable portion of retail deposits, and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	AR2 Part D Sr No 7 and 8
2	RBI- Lien marked stable retail deposits	Run offs on the stable portion of lien marked deposits from customers treated as retail.	This assumption defines the run off rates on stable portion of lien marked deposits from all customers treated as retail, where in the deposit maturity and the encumbrance period is within the LCR horizon. Since such deposits can be withdrawn within the horizon, these are treated similar to non-lien marked stable deposits. This assumption applies a 5% run off rate on the stable portion of such deposit.	AR4 Sr no 9
3	RBI- Unencumbered stable lien marked deposits	Run offs on the unencumbered stable portion of lien marked deposits from customers treated as retail.	Run off rates for unencumbered stable portion of lien marked deposits from customers treated as retail wherein the deposit maturity is within horizon, but the encumbrance period is beyond the LCR horizon is defined as a part of this assumption. The unencumbered stable portion of such deposits receive a 5% Run off rate.	AR4 Sr no 9
4	RBI- Encum portion exclusion of retail Lien marked deposits	Run offs on the encumbered portion of lien marked deposits from customers treated as retail.	Run offs on the encumbered portion of lien marked deposits from customers treated as retail wherein the deposit maturity is within horizon, but the encumbrance period is beyond the LCR horizon is defined as a part of this assumption. The encumbered portion of both stable and less stable lien marked deposits receive a 0% Run off rate.	AR4 Sr no 9

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
5	RBI- Non lien marked less stable deposits	Run-offs on the less stable portion of non-lien marked deposits from retail customers and unsecured wholesale funding from SMEs treated as retail.	The run-off rates on the less stable portion of non-lien marked deposits from retail customers and SMEs who are treated like retail customers for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 10% run-off on the portion of retail deposits that do not meet the deposit stability criteria and either mature or result in an early withdrawal, without incurring significant penalty, within the LCR horizon.	AR2 Part D Sr No 7 and 8
6	RBI- Lien marked less stable retail deposits	Run offs on the stable portion of lien marked deposits from customers treated as retail.	This assumption defines the run off rates on less stable portion of lien marked deposits from all customers treated as retail, wherein the deposit maturity and the encumbrance period is within the LCR horizon. Since such deposits can be withdrawn within the horizon, these are treated similar to non-lien marked less stable deposits. This assumption applies a 10% run off rate on the stable portion of such deposit.	AR4 Sr no 9
7	RBI -Unencumbered less stable lien marked deposits	Run offs on the unencumbered less stable portion of lien marked deposits from customers treated as retail.	Run off rates for unencumbered less stable portion of lien marked deposits from customers treated as retail wherein the deposit maturity is within the horizon, but the encumbrance period is beyond the LCR horizon is defined as a part of this assumption. The unencumbered less stable portion of such deposits receive a 10% Run off rate.	AR4 Sr no 9
9a	RBI - Insured Operational Balance Run-off	Run-off on the portion of operational balance, from deposits generated by clearing, custody and cash management activities, that is fully covered by deposit	The run-off rates on the insured portion of the balance held in operational accounts to fulfill operational requirements are pre-defined as part of this assumption. This assumption applies a 3% run-off on insured operational balances that meet the additional criteria for deposit insurance schemes and a 5% run-off on those that do not meet the additional criteria.	AR2 part D Sr No 10, BLR 1 template A 2. (ii)

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		insurance.		
9b	RBI - Uninsured Operational Balance Run-off	Run-off on the portion of operational balance, from deposits generated by clearing, custody and cash management activities, that is not covered by deposit insurance.	The run-off rates on the uninsured portion of the balance held in operational accounts to fulfill operational requirements are pre-defined as part of this assumption. This assumption applies a 25% run-off on operational balances that are not covered by deposit insurance.	AR2 part D Sr No 10, BLR 1 template A 2. (ii)
10	RBI-Run-off on Unsec Non-Op Funding from SME and others	Run-off on the unsecured wholesale funding, provided by SMEs, that is not classified as an operational deposit. This is achieved by rolling over 1 – run-off rate to beyond the LCR horizon of 30 days.	The run-off rates on the cash flows, from unsecured funding that is not classified as an operational deposit, received from SME's, treated as wholesale customers and AoP, HUF, partnerships, trusts which are treated as wholesale, for the purposes of LCR, are pre-defined as part of this assumption. This assumption applies a 60% rollover for an SME treated as wholesale and a 0% rollover on the other entities.	AR2 Part D Sr 9
11	RBI-NFC, Sov, CB, PSE UWF Run-off on Non-op Balance	Run-off on the unsecured wholesale funding (UWF), provided by non-financial corporate (NFC), sovereigns (Sov), central banks (CB), and multilateral development banks (MDB) and PSEs that is not	The run-off rates on the cash flows, from unsecured funding that is not classified as an operational deposit, received from non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 80% rollover that is 20% run-off on cash flows from non-operational funding accounts that are fully covered by deposit insurance and a 60% rollover that is 40% run-off on those non-	AR2 Part D Sr 9

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		classified as an operational deposit. This is achieved by rolling over 1 – run-off rate to beyond the LCR horizon of 30 days.	operational funding accounts that are not fully covered by deposit insurance.	
12	RBI-UWF Run-off on Non-op Balance from SMEs and others	Run-offs on unsecured wholesale funding (UWF) from SMEs not treated as retail.	The run-off rates on the non-operational portion of operational deposits from SME's, treated as wholesale customers for the purposes of LCR, and AoP, HUF, partnerships, trusts which are treated as wholesale are pre-defined as part of this assumption. . This assumption applies a 40% run off for an SME treated as wholesale and a 100% run off on the other entities.	AR2 Part D Sr 9
13	RBI-NFC, Sov, CB,PSE Non-operational UWF Run-off	Run-off on the non-operational portion of unsecured wholesale funding provided by non-financial corporate (NFC), sovereigns (Sov), central banks (CB), and multilateral development banks (MDB) and PSEs that is classified as an operational deposit.	The run-off rates on the non-operational portion of operational deposits from non-financial corporate, sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 40% run off on rate on the non-operational portion of deposits from these counterparties.	AR2 Part D Sr 9
14a	Non lien marked term deposits from SME, AoP, trusts etc	Non lien marked term deposits from SME, AoP, HUF, Trusts and partnerships treated as wholesale.	The run-off rates for non-lien marked term deposits from SMEs, AoPs, HUF, Trusts and partnerships treated as wholesale for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 40% run off on Wholesale SME and a 100% run off on the other counterparties	AR4 Sr no 9

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
14b	Term deposits with no lien marked.	Non lien marked term deposits from sovereigns, central banks, MDB, non-financial corporates and PSE.	The run-off rates for non-lien marked term deposits from sovereigns, Central banks, non-financial corporates, MDB and PSE are pre-defined as part of this assumption. This assumption applies a 40% run off on all the counterparties	AR4 Sr no 9
15a	Lien marked term deposits from SME, AoP, trusts etc	Lien marked term deposits from SME, AoP, HUF, Trusts and partnerships treated as wholesale.	The run-off rates for lien marked term deposits from SMEs, AoPs, HUF, Trusts and partnerships treated as wholesale for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 40% run off on Wholesale SME and a 100% run off on the other counterparties	AR4 Sr no 9
15b	Lien marked term deposits from PSE, MDB etc	Lien marked term deposits from sovereigns, central banks, MDB, non-financial corporates and PSE.	The run-off rates for lien marked term deposits from sovereigns, Central banks, non-financial corporates, MDB and PSE are pre-defined as part of this assumption. This assumption applies a 40% run off on all the counterparties	AR4 Sr no 9
16a	Unenc portion of lien marked TD from SME, AoP	Unencumbered portion of lien marked deposits from SME, AoP, HUF, Trusts and partnerships treated as wholesale	The run-off rates for the unencumbered portion of lien marked term deposits from SMEs, HUF, AoPs, Trusts and partnerships treated as wholesale for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 40% run off on Wholesale SME and a 100% run off on the other counterparties	AR4 Sr no 9
16b	Unenc portion of lien marked TD from sov, CB	Unencumbered portion of lien marked deposits from sovereigns, Central banks, MDB, Non-financial corporates and PSE.	The run-off rates for the unencumbered portion of lien marked term deposits from sovereigns, Central banks, non-financial corporates, MDB and PSE are pre-defined as part of this assumption. This assumption applies a 40% run off on all the counterparties	AR4 Sr no 9

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
17a	Encum portion of lien marked dep from SME, AoP etc	Encumbered portion of lien marked deposits from SME, AoP, HUF, Trusts and partnerships treated as wholesale	The run-off rates for the encumbered portion of lien marked term deposits from SMEs, AoPs, HUF, Trusts and partnerships treated as wholesale for the purposes of LCR are pre-defined as part of this assumption. This assumption applies a 0% run off on all the counterparties	AR4 Sr no 9
17b	Enc portion of lien marked TD from sov, CB	Encumbered portion of lien marked deposits from sovereigns, Central banks, MDB, Non-financial corporates and PSE.	The run-off rates for the encumbered portion of lien marked term deposits from sovereigns, Central banks, non-financial corporates, MDB and PSE are pre-defined as part of this assumption. This assumption applies a 0% run off on all the counterparties	AR4 Sr no 9
18	RBI - Other LE Unsecured Wholesale Funding Run-off	Run-off on unsecured wholesale funding, from wholesale customers other than SMEs, non-financial corporate, sovereigns, central banks, multilateral development banks and PSEs, provided for non-operational purposes.	The run-off rates on the cash flows, from unsecured funding that is not classified as an operational deposit, received from wholesale counterparties other than SMEs, non-financial corporates, sovereigns, central banks , multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 0% rollover i.e. 100% run-off on cash flows from non-operational funding accounts.	BLR Template A2 (iv)
19	RBI-UWF Run-off on Non-operational Balance of Other Entities	Run-off on the non-operational portion of unsecured wholesale funding (UWF) provided by customers other than non-financial corporates, sovereigns, central banks,	The run-off rates on the non-operational portion of operational deposits from wholesale counterparties other than SMEs, non-financial corporates, sovereigns, central banks, multilateral development banks and PSEs, are pre-defined as part of this assumption. This assumption applies a 100% run-off on the non-operational portion of operational deposits from such counterparties.	BLR Template A2 (iv)

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		multilateral development banks and PSEs that is classified as an operational deposit.		
20a	Non lien marked TD from other LE	Run off for non-lien marked term deposits from other legal entities.	The run-off rates for non-lien marked term deposits from all other legal entities are pre-defined as part of this assumption. This assumption applies a 100% run off for such deposits.	AR4 Sr no 9
20b	Lien marked TD from other LE	Run off for lien marked term deposits from other legal entities.	The run-off rates for lien marked term deposits from all other legal entities are pre-defined as part of this assumption. This assumption applies a 100% run off for such deposits.	AR4 Sr no 9
20c	Unenc portion of lien marked TD from other LE	Run off for unencumbered portion of lien marked term deposits from other legal entities.	The run-off rates for the unencumbered portion of lien marked term deposits from all other legal entities are pre-defined as part of this assumption. This assumption applies a 100% run off.	AR4 Sr no 9
20d	Enc portion of lien marked TD from other LE	Run off for encumbered portion of lien marked term deposits from other legal entities.	The run-off rates for the encumbered portion of lien marked term deposits from all other legal entities are pre-defined as part of this assumption. This assumption applies a 0% run off.	AR4 Sr no 9
21a	RBI- Secured funding run off - Central banks	Run off on secured funding, excluding collateral swaps with central banks as counterparty	The run-off rates on the secured funding, excluding collateral swaps, with Central banks as counterparty, are pre-defined as part of these assumptions. The assumption applies a 100% roll over to cash flows from such transactions.	AR2 Part D Sr No11

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
21b	RBI- Secured funding run off - all other counterparties	Run-off on secured funding, excluding collateral swaps, with all counterparties except central banks	The run-off rates on the secured funding, excluding collateral swaps, from all counterparties except Central banks, are pre-defined as part of these assumptions. This assumption applies the regulatory run-offs applicable to each counterparty type in the form of rollover rates that is 1 – run-off rates.	AR2 Part D Sr No11
22	RBI-Collateral Swap Run-off	Run-off on collateral swap transactions.	The run-off rates on collateral swaps are pre-defined as part of this assumption. This assumption applies the run-offs applicable to the market value of received collateral, when the collateral received under a swap transaction is of a higher quality than the collateral placed, as the difference between the liquidity haircuts applicable to the received and placed collateral.	AR2 Part D Sr No 11
23	RBI- Derivatives cash outflows	Net cash outflows from derivative transactions.	The outflow rate on the 30-day cash outflows from derivative transactions is pre-defined as part of this assumption. This assumption applies a 100% outflow on derivative cash outflows, on a net basis in case of derivatives which are part of a netting agreement and on a non-net basis for other derivatives.	BLR Template A 4 (i)
24	RBI-Additional Collateral Required Due to Ratings Downgrade	Increased liquidity needs arising from the requirement to post additional collateral due to a 3-notch ratings downgrade.	The outflow rate, on the additional collateral required to be posted on contracts with downgrade triggers, due to a 3-notch ratings downgrade, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the downgrade impact amount arising from a 3-notch ratings downgrade.	AR2 Part D Sr No 12, Explanatory note (ix)
25	RBI-Loss of Re-hypothecation Rights Due to Ratings Downgrade	Increased liquidity needs arising from a loss of re-hypothecation rights on assets received as collateral due to a	The outflow rate, on the additional cash outflows arising on contracts with downgrade triggers that result in a loss of re-hypothecation rights due to a 3-notch ratings downgrade is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of	AR2 Part D Sr No 12, Explanatory note (ix)

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		3-notch ratings downgrade.	mitigants received under re-hypothecation rights corresponding to accounts whose downgrade trigger is activated due to the 3-notch ratings downgrade.	
26	RBI - Increased Liquidity Needs Due to Change in Coll Value	Increased liquidity needs arising from the potential change in the value of posted collateral.	The outflow rate on the additional cash outflow due to a potential loss in the market value of non-level 1 assets posted as collateral is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of non-level 1 posted collateral computed after netting the non-level 1 collateral received under re-hypothecation rights on the same transaction.	AR2 Part D Sr No 12, Explanatory note (x)
27	RBI-Increased Liquidity Needs Due to Market Valuation Change	Increased liquidity needs arising from market valuation changes on derivatives and other transactions.	The outflow rate on the collateral outflows occurring due market valuation changes on derivative and other transactions is pre-defined as part of this assumption. This assumption applies a 100% outflow rate on the largest absolute net 30-day collateral flow occurring during the preceding 24 months under the historical look-back approach.	AR2 Part D Sr No 12
28	RBI-Increased Liquidity Needs Due To Excess Collateral	Increased liquidity needs arising from excess non-segregated collateral received that can be recalled by the counterparty.	The outflow rate on the excess unsegregated collateral held by a bank, which can potentially be withdrawn by the counterparty, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of excess collateral.	AR2 Part D Sr No 12, Explanatory note (xiv)
29	RBI-Increased Liquidity Needs from Contractually Due Coll	Increased liquidity needs arising from collateral that is contractually required to be posted to the counterparty but has not yet been posted.	The outflow rate on the collateral that the bank is contractually required to post to its counterparty, but has not yet posted, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the value of contractually due collateral.	AR2 Part D Sr No 12, Explanatory note (xiii)

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
30	RBI-Increased Liquidity Needs Due to Substitutable Coll	Increased liquidity needs arising from contracts that allow a counterparty to substitute lower quality collateral for the current higher quality collateral.	The outflow rate on the collateral that the counterparty can contractually substitute with lower quality collateral is pre-defined as part of this assumption. This assumption applies an outflow rate equal to the difference between the liquidity haircuts of collateral that can be potentially substituted by the counterparty and the collateral that substitutes it.	AR2 Part D Sr No 12, Explanatory note (xv)
31	RBI-Loss of Funding on Structured Financing Instruments	Loss of funding on asset-backed securities, covered bonds and other structured financing instruments.	The run-off rate on the maturing asset-backed securities, covered bonds and other structured financing instruments is pre-defined as part of this assumption. This assumption applies a 100% run-off on structured financing instruments that mature within the LCR horizon.	AR2 Part D Sr no 12
32	RBI-Loss of Funding from Financing Facility–Maturing Debt	Loss of funding on asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities due to inability to refinance maturing debt.	The run-off rate on the maturing amounts of asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities is pre-defined as part of this assumption. This assumption applies a 100% run-off on the EOP balance of the structured financing facilities that mature within the LCR horizon.	AR2 Part D Sr no 12
33	RBI-Loss of Funding from Financing Facility–Return of Assets	Loss of funding on asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities due to potential return of assets.	The run-off rate on the returnable assets underlying asset-backed commercial paper, conduits, securities investment vehicles and other such financing facilities is pre-defined as part of this assumption. This assumption applies a 100% run-off on the value of the assets that are returnable within the LCR horizon.	AR2 Part D Sr no 12

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
34	RBI-Drawdowns on Committed Credit and Liquidity Facilities	Drawdowns on committed credit and liquidity facilities extended to retail customers, SMEs, corporates, sovereigns, central banks, MDBs and PSEs.	The outflow rate on the undrawn amount available to be drawn down on the committed credit and liquidity facilities extended to retail customers, SMEs, corporates, sovereigns, central banks, MDBs and PSEs is pre-defined as part of this assumption. This assumption applies the relevant outflow as a drawdown rate, based on the counterparty type, for the aforementioned counterparties.	BLR 1 LCR template-C.1 AR2 Part D Sr No 12, Explanatory notes (xvi)
35	RBI-Draws on Committed Facilities Extended to Banks	Drawdowns on committed credit and liquidity facilities extended to banks.	The outflow rate on the undrawn amount available to be drawn down on the committed credit and liquidity facilities extended to customers is pre-defined as part of this assumption. This assumption applies the relevant outflow as a drawdown rate, for banks, including those subject to prudential regulation.	BLR 1 LCR template-C.1 AR2 Part D Sr No 12, Explanatory notes (xvi)
36	RBI-Draws on Committed Facilities Extended to Other Entitiy	Drawdowns on committed credit and liquidity facilities extended to entities other than retail customers, SMEs, corporates, sovereigns, central banks, MDBs, PSEs and banks.	The outflow rate on the undrawn amount available to be drawn down on the committed credit and liquidity facilities extended to customers other than retail customers, SMEs, corporates, sovereigns, central banks, MDBs, PSEs and banks is pre-defined as part of this assumption. This assumption applies a 100% outflow as a drawdown rate to all counterparties excluding the aforementioned counterparties.	BLR 1 LCR template-C.1 AR2 Part D Sr No 12, Explanatory notes (xvi)
37	RBI - Other Contingent Funding Obligation Outflows	Outflows related to trade finance related instruments.	The outflow rate on the trade finance related instruments is pre-defined as part of this assumption. This assumption applies a 5% run-off on such trade finance obligations.	BLR 1 LCR template-C.1 AR2 Part D Sr No 12 AR4 Sr no 5

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
38	RBI - Uncommitted Facility Outflows	Drawdowns on uncommitted credit and liquidity facilities extended to customers.	The outflow rate on the undrawn amount available to be drawn down on the uncommitted credit and liquidity facilities extended to customers is pre-defined as part of this assumption. This assumption applies a 0% drawdown on the uncommitted facilities. The drawdown rates are allowed to be updated to reflect the rates specified by national regulators.	BLR 1 LCR template-C.1 AR2 Part D Sr No 12 AR4 Sr no 5
39	RBI- Outflows related to short positions.	Outflows related to customer and bank short positions	The outflow rate on the customer and firm short positions is pre-defined as part of this assumption. This assumption specifies outflows on the short positions based on assets covering such short positions.	AR2 Part D Sr No 12 Explanatory note (xx) AR2 Appendix Para E , Explanatory note (iii)
40.	RBI - Other Contractual Obligations to Non-Financial Customers	Outflows related to other contractual obligations to extend funds within 30 days to retail and non-financial wholesale counterparties.	The outflow rate on the other contractual obligations to extend funds to retail and non-financial corporate customers, in excess of 50% of contractual inflows from such customers within the LCR horizon, is pre-defined as part of this assumption. This assumption applies a 100% outflow on the excess contractual obligation amount.	AR2 Part D Sr. No. 12 (xviii)
Inflows				
1	RBI- Secured lending inflows	Inflows from secured lending transactions excluding collateral swaps.	The inflow rates on the secured lending, excluding collateral swaps, are pre-defined as part of this assumption. This assumption applies the regulatory inflows to secured lending transactions based on the asset level of the collateral received in the form of rollover rates i.e. 1 – run-off rates.	BLR 1 LCR template-C.1 (June 2014) AR2 Appendix- E, explanatory note (i), (ii) and (iii)

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
2	RBI - Collateral Swap Inflows	Inflows from collateral swap transactions.	The inflow rates on collateral swaps are pre-defined as part of this assumption. This assumption applies the inflows applicable to the market value of placed collateral, when the collateral placed under a swap transaction is of a higher quality than the collateral received, as the difference between the liquidity haircuts applicable to the placed and received collateral.	BLR 1 LCR template-C.1 (June 2014) AR2 Appendix- E, explanatory note (i), (ii) and (iii)
3	RBI - Drawdowns on Committed Funding Facilities received	Drawdowns on committed facilities received by the bank.	The inflow rate on the undrawn amount available to be drawn down, on the committed credit and liquidity facilities received by the bank, is pre-defined as part of this assumption. This assumption applies a 0% inflow rate on the credit and liquidity lines received by the bank.	BLR 1 LCR template-C.4 AR2 Part D Sr No 14, Explanatory notes (xxv) and (xxvi)
4	RBI - Other Inflows from Retail Counterparties	Other inflows from fully performing loans, which have a specified maturity and are extended to retail customers and SMEs treated as retail.	The inflow rate on the fully performing loans with a stated maturity, extended to retail customers and SMEs who are treated like retail customers for the purposes of LCR, is pre-defined as part of this assumption. This assumption applies a 50% rollover i.e. 50% inflow on performing retail loans.	BLR 1 LCR template-C.5 (June 2014) AR 2 Part D Sr No 13
5	RBI - Other Inflows from WSME, NFC, Sov, CB, MDB and PSE	Other inflows from fully performing loans, which have a specified maturity and are extended to small and medium enterprises treated as wholesale (WSME), non-financial corporate (NFC), sovereigns (Sov), central banks (CB), multilateral	The inflow rate on the fully performing loans with a stated maturity, extended to wholesale SMEs, non-financial corporates, sovereigns, central banks, multilateral development banks and public sector enterprises is pre-defined as part of this assumption. This assumption applies a 0% rollover that is 100% inflow on performing loans from central banks and a 50% rollover that is 50% inflow on those from other non-financial counterparties specified earlier.	BLR 1 LCR template-C.5 AR 2 Part D Sr No 13

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		development banks (MDB) and public sector enterprises (PSE).		
6	RBI - Other Inflows from Other Wholesale Counterparties	Other inflows from fully performing loans extended to financial entities, excluding central bank, multilateral development bank and public sector enterprise, and to non-financial wholesale counterparties, excluding corporate, sovereign, central bank, multilateral development bank and public sector enterprise.	The inflow rate on the fully performing loans with a stated maturity, extended to counterparties other than retail, SMEs, non-financial corporates, sovereigns, central banks, multilateral development banks and public sector enterprises, is pre-defined as part of this assumption. This assumption applies a 0% rollover that is 100% inflow on performing loans from other financial entities and a 50% rollover that is 50% inflow on those from other non-financial counterparties.	BLR 1 LCR template-C.5 AR 2 Part D Sr No 13
7	RBI - Revolving, Non-Maturity and Non-Performing Inflow Excl	Exclusion of inflows from revolving products, products that do not have a specified maturity, and products that are not fully performing.	The exclusion of cash inflows from revolving assets, assets that do not have a stated maturity and assets that are not fully performing is pre-defined as part of this assumption. This assumption applies a 100% rollover on the inflows from such assets.	BLR 1 LCR template-C.5 AR2 Part D Sr No 13 and 14
8a	RBI - Open Maturity Loan Minimum Payment Inflows	Inflows due to minimum payments received within the LCR horizon on open maturity loans from all counterparties	The inflow rate on the minimum payments of principal, interest and fee, that are contractually due within the LCR horizon, on an open maturity loan with all counterparties, is pre-defined as part of this assumption. This assumption applies a 50% factor on such minimum payments for retail parties and non-financial counterparties and 100% factor on	BLR 1 LCR template-C.5 AR2 Part D Sr No 14

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
			financial counterparties.	
8b	RBI - Open Maturity Loans-wholesale parties	Inflows due to minimum payments received within the LCR horizon on open maturity loans with wholesale counterparties	The inflow rate on the minimum payments of principal, interest and fee, that are contractually due within the LCR horizon, on an open maturity loan with wholesale counterparties, is pre-defined as part of this assumption. This assumption applies a 100% inflow on such minimum payments with financial parties and 50% inflow with non financial parties.	BLR 1 LCR template-C.5 AR2 Part D Sr No 14
9	RBI - Operational Deposit Inflows	Inflows from operational deposits held with other financial institutions and deposits held with the centralized institution of a cooperative banking network.	The inflow rate on the deposits, held by the bank at other institutions for operational purposes, are pre-defined as part of this assumption. This assumption applies a 0% inflow on such operational deposits.	BLR 1 LCR template-C.5 AR2 Part D Sr no 10
10	RBI-Derivatives Cash Inflows	Net cash inflows from derivative transactions.	The inflow rate on the 30-day cash inflows from derivative transactions is pre-defined as part of this assumption. This assumption applies a 100% inflow on derivative cash inflows, on a net basis in case of derivatives which are part of a netting agreement and on a non-net basis for other derivatives.	BLR 1 LCR template-C.6 AR2 Part D Sr No 13
11	RBI - Non HQLA Security inflows	Inflows from securities not included in the stock of HQLA.	The inflow rate on the performing securities that are excluded from the stock of HQLA is pre-defined as part of this assumption. This assumption applies a 100% inflow on both the principal and interest cash flows from securities classified as Other Assets and securities classified as HQLA but do not meet the eligibility criteria for inclusion in	AR2 Part D, Sr No 13, Explanatory Note (xxiii)

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
			the stock of HQLA. It also applies a 0% inflow rate on non-performing securities and securities that are classified as HQLA and meet the criteria for inclusion in the stock of HQLA, to avoid double counting.	
12	RBI - Contractual Interest Inflows	Inflows related to contractual receipt of interest.	The inflow rate on the interest contractually receivable, on fully performing assets other than non-HQLA securities, within the LCR horizon is pre-defined as part of this assumption. This assumption applies a 100% inflow on interest in the form of a 0% rollover rate.	AR2 Part D, Sr No 13, Explanatory Note (xxiii)
50	RBI - Other Deposit Inflows	Inflows from deposits placed with the central bank or with other banks that are not included as a level 1 asset in the stock of HQLA.	The inflow rate on the deposits held with central banks and other financial institutions maturing within the LCR horizon is pre-defined as part of this assumption. This assumption applies a 100% inflow on interest in the form of a 0% rollover rate.	AR7 Sr. No. 1 Section 5.4 (i) (a)

3.2 Net Stable Funding Ratio Calculation

Net Stable Funding Ratio (NSFR) is one of the two minimum standards developed to promote funding and liquidity management in financial institutions. Liquidity Coverage Ratio (LCR) is the first standard which assesses the short term liquidity challenges of a bank. NSFR assesses the bank’s liquidity risks over a longer time horizon. Both the standards, complement each other, are aimed at providing a holistic picture of a bank’s funding risk profile, and aid in better liquidity risk management practices.

3.2.1 Overview

NSFR is defined as the amount of available stable funding relative to the required stable funding. Available stable funding refers to the portion of capital and liabilities expected to be reliable over the horizon of 1 year. Required stable funding refers to the portion of assets and off balance sheet exposures over the same horizon. The NSFR ratio is expected to be at least 100%.

$$\left(\frac{Available\ stable\ funding}{Required\ stable\ funding}\right) \geq 100\%$$

3.2.2 Process Flow

The Available Stable Funding (ASF) factor and Required Stable Funding (RSF) factor is applied through business assumptions and reflects through the execution of a Business as Usual (BaU) run in the OFSAA LRM application. The ASF and RSF factors are applied as weights at the account level and the Total ASF and Total RSF is obtained by taking a sum of the all the weighted amounts. The ratio is then computed by the application as the (Total ASF amount)/(Total RSF amount) A set of pre-defined business assumptions for ASF and RSF as defined in the NSFR guidelines are prepackaged in the application. For the complete list of pre seeded ASF and RSF assumptions refer section Regulation Addressed through Business Assumptions.

3.2.2.1 Maturity bands

One of the various dimensions used to allocate ASF and RSF factors is the maturity bucket of the instrument. For NSFR computation, maturity bands are used to allocate the factors. The RBI NSFR band is pre-defined as per regulatory guidelines and has values as follows:

- Less than 6 months
- Greater than or equal to 6 months but less than 1 year
- Greater than or equal one year
- Open maturity

All accounts will be categorized on one of the above bands depending on the maturity date. It must be noted that to categorize any product into open maturity, the Rule "LRM - Classification of Products as Open Maturity" has to be edited and the product must be included in the Rule.

3.2.2.2 Available Amount of Stable Funding Computation

The available stable funding factor is a pre-determined weight ranging from 0% to 100% which is applied through business assumptions for the accounts falling under the dimensional combinations defined. The weights are as guided by the NSFR standard. The available stable funding is then taken as a total of all the weighted amounts where an ASF factor is applied.

The formula for calculating Available Amount of Stable Funding is as follows:

$$\boldsymbol{Available\ Amount\ of\ Stable\ Funding = \sum_{i=1}^{n} Liability_i * Factor_i}$$

$$\boldsymbol{where\ n = \ The\ number\ of\ capital\ and\ liability\ accounts}$$

An example of the application of ASF factor is given below:

Consider an assumption defined with the following dimensional combination and ASF factors, with the based on measure being Total stable balance:

Dimensional Combination			**ASF Factor**
Product	**Retail/Wholesale Indicator**	**Residual Maturity Band**	
Deposits	R	<= 6 months	95%

Deposits	R	6 months - 1 year	95%
Deposits	R	>= 1 year	95%

If there are five accounts falling under the above combination, then after the assumption is applied the resulting amounts with application of ASF factors is as follows:

Account	Stable Balance	ASF Weighted Amount
A1	3400	3230
A2	3873	3679.35
A3	9000	8550
A4	1000	950
A5	100	95

NOTE: OFS LRM application does not compute ASF items such as Tier 1 and Tier 2 capital, deferred tax liabilities, and minority interest. The items are taken as a download from the OFS Basel application. By updating the latest Basel Run Skey as a setup parameter, the LRM application picks up the respective standard accounting head balances and applies the respective ASF factors.

In case OFS Basel is not installed, then the items mentioned below must be provided as a download in FCT_STANDARD_ACCT_HEAD table.

- Gross Tier 2 Capital
- Deferred Tax Liability related to Other Intangible Asset
- Deferred Tax Liability related to Goodwill
- Deferred Tax Liability related to MSR
- Deferred Tax Liability related to Deferred Tax Asset

- Deferred Tax Liability related to Defined Pension Fund Asset
- Net CET1 Capital post Minority Interest Adjustment
- Net AT1 Capital post Minority Interest Adjustment
- Total Minority Interest required for NSFR

3.2.2.3 Required Amount of Stable Funding Computation

The required stable funding factor is a pre-determined weight ranging from 0% to 100% which is applied through business assumptions for the accounts falling under the defined dimensional combinations. The weights are as guided by the NSFR standard. The required stable funding is then considered as a sum of all the weighted amounts where an RSF factor is applied.

The required stable funding factor is a weight function and is applied in a similar manner as that of the ASF. The formula which is used for calculating the Required Amount of Stable Funding is as follows:

$$\boldsymbol{Required\ Amount\ of\ Stable\ Funding} = \left(\sum_{i=1}^{n} \boldsymbol{Asset_i * Factor_i}\right) + \left(\sum_{i=1}^{m} \boldsymbol{Off\ Balance\ Sheet_i * Factor_i}\right)$$

$$\boldsymbol{where\ n = Number\ of\ asset\ accounts}$$

$$\boldsymbol{where\ \ m\ = \ Number\ of\ off\ balance\ sheet\ accounts}$$

3.2.2.4 Off Balance Sheet Items

Off balance sheet items are considered under the application of RSF factor, and are given the appropriate factor as guided. Some combinations such as line of credit have a pre-defined RSF factor as guided and are available as pre seeded assumptions. Other off balance sheet products such as Variable Rate Demand Notes (VRDN) and Adjustable Rate Notes (ARN) do not have pre-defined factors and are left to the discretion of the jurisdictions. For such products, the user can define assumptions and apply desired RSF factors as applicable.

3.2.2.5 Derivatives

Derivatives are handled through application of both ASF and RSF factors as applicable. They can behave as either an asset or a liability, depending on the marked to market value. Application of factors on derivatives is done on the market value after subtracting variation margin posted/received against the account. The computation is described below:

4. NSFR derivative liabilities = Derivative liabilities – (Total collateral posted as variation margin against the derivative liabilities)
5. NSFR derivative assets = Derivative assets – (Cash collateral received as variation margin against the derivative assets)
6. The factors are then applied as follows:
   - **ASF factor application**

     ASF amount for derivatives = 0% * Max ((NSFR derivative liabilities –NSFR derivative assets), 0)
   - **RSF factor application**

     RSF amount for derivatives = 100% * Max ((NSFR derivative assets- NSFR derivative liabilities), 0)

Derivative liabilities refer to those derivative accounts where the market value is negative. Derivative assets refer to those derivative accounts where the market value is positive. Apart from the variation margin, the initial margin against derivative contracts is also treated with the appropriate factor.

3.2.2.6 Net Stable Funding Ratio Computation

The Net Stable Funding Ratio is calculated as follows:

$$\boxed{\textit{Net Stable Funding Ratio} = \frac{\textit{Available Amount of Stable Funding}}{\textit{Required Amount of Stable Funding}}}$$

3.2.3 Pre-configured RBI Regulatory NSFR Scenarios

OFS LRM supports out-of-the-box RBI NSFR assumptions according to RBI guidelines on the Net stable funding ratio.

This section explains the business assumptions which support NSFR as per RBI circular DBR.BP.BC. XX/21.04.098/2014-15: the net stable funding ratio, May 2015.

NOTE: This section gives only the contextual information about all the business assumptions. For more detailed information refer OFS LRM application (UI).

3.2.3.1 Regulation Addressed through Business Assumptions

The application supports multiple assumptions with pre-configured rules and scenarios based on regulator specified NSFR scenario parameters. The list of pre-configured business assumptions and the corresponding reference to the regulatory requirement that it addresses is provided in the following tables:

3.2.3.1.1 Available Stable Funding Factor

This section enlists all the pre seeded assumptions acting on liabilities and capital items which receive an ASF factor.

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
1	RBI-Capital items, DTL and minority interest	[RBI]: Tier 1 and Tier 2 capital, deferred tax liabilities and minority interest	This assumption defines the long-term funding sources with effective maturity of one year or more, primarily tier 1 and tier 2 capital instruments along with deferred tax liability and minority interest, which are assigned a 100% ASF factor for the NSFR computation.	MC Paragraphs - 7.2A, 7.2B, 7.6B
2	RBI- Stable retail deposits with maturity less than 1yr	[RBI]: ASF- Stable and highly stable deposits as defined in the LCR from customers treated as retail with a	The ASF factors applicable to the stable portion of deposits, from retail customers and SMEs treated like retail customers for the purposes of LCR, with remaining maturity of less than 1 year are pre-defined as part of this assumption. This assumption applies a 95% ASF factor on the stable portion of the retail deposits.	MC Paragraph - 7.3

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		remaining maturity of less than 1 yr		
3	RBI- Stable retail deposits with maturity more than 1yr	[RBI]: ASF- Stable and highly stable deposits as defined in the LCR from customers treated as retail with a remaining maturity of more than 1 yr and cash flow maturity of less than 1 year	The ASF factors applicable to the stable portion of deposits, from retail customers and SMEs treated like retail customers for the purposes of LCR, with remaining maturity of more than 1 year with cash flow maturities within 1 year, are pre-defined as part of this assumption. This assumption applies a 95% ASF factor on the stable portion of cash flows.	MC Paragraph - 7.3
4	RBI- Less stable retail deposits with maturity less than 1yr	[RBI]: ASF- Less stable deposits as defined in the LCR from customers treated as retail with a remaining maturity of less than 1 yr	The ASF factors applicable to the less stable portion of deposits, from retail customers and SMEs treated like retail customers for the purposes of LCR, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. This assumption applies a 90% ASF factor on the stable portion of retail deposits.	MC Paragraph - 7.4
5	RBI-Less stable retail deposits- Cash flow basis	[RBI]: ASF- Less stable deposits as defined in the LCR from customers treated as retail with a remaining maturity of more than 1 yr and cashflow maturity of less than 1 year	The ASF factors applicable to the less stable portion of deposits from retail customers and SMEs treated like retail customers for the purposes of LCR, with remaining maturity of more than 1 year with cash flow maturity within 1 year, are pre-defined as part of this assumption. This assumption applies a 90% ASF factor on the stable portion of cash flows.	MC Paragraph - 7.4
6	RBI- Other funds from retail with mat less than 1yr	[RBI]: Other funding from customers treated as retail with a residual maturity of	The ASF factors applicable to the funding other than deposits, from customers who are treated as retail for the purposes of LCR, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on the funding with remaining maturity of less than 6 months and 50%	MC Paragraphs - 7.5D and 7.6A

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		less than 1 year	on the funding with remaining maturity between 6 months to 1 year.	
7	RBI- Other funds from retail with mat more than 1yr	[RBI]: Other funding from customers treated as retail with an account residual maturity of more than 1 year	The ASF factors applicable to the funding other than deposits, from customers who are treated as retail for the purposes of LCR, with remaining maturity of more than 1 year with cash flow maturity within 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on cash flows with maturity less than 6 months and a 50% to cash flows with maturity between 6 month to 1 year.	MC Paragraphs - 7.5D and 7.6A
8	RBI ASF - Op dep with mat less than 1 yr	RBI ASF on the operational portion of operational deposits, generated by clearing, custody and cash management activities, with remaining maturity of less than 1 year.	The ASF factor applicable to the balance held in operational accounts to fulfill operational requirements are pre-defined as part of this assumption. This assumption applies a 50% ASF factor on the operational balances with remaining maturity of less than 1 year.	MC Paragraph - 7.5B
9	RBI ASF - Non op portion of op dep from SME with mat less than 1 yr	RBI ASF on non-operational portion for operational accounts from SMEs AoP, Trusts, partnerships and HUFs not treated as retail, with remaining maturity less than 1 year.	The ASF factor on non-operational portion of operational accounts, from small and medium enterprises, association of persons, trusts, partnerships and Hindu undivided families not treated as retail, with remaining maturity of less than 1 year are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational balances of operational accounts with remaining maturity of less than 1 year.	MC Paragraph - 7.6B

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
10	RBI ASF - Non op dep from SME less than 1 yr	RBI ASF on non-operational wholesale funding, from SMEs AoP, Trusts, partnerships and HUFs not treated as retail, with remaining maturity less than 1 year.	The ASF factor on non-operational wholesale funding, from small and medium enterprises, association of persons, trusts, partnerships and Hindu undivided families not treated as retail, with remaining maturity of less than 1 year are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational funding with remaining maturity of less than 6 months and a 50% ASF factor on non-operational funding with remaining maturity between 6 months to 1 year.	MC Paragraphs - 7.6A, 7.6B and 7.5D
11	RBI ASF - Non op dep from SME greater than 1 yr	RBI ASF on non-operational wholesale funding, from SMEs AoP, Trusts, partnerships and HUFs not treated as retail, with remaining maturity greater than 1 year and where the cash flows are occurring within 1 year.	The ASF factor applicable to non-operational cash flows, from SMEs AoP, Trusts, partnerships and HUFs not treated as retail, with remaining maturity of greater than 1 year with cash flow maturity within 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational cash flows with cash flow maturity of less than 6 months and a 50% ASF factor on non-operational cash flows with remaining maturity between 6 months to 1 year.	MC Paragraphs - 7.6A, 7.6B and 7.5D
12	RBI ASF - Non op portion of op dep from CB PSE MDB NDB with mat less than 1 yr	RBI ASF on the non-operational portion of operational deposits, from Central banks, PSE, MDB, NDB, generated by clearing, custody and cash management activities, with remaining maturity of less than 1 year.	The ASF factor applicable to non-operational portion of operational accounts from central banks, public sector entity (PSE), multilateral development bank (MDB), national development bank (NDB), with remaining maturity of less than 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational portion of operational accounts from central banks with remaining maturity of less than 1 year and a 50% ASF factor on non-operational portion of operational accounts from central banks, PSE, MDB, and NDB with remaining maturity of less than 1 year.	MC Paragraphs - 7.5 C, 7.5D and 7.6A

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
13	RBI ASF - Non op funds from CB PSE MDB NDB greater than 1 yr	RBI ASF on non-operational funding, from central banks, PSE, MDB, NDB, with remaining maturity greater than 1 year and where the cash flows are occurring within 1 year.	The ASF factor applicable to non-operational cash flows from central banks, PSE, MDB, NDB, with remaining maturity of greater than 1 year with cash flow maturity within 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational cash flows from central banks with cash flow maturity of less than 6 months, a 50% ASF factor for cash flow maturity between 6 months to 1 year, a 50% ASF factor on non-operational cash flows from PSE, MDB, and NDB with cash flow maturity of less than 1 year.	MC Paragraphs - 7.5 C, 7.5D and 7.6A
14	RBI ASF - Non op funds from CB PSE MDB NDB less than 1 yr	RBI ASF on non-operational funding, from Central banks, financial institutions (banks) PSE, MDB, NDB, with remaining maturity less than 1 year.	The ASF factor on non-operational funding from central banks, PSE, MDB, NDB, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational funding from central banks with remaining maturity of less than 6 months, a 50% ASF factor for non-operational funding from PSE, MDB, and NDB between 6 months to 1 year and 50% ASF factor on non-operational funding from PSE, MDB, and NDB with remaining maturity of less than 1 year.	MC Paragraphs - 7.5 C, 7.5D and 7.6A
15	RBI ASF - Non op portion of op dep from corp with mat less than 1 yr	RBI ASF on the non-operational portion of operational deposits, from financial and non-financial corporates, generated by clearing, custody and cash management activities, with remaining maturity of less than 1 year.	The ASF factor applicable to non-operational portion of operational accounts from financial and non-financial corporates, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational portion of operational accounts from financial corporates with remaining maturity of less than 1 year and a 50% ASF factor on non-operational portion of operational accounts from non-financial corporates with remaining maturity of less than 1 year.	MC Paragraphs - 7.5 A, 7.6B

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
16	RBI ASF - Non op funds from Corp greater than 1 yr	RBI ASF on non-operational funding, from financial and non-financial corporates, with remaining maturity greater than 1 year and where the cash flows are occurring within 1 year.	The ASF factor applicable to non-operational cash flows from financial and non-financial corporates, with remaining maturity of greater than 1 year with cash flow maturity within 1 year, are pre-defined as part of this assumption. This assumption applies a 50% ASF factor on non-operational cash flows from non-financial corporates with cash flow maturity of less than 6 months and between 6 months to 1 year. The assumptions applies a 0% ASF factor on non-operational cash flows from financial corporates with cash flow maturity of less than 6 months and a 50% ASF factor on non-operational cash flows from financial corporates with cash flow maturity between 6 months to 1 year.	MC Paragraphs - 7.5 A, ,7.5, 7.6A
17	RBI ASF - Non op funds from Corp less than 1 yr	RBI ASF on non-operational funding, from financial and non-financial corporates, with remaining maturity less than 1 year.	The ASF factor on non-operational funding from financial and non-financial corporates, with remaining maturity less than 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational funding from financial corporates with remaining maturity of less than 6 months and a 50% ASF factor for non-operational funding from financial corporates with remaining maturity between 6 months to 1 year. The assumptions also applies a 50% ASF factor on non-operational funding from non-financial corporates with remaining maturity of less than 6 months and between 6 months to 1 year.	MC Paragraphs - 7.5 A, ,7.5, 7.6A
18	RBI ASF - Non op portion of op dep other parties with mat less than 1 yr	RBI ASF on the non-operational portion of operational deposits, from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB, generated by	The ASF factor applicable to non-operational portion of operational accounts from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB, with remaining maturity less than 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor on non-operational portion of operational accounts from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, and sovereign, PSE, MDB and NDB with remaining maturity of less than 1 year.	MC Paragraphs - 7.6B

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
		clearing, custody and cash management activities, with remaining maturity of less than 1 year.		
19	RBI ASF - Non op funds other parties less than 1 yr	RBI ASF on non-operational funding, from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB, with remaining maturity less than 1 year.	The ASF factor applicable to non-operational funding, from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB, with remaining maturity less than 1 year are pre-defined as part of this assumption. This assumption applies a 0% ASF factor and a 50% ASF factor on non-operational funding from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB with remaining maturity of less than 6 months and between 6 months to 1 year respectively.	MC Paragraphs - 7.6A, 7.5D
20	RBI ASF - Non op funds other parties greater than 1 yr	RBI ASF on non-operational funding, from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB, with remaining maturity greater than 1 year and where the cash flows are occurring within 1 year.	The ASF factor applicable to non-operational cash flows, from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB, with remaining maturity greater than 1 year with cash flow maturity within 1 year, are pre-defined as part of this assumption. This assumption applies a 0% ASF factor and 50% ASF factor on non-operational cash flows from all except retail, SME, AoP, Trusts, partnerships, HUF, corporates, banks, central banks, sovereign, PSE, MDB and NDB with cash flow maturity of less than 6 months and between 6 months to 1 year respectively.	MC Paragraphs - 7.6A, 7.5D

Sl. No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Regulatory Reference
21	RBI ASF- Trade date payables	[RBI]: Trade date payables arising from purchases of foreign currencies, financial instruments and commodities that are expected to settle or have failed but are expected to settle within the standard settlement cycle.	The ASF factor applicable to trade payable cash flows arising from purchases of foreign currencies, financial instruments and commodities expected to settle within the standard settlement cycle, are pre-defined in this assumption. This assumption applies 0% ASF factor on the trade payable cash flows.	MC Paragraph - 7.6 D
22	RBI ASF- Liabilities with open maturity	[RBI] : Secured deposits and all other borrowings and which do not have a stated maturity.	The ASF factor applicable to all the other funding's without any stated maturity are pre-defined in this assumption. This assumption applies 0% ASF factor on all the funding's without any maturity.	MC Paragraph - 7.6 B
23	RBI ASF-Borr and Liabilities with maturities beyond 1 year (Catch all for cash flows beyond 1 year)	[RBI]: Borrowings and liabilities with residual maturities and cash flows falling beyond 1 year.	The ASF factors applicable to all other funding's with remaining maturity of greater than 1 year with cash flow maturity within 1 year, are pre-defined in this assumption. This assumption applies 0% ASF factor on the cash flows.	MC Paragraph - 7.2 C

3.2.3.1.2 Required Stable Funding Factor

This section enlists all the pre seeded assumptions acting on assets and off balance sheet items which receive an RSF factor.

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
1	RBI- Coins and banknotes	[RBI]: Coins, banknotes, cash and restricted cash held by the bank.	The RSF factor applicable to coins, banknotes, and cash held by the bank, is pre-defined as a part of this assumption. This assumption applies 0% RSF factor on the coins, banknotes, and cash held by bank.	MC Paragraph - 9.2 A
2	RBI- Central bank reserves	[RBI]: All central bank reserves, including, required reserves and excess reserves.	The RSF factors applicable to required and excess central bank reserves, are pre-defined as a part of this assumption. This assumption applies 0% RSF factor to all central bank reserves.	MC Paragraph - 9.2 B
3	RBI- Unencumbered claims on central banks	[RBI]: Unencumbered loans and other claims on central banks	The RSF factors applicable to fully performing unencumbered loans and claims on central banks, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. This assumption applies 0%, 50% and 100% RSF factors to the loans and claims on central banks with remaining maturity of less than 6 months, between 6 months and 1 year, and 1 year or more respectively.	MC Paragraphs - 9.2 C, 9.6 C, 9.9 C

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
4	RBI- Encumbered claims on central banks	[RBI]: Encumbered loans and other claims on central banks	The RSF factors applicable to fully performing encumbered loans and claims on central banks, maturing within a year and encumbrance period 1 year or more, are pre-defined as part of this assumption. For the qualifying assets with encumbrance period of less than 6 months, the assumption applies 0%, 50%, and 100% RSF factors based on a remaining maturity of less than 6 months, between 6 months and 1 year, and 1 year or more respectively. For assets with encumbrance period of between 6 months and 1 year, the assumption applies 50%, and 100% RSF factors based on a remaining maturity of less than 1 year and 1 year or more respectively. A 100% RSF factor is applied to all assets maturing within a year and encumbrance period of 1 year or more.	MC Paragraph - 10.4
5	RBI-Unenc loans to fin insti secured by level 1 asset	[RBI]: Unencumbered loans to financial institutions where the loan is secured against level 1 assets as defined in the LCR.	The RSF factors applicable on the unencumbered loans given to financial institutions secured by a level 1 asset, with residual maturity less than 1 year, are pre-defined as a part of this assumption. The	MC Paragraphs - 9.4, 9.5 B, 9.6 C, 9.9 C

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			assumption applies RSF factor of 10%,50%,100% on the unencumbered secured loans given to financial institutions secured by level 1 asset with remaining maturity of less than 6 months, 6 months to 1 year and 1 year or more respectively, where the collateral received can be re-hypothecated for the life of loan. The assumption applies RSF factor of 15%,50%,100% on the unencumbered secured loans given to financial institutions secured by level 1 asset with remaining maturity of less than 6 months, 6 months to 1 year and 1 year or more respectively, where the collateral received cannot be re-hypothecated for the life of loan.	
6	RBI-Encum loans to fin insti secured by level 1 asset	[RBI]: Encumbered loans to financial institutions where the loan is secured against level 1 assets as defined in the LCR.	The RSF factors applicable on the encumbered loans given to financial institutions secured by a level 1 asset, with residual maturity less than 1 year, are pre-defined as a part of this assumption. The assumption applies relevant RSF factors on the encumbered secured loans based on the encumbrance period and residual maturity. The Level 1 asset received as collateral can	MC Paragraphs - 9.6 B, 9.9 A, 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			further be re-hypothecated to raise funds.	
7	RBI- Unenc loans to fin insti secured by Non-level 1 assets	[RBI]: Unencumbered loans to financial institutions where the loan is secured against assets belonging to levels other than level 1, as defined in the LCR.	The RSF factors applicable on the unencumbered loans given to financial institutions secured by assets belonging to levels other than level 1, with residual maturity less than 1 year, are pre-defined as a part of this assumption. The assumption applies RSF factor of 15%,50%,100% on the unencumbered secured loans given to financial institutions secured by assets belonging to levels other than level 1 with remaining maturity of less than 6 months, 6 months to 1 year and 1 year or more respectively.	MC Paragraphs - 9.5 B, 9.6 C, 9.9 C
8	RBI- Encum loans to fin insti securd by Non-level 1 assets	[RBI]: Encumbered loans to financial institutions where the loan is secured against assets belonging to levels other than level 1, as defined in the LCR.	The RSF factors applicable on the encumbered loans given to financial institutions secured by a assets belonging to levels other than level 1, with residual maturity less than 1 year, are pre-defined as a part of this assumption. The assumption applies relevant RSF factor on the encumbered secured loans based on the residual maturity and encumbrance period of the loan.	MC Paragraphs - 9.9 A, 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
9	RBI- Unenc unsecured loans to financial instituitions	[RBI]: Unencumbered unsecured loans excluding overdrafts to financial institutions.	The RSF factors applicable on the unencumbered unsecured loans given to financial institutions, with residual maturity less than 1 year, are pre-defined as a part of this assumption. The assumption applies RSF factor of 15%, 50%, and 100% on the unencumbered unsecured loans given to financial institutions, with remaining maturity of less than 6 months, 6 months to 1 year and 1 year or more respectively.	MC Paragraphs - 9.5 B, 9.6 C, 9.9 C
10	RBI- Enc unsecured loans to financial instituitions	[RBI]: Encumbered unsecured loans to financial institutions.	The RSF factors applicable on the encumbered unsecured loans given to financial institutions, with residual maturity less than 1 year, are pre-defined as a part of this assumption. The assumption applies relevant RSF factor on the encumbered secured loans given to financial institutions based on the residual maturity and encumbrance period of the loan.	MC Paragraphs - 9.9 A, 10.4
11	RBI- Unenc loans to others, mat less than 1yr	[RBI]: Unencumbered loans with residual maturity less than a year to other counterparties i.e. Non-financial corporates, retail and small business	The RSF factors applicable to fully performing unencumbered loans to non-financial corporates, retail and small business customers, sovereigns, Public sector	MC Paragraphs - 9.6 E, 9.9 B, 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
		customers, sovereigns, Public sector enterprises and sovereigns.	enterprises and sovereigns, with remaining maturity of less than 1 year, are per defined as part of this assumption. This assumption applies 50% RSF factors on the loans to non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns with remaining maturity of less than 1 year.	
12	RBI- Enc loans to others, mat less than 1yr	[RBI]: Encumbered loans with residual maturity less than a year to other counterparties i.e. Non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	The RSF factors applicable to fully performing encumbered loans to non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns, with remaining maturity of less than 1 year, are per defined as part of this assumption. This assumption applies 50% RSF factors on the encumbered loans to non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns with remaining maturity of less than 1 year.	MC Paragraph - 10.4
13	RBI- Unenc loans to others, mat more than 1 yr	[RBI]: Unencumbered loans with residual maturity more than a year to other counterparties i.e. Non-financial	The RSF factors applicable to fully performing unencumbered loans to non-financial corporates, retail and small business	MC Paragraphs - 9.7 B, 9.8 A

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
		corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	customers, sovereigns, Public sector enterprises and sovereigns, with remaining maturity of more than 1 year with standardized risk weights under Basel 2 approach, are per defined as part of this assumption. This assumption applies a 65 % RSF factors on the loans to non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns with remaining maturity of more than 1 year and risk weight more than or equal to 35%. It applies a RSF factor of 85% on the loans to non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns with remaining maturity of more than 1 year and risk weight greater than 35%.	
14	RBI - Enc Loans to others, mat more than 1yr	[RBI]: Encumbered loans with residual maturity more than a year to other counterparties i.e. Non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns.	The RSF factors applicable to fully performing encumbered loans to non-financial corporates, retail and small business customers, sovereigns, Public sector enterprises and sovereigns, with remaining maturity of more than 1 year with standardized risk weights under Basel 2 approach, are per defined as	MC Paragraphs - 9.9 A, 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			part of this assumption. This assumption applies relevant RSF factors on the encumbered loans based on the residual maturity, encumbrance period and the risk weigh associated to the loan.	
15	RBI- Unenc non HQLA assets	[RBI]:Unencumbered securities, with maturity less than 1 year, which do not qualify as High quality liquid assets under the LCR Rule	The RSF factors applicable to unencumbered securities, with remaining maturity of less than 1 year and which do not qualify, as High quality liquid assets under the LCR Rule, are pre-defined as part of this assumption. The assumption applies a 50% RSF factor on unencumbered securities, which do not qualify as High quality liquid assets under the LCR Rule, with remaining maturity of less than 1 year	MC Paragraph - 9.6 E
16	RBI- Unenc non HQLA securities mat greater than 1yr	[RBI]:Unencumbered securities, with maturity greater than 1 year which do not qualify as HQLA under the LCR Rule	The RSF factors applicable to unencumbered securities, with remaining maturity of more than 1 year and which do not qualify as High quality liquid assets under the LCR Rule , are pre-defined as part of this assumption. The assumption applies a 85% RSF factor on unencumbered securities, with remaining maturity of more than 1 year and which do not	MC Paragraph - 9.8 C

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			qualify as High quality liquid assets under the LCR Rule.	
17	RBI- Enc non HQLA assets	[RBI]:Encumbered portion of securities, with maturity less than 1 year which do not qualify as High quality liquid assets under the LCR Rule	The RSF factors applicable to encumbered portion of the securities, with remaining maturity of less than 1 year and which do not qualify as High quality liquid assets under the LCR Rule , are pre-defined as part of this assumption. The assumption applies a 50% RSF factor on encumbered portion of the securities, with remaining maturity of less than 1 year, encumbrance period of less than 1 year and which do not qualify as High quality liquid assets under the LCR Rule. It applies a 100% RSF factor on encumbered portion of the securities, with remaining maturity of less than 1 year, encumbrance period of 1 year or more and which do not qualify as High quality liquid assets under the LCR Rule.	MC Paragraphs - 9.6 B, 9.9 A
18	RBI- Enc non HQLA assets mat greater than 1yr	[RBI]:Encumbered portion of securities, with maturity greater than 1 year which do not qualify as HQLA under the LCR Rule	The RSF factors applicable to encumbered portion of the securities, with remaining maturity of more than 1 year and which do not qualify as High quality liquid assets under the LCR Rule, are pre-defined as part of this	MC Paragraphs - 9.9 A and 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			assumption. The assumption applies a 85% RSF factor on encumbered portion of the securities, with remaining maturity of 1 year or more, encumbrance period of less than 1 year and which do not qualify as High quality liquid assets under the LCR Rule. It applies a 100% RSF factor on encumbered portion of the securities, with remaining maturity of 1 year or more, encumbrance period of 1 year or more and which do not qualify as High quality liquid assets under the LCR Rule.	
19	RBI-Unencumbered level 1 assets	[RBI]: Unencumbered assets which qualify for inclusion in Level 1 of High quality liquid assets as defined in the LCR.	The RSF factors applicable to unencumbered assets, which qualify for inclusion in Level 1 of High quality liquid assets as defined in the LCR, are pre-defined as a part of this assumption. The assumption applies a 5% RSF factor on the unencumbered Level 1 assets.	MC Paragraph - 9.3
20	RBI-Unencumbered level 2A and 2B assets	[RBI]: Unencumbered assets which qualify for inclusion in Level 2A and 2B of High quality liquid assets as defined in the LCR.	The RSF factors applicable to unencumbered assets, which qualify for inclusion in Level 2A, and 2B of High quality liquid assets as defined in the LCR, are pre-defined as a part of this assumption. The assumption applies a 15%	MC Paragraphs - 9.5 A. 9.6 A

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			RSF factor on the unencumbered Level 2A assets and a RSF factor of 50% on the unencumbered Level 2B assets.	
21	RBI-Encumbered level 1 assets	[RBI]: Encumbered portion of assets which qualify for inclusion in Level 1 of High quality liquid assets as defined in the LCR.	The RSF factors applicable to encumbered portion of assets, which qualify for inclusion in Level 1 of High quality liquid assets as, defined in the LCR, are pre-defined as a part of this assumption. The assumption applies 50% and 100% RSF factors on the encumbered portion of Level 1 assets, with encumbrance period of less than 1 year and1 year or more respectively.	MC Paragraphs - 9.3, 9.6 B, 9.9 A, 10.4
22	RBI- Encumbered level 2 assets	RBI- Encumbered level 2 assets	The RSF factors applicable to encumbered portion of assets, which qualify for inclusion in Level 2A, and 2B of High quality liquid assets as defined in the LCR, are pre-defined as a part of this assumption. The assumption applies 15%, 50% and 100% RSF factors on the encumbered portion of Level 2A assets, with encumbrance period of less than 6 months, between 6 months to 1 year and1 year or more respectively. It applies 50% and 100% RSF factors on the encumbered portion	MC Paragraphs - 9.6 A and B, 9.9 A and 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			of Level 2B assets, with encumbrance period of less than 1 year and1 year or more respectively.	
23	RBI-Unencumbered operational balances with other banks	[RBI]: Operational portion of Unencumbered deposits held at other financial institutions, for operational purpose and are subject to the 50% ASF treatment.	The RSF factors applicable to operational portion of unencumbered deposits held at other financial institutions to fulfill the operational requirements, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. The assumption applies RSF factor of 50% and 100% on operational portion of unencumbered deposits held at other financial institutions, with remaining maturity of less than 1 year and1 year or more respectively.	MC Paragraph - 9.6 D
24	RBI- Unencumbered non operational balances with other banks	[RBI]: Non-operational portion of Unencumbered deposits held at other financial institutions, for operational purpose and are subject to the 50% ASF treatment.	The RSF factors applicable to non-operational portion of unencumbered deposits held at other financial institutions to fulfill the operational requirements, with remaining maturity of less than 1 year, are pre-defined as part of this assumption. The assumption applies RSF factor of 15%, 50% and 100% on non-operational portion of unencumbered deposits held at other financial institutions,	MC Paragraphs - 9.6 D, BIS FAQ July 2016, point 32

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			with remaining maturity of less than 6 months, between 6 months to 1 year and1 year or more respectively.	
25	RBI-Unencumbered residential mortgage loans	[RBI]: Unencumbered residential mortgage loans which would qualify for a) 35% or lesser risk weight as per Basel 2 standardized approach for credit risk b) higher than 35% risk weight as per Basel 2 standardized approach for credit risk	The RSF factors applicable to unencumbered residential mortgage loans, with standardized risk weights under Basel 2 approach, are per defined as part of this assumption. The assumption applies RSF factors of 50% and 65% on the unencumbered residential mortgage loans, with remaining maturity of less than 1 year and1 year or more respectively, with risk weights less than or equal to 35%. It applies RSF factors of 50% and 85% on the unencumbered residential mortgage loans, with remaining maturity of less than 1 year and1 year or more respectively, with risk weights greater than 35%.	MC Paragraphs - 9.7 A and 9.7 B
26	RBI-Encumbered residential mortgage loans	[RBI]: Encumbered residential mortgage loans which would qualify for a) 35% or lesser risk weight as per Basel 2 standardized approach for credit risk b) higher than 35% risk weight as per Basel	The RSF factors applicable to fully performing encumbered residential mortgage loans, with standardized risk weights under Basel 2 approach, are per defined as part of this assumption. This assumption applies RSF	MC Paragraphs - 9.9 A and 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
		2 standardized approach for credit risk	factors of 50% and 65 % on the encumbered residential mortgage loans, with remaining maturity of less than 1 year and greater than equal to 1 year respectively, encumbrance period is less than 1 year and risk weight is less than or equal to 35%. It applies a RSF factor of 100% on the encumbered residential mortgage loans with remaining maturity of more than 1 year, encumbrance period of more than 1 year and risk weight is more than 35%.	
27	RBI- Unencumbered commodities	[RBI]: Unencumbered physically traded commodities, including gold.	The RSF factor applicable to unencumbered balance of physically traded commodities including gold, are pre-defined as a part of this assumption. The assumption applies a 85% RSF factor on the unencumbered balance of the commodities.	MC Paragraph - 9.8 D
28	RBI- encumbered commodities	[RBI]: Encumbered physically traded commodities including gold.	The RSF factor applicable to encumbered balance of physically traded commodities including gold, are pre-defined as a part of this assumption. The assumption applies 85% and 100% RSF factors on the encumbered balance of the commodities, with	MC Paragraph - 10.4

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
			encumbrance period of less than 1 year and 1 year or more respectively.	
29	RBI- Trade date receivables	[RBI]: Trade date receivables arising from purchases of foreign currencies, financial instruments and commodities that are expected to settle or have failed but are expected to settle within the standard settlement cycle.	The RSF factor applicable to trade date receivables arising from purchases of foreign currencies, financial instruments and commodities that are expected to settle or have failed but are expected to settle within the standard settlement cycle, are pre-defined as part of this assumption. The assumption applies 0% RSF factor to the trade receivables, which expected to settle within settlement cycle.	MC Paragraphs - 9.2 D
Off-Balance Sheet				
1	RSF OBS- Credit and liquidity facilities to client	[RBI]: Off balance sheet exposures- Irrevocable, revocable and conditionally revocable credit and liquidity facilities offered to any clients by the bank	The RSF factor applicable to irrevocable, revocable and conditionally revocable credit and liquidity facilities offered to any clients by the bank, is pre-defined as part of this assumption. The assumption applies a 5% RSF factor to the undrawn amount of irrevocable, revocable and conditionally revocable credit and liquidity facilities.	MC Paragraph - 9.1
2	RBI- Guarantees and	[RBI]: Off balance sheet exposures-	The RSF factor applicable to the Guarantees	MC Paragraph - 9.1

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
	letters of credit	Guarantees and letters of credit	and Letters of credit offered by the bank, is pre-defined as part of this assumption. The assumption applies a 5% RSF factor to the EOP balance of the Guarantees and Letters of credit.	
3	RBI-Non contractual obligations type	[RBI]: Non contractual obligations type such as potential requests for debt repurchases, managed funds etc	The RSF factor applicable to the non-contractual obligations type such as potential requests for debt repurchases, managed funds etc., is pre-defined as part of this assumption. The assumption applies 5% RSF factor to the aforesaid non-contractual obligations amount.	MC Paragraph - 9.1
4	RBI-Non contractual obligations	[RBI]: Non contractual obligations type such as potential requests for debt repurchases, managed funds etc	The RSF factor applicable to the non-contractual obligations for structured products such as Variable rate notes (VRDNs), Adjustable rate notes (ARDNs) etc. offered by the bank, is pre-defined as part of this assumption. The assumption applies 5% RSF factor to the EOP balance for aforesaid non-contractual obligations.	MC Paragraph - 9.1

3.2.3.1.3 Derivatives

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
1	RBI- Additional Derivative Liability for RSF	[RBI]: RSF Additional portion of derivative liabilities to be included as part of RSF.	The RSF factor applicable to all derivative contracts including netted derivative contracts, where the aggregate mark to market value of the contracts prior to any variation margin adjustment is negative, is pre-defined as part of this assumption. The assumption applies a 100% RSF factor to the 20% of negative mark-to-mark value for the aforementioned derivative contracts.	MC Paragraph - 9.9 D
2	RBI - Net NSFR Derivative Liabilities	[RBI]: ASF derivative liabilities net of derivative assets, where derivative liability is net of any variation margin posted and derivative asset is net of cash margin received.	The ASF factor applicable to all derivative contracts including netted derivative contracts, where the net aggregate mark to market value of the contracts for an entity including any variation margin adjustment is negative, is pre-defined as part of this assumption. The assumption applies a 0% ASF factor to the derivative liabilities net of derivative assets, where the net aggregate mark to market value of the contracts is negative.	MC Paragraph - 7.6 C
3	RBI - Net NSFR Derivative assets	[RBI]: RSF derivative assets net of derivative liabilities, where derivative liability is net of any variation margin	The ASF factor applicable to all derivative contracts including netted derivative contracts, where the net aggregate mark to market value	MC Paragraph - 9.9 B

Serial No.	Assumption Name	Assumption Description	Regulatory Requirement Addressed	Basel Committee Banking supervision, Basel III, The net stable funding ratio, October 2014 (BCBS 295) Reference
		posted and derivative asset is net of cash margin received.	of the contracts for an entity including any cash margin adjustment is positive, is pre-defined as part of this assumption. The assumption applies a 100% RSF factor to the derivative assets net of derivative liabilities, where the net aggregate mark to market value of the contracts is positive.	
4	RBI- Margin for derivatives	[RBI]: RSF Treatment of initial margin posted against derivative transactions.	The RSF factor applicable to the initial margin posted for the derivative contracts is pre-defined as part of this assumption. The assumption applies a 85% RSF factor to the initial margin posted against the derivative contracts.	MC Paragraph - 9.8 A

3.2.3.2 Regulation Addressed through Business Rules

The list of pre-configured business rules and the corresponding reference to the regulatory requirement that it addresses is provided in the following tables:

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
1	LRM - Instrument - NSFR Encumbered Band Surrogate Key Population	This rule identifies the encumbrance band related to Net Stable Funding Ratio for the encumbrance date at the account level and updates the underlying related unique identifier in the FSI_LRM_INSTRUMENT table.	The encumbrance period for the asset for the purpose of required stable funding (RSF) calculations is identified as part of this rule	MC Paragraph - 10.4
2	LRM - Instrument - NSFR Residual Maturity Band Surrogate Key Population - Open Maturity	This rule identifies the maturity band related to Net Stable Funding Ratio for the maturity date at the account level for the open maturity products and updates the underlying related unique identifier in the FSI_LRM_INSTRUMENT table.	The products with no stated maturity for the computation of available stable funding (ASF) are identified as part of this rule.	MC Paragraph - 7.6 B
3	LRM - Stable and Operational Balance Percentage Calculation	This rule calculates the percentage of the stable balance and the operational balance with respect to the end of period balance of the accounts and updates the same in the FSI_LRM_INSTRUMENT table.	This rule computes the percentage of stable and less stable portion of deposits, held by retail and wholesale customers treated as retail for the purposes of LCR, for ASF calculation.	MC Paragraph - 7.3 and 7.4
4	LRM - Account Cash flow - Stable and Operational Amount Calculation	This rule calculates the cash flows associated with the stable portion and less stable portion of the accounts. In addition, this rule calculates the cash flows associated with the operational balance portion and non-operational balance portion. All these above values are updated in FCT_ACCOUNT_CASH_FLOWS.	This rule calculates the cash flows associated to stable and less stable deposits, held by retail and wholesale customers treated as retail for the purposes of LCR, having residual maturity of more than 1 year and cash flow maturity of more than 1 year. This rule applies the stable and less stable deposit percentage to cash flows with maturity of more than 1 year.	MC Paragraph - 7.2 C
5	LRM - Netted Derivatives - Derivative Liability Amount Calculation	This rule calculates the derivative liability amount for the netted contracts by considering the absolute value of sum of marked to market value of all the underlying	All the derivative contracts associated with the netting agreement, where the aggregate mark to market value of the contracts prior to any variation margin adjustment is	MC Paragraph - 8.1

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
		contracts associated with the netting agreement.	negative is computed as part of this rule.	
6	LRM - Netted Derivatives - Posted collateral Margin Amount Calculation	This rule calculates the sum of the value of the collaterals posted as variation margin related with the netted derivatives and updates this information in FSI_LRM_INSTRUMENT table.	The rule computes the value of the all the collaterals posted as variation margin for the netted derivative contracts related with the netting agreement	MC Paragraph - 8.1
7	LRM - Derivatives - Posted collateral Margin Amount Calculation	This rule calculates the sum of the value of the collaterals posted as variation margin related with the non-netted derivative contracts and updates this information in FSI_LRM_INSTRUMENT table.	The rule computes the value of the all the collaterals posted as variation margin for the non-netted derivative contracts.	MC Paragraph - 8.1
8	LRM - Derivatives - Received Variation Margin Calculation	This rule calculates the sum of the margin amount of cash variation margin received related with the non-netted derivative contracts and updates this information in FSI_LRM_INSTRUMENT table.	The rule computes the sum of the cash amount received as variation margin for the non-netted derivative contracts	MC Paragraph - 10.1
9	LRM - Netted Derivatives - Derivative Asset Amount Calculation	This rule calculates the derivative asset amount for the netted contracts by considering the absolute value of sum of the marked to market value of all the underlying contracts associated with the netting agreement.	All the derivative contracts associated with the netting agreement, where the aggregate mark to market value of the contracts prior to any variation margin adjustment is positive is computed as part of this rule.	MC Paragraph - 10.1
10	LRM - Netted Derivatives - Received Variation Margin Calculation	This rule calculates the sum of the margin amount of cash variation margin received related to the netted derivative contracts at the netting agreement level and updates this information in FSI_LRM_INSTRUMENT table.	The rule computes the sum of the cash amount received as variation margin for the netted derivative contracts associated with netting agreement.	MC Paragraph - 10.1

Sl. No.	Rule Name	Rule Description	Regulatory Requirement Addressed	Regulatory Reference
11	LRM - Derivatives - Posted collateral Initial Margin Amount Calculation	This rule calculates the sum of the margin amount of initial margin posted for all derivative contracts and updates this information in FSI_LRM_INSTRUMENT table.	This rule computes the sum of initial margin posted for derivative contracts.	MC Paragraph - 9.8 A
12	LRM - Derivatives - Additional Derivative Liability Amount Calculation	This rule calculates the additional portion of the derivative liabilities as a percentage of the derivative liability. This percentage is setup master parameterized for the users to edit the same. This value gets updated in the FSI_LRM_INSTRUMENT table.	20% of all derivative contracts including netted derivative contracts, where the aggregate mark to market value of the contracts prior to any variation margin adjustment is negative is configured in this rule. This additional derivative liability amount is used for the purpose of RSF computation.	MC Paragraphs - 9.9 D

4 Regulatory Calculations as Per European Banking Authority

4.1 Liquidity Coverage Ratio Calculation as Per Capital Requirements Regulation

4.1.1 Overview

The European Banking Authority (EBA) Liquidity Coverage Ratio (LCR) Calculations caters to the final guidelines on the LCR, Liquidity Risk Monitoring Tools and LCR Disclosure Standards that were published by European Banking Authority in June 2013.

4.1.1.1 Consolidation of LCR

The LCR and monitoring tools are applicable for European banks at whole bank level only that is, on a stand-alone basis including overseas operations through branches. However, banks endeavor to move over to meeting the standard at consolidated level also. For foreign banks operating as branches in Europe, the framework is applicable on stand- alone basis (that is, for European operations only).

4.1.2 Inputs

LRM application requires the below inputs required for calculating Liquidity Coverage Ratio:

- Liquidity Haircut, inflow percentage and outflow percentage of the respective business assumption are pre-configured.
- Liquidity Horizon is specified as the Run time parameter.

4.1.3 Process Flow

This section provides the high level process flow for LCR Calculation as per EBA guidelines:

- Standard Product and Standard Party Reclassification
- Instrument / Contractual / Mitigant / GL Data Population
- Asset level Identification
- Mitigant Level Identification
- HQLA Haircut Assignment
- Calculation of Stock of HQLA Adjustment
- Deposit Stability Identification
- Cash Flow Aggregation
- Business Assumption

- Cash Inflows and Cash outflows
- Calculation of Total Net Cash Outflow
- Calculation of Liquidity Coverage Ratio

LRM supports an out-of-the-box EBA LCR which includes the regulatory scenario with associated HQLA haircuts, inflow and outflow percentage / rates pre-configured in the form of business assumptions.

4.1.3.1 Standard Product and Standard Party Reclassification

Bank Products and Bank Party Types which are accepted as download from the banks are reclassified into regulatory identified Standard Product and Party types respectively.

- **Product Type Reclassification**:

  Product Types used by the reporting bank in the input data are reclassified to standard product types by the application as recommended by the Basel Committee in the EBA Basel III Final. The product types after reclassification are stored as Standard Product Types. The reclassification is based on simple logic. For example: Housing Loan is reclassified as Residential Mortgage Exposure as per the Basel guidelines.

- **Party Type Reclassification:**

  Similar to product type, the customer type and issuer type (which are stored as party types) are also reclassified into Standard Party Types by the application. Party Type reclassification rules handles reclassification of customer types, issuer types and entity types. The party type reclassification is based on simple logic. For example: Individual is reclassified as Retail.

4.1.3.2 Instrument / Contractual / Mitigant / GL Data Population

Data from the banks source system moves into the LRM Staging tables. LRM application has its own set of staging tables.

LRM application requires the following data:

- Instrument data
- Mitigant data
- GL data
- Cash flow data

4.1.3.3 Asset Level Identification

Liquid assets comprise of high quality assets that can be readily sold or used as collaterals to obtain funds in a range of stress scenarios. They are unencumbered that is, without legal, regulatory or operational impediments. Assets are considered to be high quality liquid assets if they can be easily and immediately converted into cash at little or no loss of value.

High Quality Liquid Assets are classified into two categories:

- EHQLA - Extremely High Quality Liquid Asset
- HQLA - High Quality Liquid Asset.

EHQLA assets can be included without limit, but HQLA assets can only comprise 40% of the stock of total high quality liquid assets.

4.1.3.3.1 EHQLA Asset

EHQLA asset can comprise an unlimited share of the pool and are not subject to a haircut under the LCR.

EHQLA asset is limited to:

1. Any deposits and/ or cash reserve placed with Central Bank.
2. Cash including cash reserves.
3. Debt Security Assets issued by supranational quasi-governmental entities or multi-lateral bank.
4. Debt Security Assets issued by Sovereign / Central Bank / Non central Public Sector Enterprise issued in European Economic Area (EEA) countries in domestic currency.
5. Debt security issued by Government backed Credit institution with purpose of Promotional Loan
6. Standby Credit Facilities provided by Central Bank.
7. Line of Credit provided by Central credit institutions or institutional network of co-operative Bank.
8. Deposits placed with Central credit institution or institutional network of co-operative Bank.

4.1.3.3.2 HQLA Asset

Classification of assets into HQLA category is required in order to compute the amount of high quality liquid assets. 85% of these assets are used to compute the numerator of the Liquidity Coverage Ratio.

A minimum of 15% haircut is applied to the current market value of each HQLA asset held in the stock. The criteria for identifying the asset as HQLA are:

1. Non EEA Sovereign bonds issued in domestic currency rated ECAI 2 or above, of minimum issue size EUR 100 million (or the local currency equivalent).

2. Bonds issued by local government institutions in EEA currencies, rated ECAI 2 or above, of minimum issue size EUR 250 million (or the local currency equivalent) and a maximum time to maturity of 10 years.
3. Assets issued and guaranteed by Non EEA central bank and non-central government public sector entities in the domestic currency of the public sector entity.
4. Covered bonds rated ECAI 1 of minimum issue size EUR 250 million.
5. Corporate bonds rated ECAI 4 or better, of minimum issue size EUR 250 million (or the local currency equivalent) and a maximum time to maturity of 10 years.
6. Residential Mortgage Backed Securities (RMBS) rated ECAI 1 of minimum issue size of EUR 100 million (or the local currency equivalent) and a maximum time to maturity of 5 years.
7. Common equity shares that satisfy all of the following conditions may be classified as HQLA.
8. A Shares or units in CIUs may be treated as liquid assets
9. They are bonds issued by Financial Institutions as referred to in Article 52(4) of Directive 2009/65/EC other than Covered bonds and Asset Backed Securities.

4.1.3.4 Mitigant Level Identification

Mitigants comprise of high quality assets that can be readily sold or used as collateral to obtain funds in a range of stress scenarios. They are unencumbered that is, without legal, regulatory or operational impediments. Mitigants are considered to be high quality liquid assets if they can be easily and immediately converted into cash at little or no loss of value.

High Quality Liquid Assets are classified into two categories:

- EHQLA - Extremely High Quality Liquid Asset
- HQLA - High Quality Liquid Asset.

EHQLA assets can be included without limit, but HQLA assets can only comprise 40% of the stock of total high quality liquid assets.

4.1.3.4.1 EHQLA Mitigant

EHQLA mitigants are identified by the below criteria:

1. Any deposits and/ or cash reserve placed with Central Banks.
2. Cash including cash reserves.
3. Debt Security Assets issued by supranational quasi-governmental entities or Multilateral Development Bank.

4. Debt Security Assets issued by Sovereign / Central Bank / Non central Public Sector Enterprise issued in EEA countries in domestic currency.
5. Debt Security Assets guaranteed by supranational quasi-governmental entities or Multilateral Development Bank.
6. Debt Security Assets guaranteed by Sovereign / Central Bank / Non central Public Sector Enterprise issued in EEA countries in domestic currency.
7. Debt security issued by Government backed Credit institution with purpose of Promotional Loan

4.1.3.4.2 HQLA Mitigant

The criteria for identifying the HQLA mitigants are:

1. Debt securities issued by Non EEA Sovereign in domestic currency rated ECAI 2 or above, of minimum issue size EUR 100 million (or the local currency equivalent).
2. Bonds issued by local government institutions in EEA currencies, rated ECAI 2 or above, of minimum issue size EUR 250 million (or the local currency equivalent) and a maximum time to maturity of 10 years.
3. Debt securities issued and guaranteed by Non EEA central bank and non-central government public sector entities in the domestic currency of the public sector entity.
4. Covered bonds rated ECAI 1 of minimum issue size EUR 250 million.
5. Corporate bonds, issued by corporate, rated ECAI 4 or better, of minimum issue size EUR 250 million (or the local currency equivalent) and a maximum time to maturity of 10 years.
6. RMBS, issued by banks, rated ECAI 1 of minimum issue size of EUR 100 million (or the local currency equivalent) and a maximum time to maturity of 5 years.
7. Common equity shares, issued by corporate, that satisfy all of the following conditions may be classified as HQLA
8. A Shares or units in CIUs may be treated as liquid assets.

4.1.3.5 HQLA Haircut Assignment

Haircut is been assigned at various steps as mentioned below

4.1.3.5.1 EHQLA Haircut

0% haircut is applied on all EHQLA assets.

4.1.3.5.2 HQLA Haircut

Based on Standard issuer type, product type and Basel credit rating, below haircut is applied on the HQLA assets.

Standard issue Type	Standard Product type	Basel Credit rating	Haircut Applied
Banks	RMBS	Basel Credit rating	25
Banks	Covered Bond	Basel Credit rating	15
Banks	Other Bonds		50
Central Bank	Debt Security		15
Corporate	Corporate Bond	Rating ECAI 2 to 4	50
Corporate	Corporate Bond	Rating ECAI 1	15
Corporate	Common Equity		50
Corporate	Commercial Paper	Rating ECAI 2 to 4	50
Corporate	Commercial Paper	Rating ECAI 1	15
Domestic PSE	Debt Security		15
Non-Central Government Public Sector Enterprise	Debt Security		15
Sovereign	Debt Security		15

4.1.3.5.3 Post Haircut Asset Value

Based on the haircut, the asset value is adjusted based on below formula:

Adjusted Market Value = Market Value * (1 – Haircut/100)

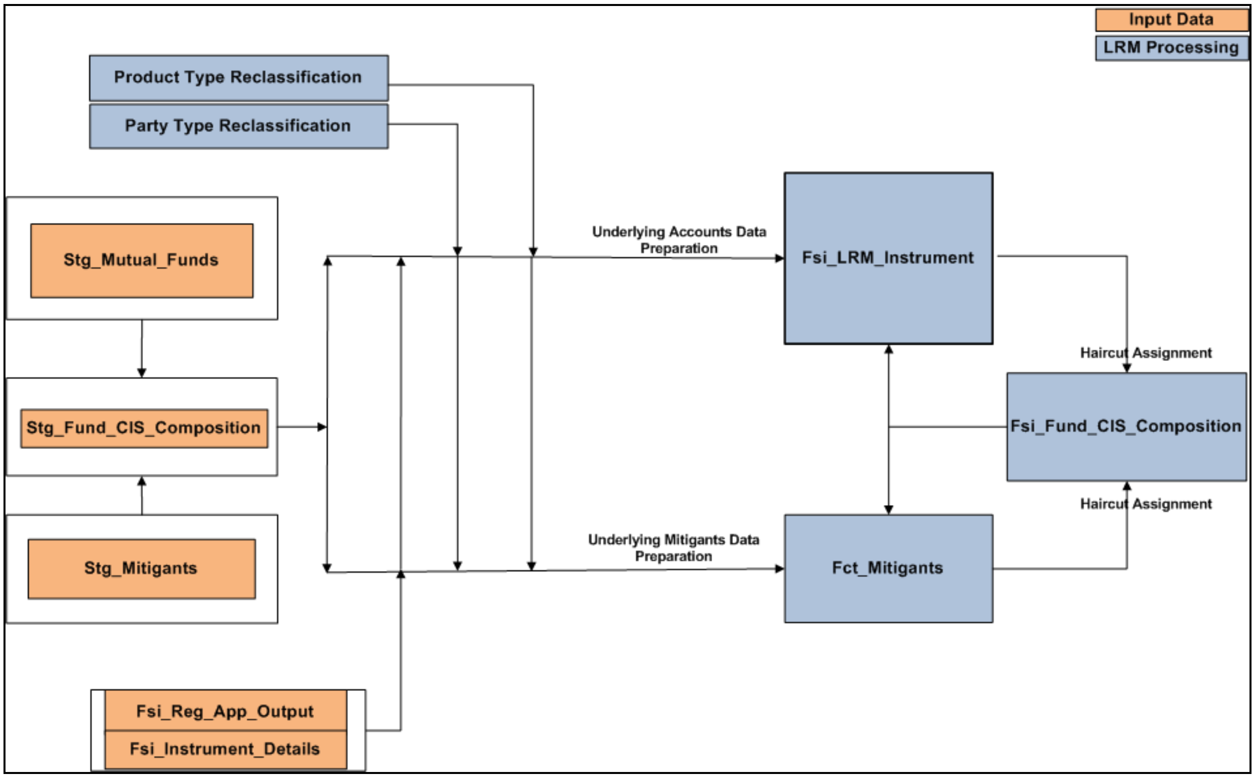
4.1.3.5.4 Post Haircut Mitigant Value

Based on the haircut, the mitigant value is adjusted based on below formula:

Adjusted Mitigant Value = Mitigant Value * (1 – Haircut/100)

4.1.3.5.5 CIU Population and Processing

The below diagram shows the CIU processing and haircut applied.



4.1.3.6 Calculation of Stock of HQLA Adjustment

Calculation of the stock of HQLA requires computations of adjusted EHQLA and HQLA assets. The stock of HQLA obtained after adjustments is used for LCR computation.

The numerator of LCR requires the computation of the Stock of HQLA. The formula for the calculation of the stock of HQLA is as follows:

Stock of HQLA = EHQLA + HQLA - Adjustment for 40% cap

Where:

Adjustment for 40% cap = Max {(Adjusted HQLA - 2/3*Adjusted EHQLA assets), 0}

Calculation of the stock of HQLA requires computations of adjusted EHQLA and HQLA assets. There may be instances when assets classified under a lower level may get temporarily converted into an asset classified under a higher level or vice-versa (for example, borrowing/lending cash, an EHQLA asset, by repo/reverse repo of Corporate Bonds, a HQLA asset). Therefore, the calculation of 40% cap on HQLA assets is taken into account the impact of such secured funding transactions on the stock of HQLA to be categorized under a particular Level. In order to ensure this while calculating the eligible amounts of HQLAs under EHQLA and HQLA, any repo / reverse repo transactions undertaken in repo-eligible HQLA assets up to and including 30 days needs to be reversed that is, adjusted. Presently, Corporate Bonds are the only HQLA assets where repo is allowed. The required adjustments are shown below:

Sl. No.	Particulars
1	Total EHQLA Assets
2(i)	Adjustment – Add amount lent under a reverse repo transaction undertaken for up to and including 30 days in corporate bonds (irrespective of whether they qualify as HQLA assets or not)
2(ii)	Adjustment – Deduct amount borrowed under a repo transaction undertaken for up to and including 30 days in corporate bonds (irrespective of whether they qualify as HQLA assets or not)

In general,

Adjustment Amount = Amount * Factor

Now,

Total Adjusted EHQLA Assets = {Adjusted amount 1 + Adjusted amount 2 (i) – Adjusted amount 2(ii)}

(From the above table)

Adjusted EHQLA assets are, therefore, arrived at by adding back the amount of cash lent (reverse repo) and by subtracting the amount of cash borrowed (repo) up to 30 days against corporate bonds.

Similarly, following adjustments are required in HQLA assets also:

Sl. No.	Particulars
1	Total HQLA Assets
2(i)	Adjustment – Add market value of HQLA corporate bonds placed as collateral under a repo transaction undertaken for up to (and including) 30 days.
2(ii)	Adjustment – Deduct market value of HQLA securities acquired as collateral under a reverse repo transaction undertaken for up to (and including) 30 days

Now,

Total Adjusted HQLA Assets = {Adjusted amount 1 + Adjusted amount 2 (i) – Adjusted amount 2(ii)}

(From the above table)

Adjusted HQLA assets are therefore arrived at by adding the amount of HQLA securities placed as collateral.

4.1.3.7 Deposit Stability Identification

The insurance calculation is as per the Deposit Insurance Organization of the country.

All commercial banks including branches of foreign banks functioning in Europe, local area banks and regional rural banks are insured by respective Deposit Insurance Organization. In the event of a bank failure, the insurance organization protects bank deposits that are payable in the respective EU countries.

A stable deposit is a deposit whose entire outstanding balance is fully covered by deposit insurance provided by the national Deposit Insurance Organization and which satisfies one of the following conditions.

- It is held in a transactional account by the depositor

  Or

- The depositor has an established relationship with the reporting legal entity.

Each depositor in a bank, in general, is insured up to a maximum of EUR.100,000 for both principal and interest amount held by him in the same capacity and same right as on the date of liquidation/cancellation of bank's license or the date on which the scheme of amalgamation/merger/reconstruction comes into force. However, each state may have different insurance coverage. The deposits kept in different branches of a bank are aggregated for the purpose of insurance cover and a maximum amount up to the coverage of the scheme is paid. All funds held in the same type of ownership at the same bank are added together before deposit insurance is determined. If the funds are in different types of ownership or are deposited into separate banks they are then separately insured.

4.1.3.7.1 Insurance Calculation

a. Insurance Scheme

Insurance eligible accounts are those which are covered by the deposit insurance scheme. OFS LRM assumes the insurance scheme code for each customer / account is provided as download. The examples for ownership categories covered by national Deposit Guarantee Schemes in EBA are general accounts and temporary high balance accounts which receive separate deposit insurance limits.

b. Products Covered by national Deposit Guarantee Scheme

The national Deposit Guarantee Scheme insures all deposits such as savings, fixed, current, recurring, and so on. The specific products covered by the national deposit insurance are expected to be provided to OFSAA as part of a rule.

c. **Allocation of Insured Amount.**

Each depositor in a bank is insured up to a maximum of EUR 100,000 (or maximum coverage as per the scheme code) for both principal and interest amount held by the depositor in the same capacity. The insurance coverage status is updated for each deposit account as follows:

- Fully Insured: Insured Amount = End Of Period Balance
- Partially Insured: Insured Amount > 0 and < End Of Period Balance
- Uninsured: Insured Amount = 0

The Insurance limit is allocated to each eligible account belonging to a particular customer within a given insurance scheme code as per the procedure given below:

- Identify / group the customers belonging to the same capacity and by their account holder position.
- Arrange the grouped customers for insurance allocation by the insurance coverage sequence defined.
- Allocate the insurance limit equally to different accounts held by the customer / customers within the same group and coverage sequence up to a maximum of the insured limit. The remaining balance of insurance is to be allocated to the next coverage sequence within the same group.
- Continue the steps for all eligible customer groups.
- The limit is applicable for each customer group separately

4.1.3.8 Cash Flow Aggregation

Cash Flow aggregation is based on a list of LRM dimensions. You can choose them using the Application Preference option under LRM application. Refer section Application Preferences in OFS Liquidity Risk Management Release V8.0.5.0.0 User Guide on OHC Documentation Library for more information.

4.1.3.9 Business Assumption

A list of pre-configured business assumptions as per the regulatory requirement is provided out-of-the-box. For EBA specific business assumptions refer section Pre-configured Regulatory LCR Scenarios for more information.

4.1.3.10 Cash Inflows and Cash outflows

4.1.3.10.1 Cash Outflows – Retail Deposits

A retail deposit consists of a liability to a natural person or to an Small Medium Sized Enterprise (SME), where the natural person or the SME would qualify for the retail exposure class under the Standardized or IRB approaches for credit risk, or a liability to a company where the total annual sales for the consolidated group of which the firm is a part is less than EUR 50 million and where the aggregate deposits by all such enterprises on a group basis do not exceed EUR 1 million.

Retail deposits are categorized into:

1. Retail deposits covered by a Deposit Guarantee Scheme (DGS) or an equivalent deposit guarantee scheme in a third country and deposit is either of the following a) part of an established relationship making withdrawal highly unlikely b) held in a transactional account, including accounts to which salaries are regularly credited;
2. Other retail deposits that do not fall under point (1) (that is, retail deposits covered by a DGS which do not qualify under points a or b or uninsured retail deposits)
3. Retail deposits which, owing to the behavior of local depositors, are subject to different outflow rates in excess of the runoff rates applicable to retails deposits mentioned in points (1) and (2).
4. Retail deposits in third countries where higher outflows are applied.
5. Retail deposits that are exempted from the outflow calculation where specific conditions are met.
   a. Determination of established relationship making withdrawal highly unlikely:
      A retail deposit is considered to be part of an established relationship when the depositor meets at least one of the following criteria:
      - Has an active contractual relationship with the institution of a minimum duration (active nature and duration not prescribed by EBA; default is assumed as 12 months).
      - Has borrowing relationship with institution for mortgage loans or other long term loans.
      - Has a minimum number of active products (number of products not prescribed by EBA; default is assumed as at least one other active product, other than a loan, with the credit institution - in line with the Delegated Act), other than loans, with the institution.

b. Determination of transactional account
   A retail deposit is considered as being held in a transactional account when salaries, income or transactions are regularly credited and debited respectively against the account (regularity of transactions and what is included in salaries are not prescribed by EBA). Although the identification criteria are not quantified, it is the responsibility of institutions to make estimates based on their specific business models and experience. The estimates are subject to supervisory review by the competent authority.

4.1.3.10.2 Eligible Retail Deposits

Deposits that are included in the DGS are eligible retail deposits. Saving products evidenced by a certificate of deposit made out to a named person; non-financial undertakings in principle are covered. Member States ensure that credit institutions mark eligible deposits in a way that allows an immediate identification of such deposits. DGSs may at any time request credit institutions to inform them about the aggregated amount of eligible deposits of every depositor.

These are insured deposits (to the extent covered by DGS) that are part of an established relationship making withdrawal highly unlikely or held in a transactional account, including accounts to which salaries are regularly credited.

A run-off factor of at least 5% is applied to such deposits.

Retail deposit products are assessed against the set of risk factors grouped into the following risk categories:

a. High Risk (Risk Category 1)
b. Very High Risk (Risk Category 2)

Retail deposits are assigned to one of the three following categories defined on the basis of the number of risk factors and riskiness of the underlying deposit:

a. Higher Outflow Rate Category 1: deposits with two risk factors from risk category 1
b. Higher Outflow Rate Category 2: deposits with three risk factors from risk category 1, or one risk factor from risk category 1 and one risk factor from risk category 2
c. Higher Outflow Rate Category 3: deposits with risk factors from risk category 2, or two risk factors from risk category 1 and one risk factor from risk category 2, or with any other mix of risk factors

Credit institutions may exclude from the calculation of outflows certain clearly circumscribed categories of retail deposits as long as in each and every instance the institution rigorously applies the following for the whole category of those deposits, unless in individually justified circumstances of hardship for the depositor:

Below mentioned circumscribed categories of retail deposits are excluded from outflows, as long as in each and every instance the institution rigorously applies the following for the whole category of those deposits, unless in individually justified circumstances of hardship for the depositor:

- within 30 days, the depositor is not allowed to withdraw the deposits; or
- for early withdrawals within 30 days, the depositor has to pay a penalty that includes the loss of interest between the date a penalty that includes the loss of interest between the date of withdrawal and the contractual maturity plus a material penalty that does not have to exceed the interest due for the time elapsed between date of deposit and the date of withdrawal.

4.1.3.10.3 Cash Outflows – Other Liabilities

The current amounts outstanding of other liabilities that come due, can be called for payout by the issuing institutions or by the provider of the funding or entail an implicit expectation of the provider of the funding that the institution repays the liability during the next 30 calendar days. Other liabilities are categorized as follows:

a. Liabilities resulting from the institution’s own operating expenses (additional outflows)
b. Secured lending and capital market-driven transactions (secured wholesale funding)
c. Operational and non-operational deposits (unsecured wholesale funding)
d. Non-financial customers (unsecured wholesale funding)
e. Derivative contracts (additional outflows)
f. Other liabilities (unsecured wholesale funding)

4.1.3.10.4 Additional outflows

In addition to the above mentioned cash flows, there are additional cash flows as well. The additional cash flows are:

a. Increased liquidity needs resulting from collateral posted for derivatives.
   Collateral other than liquid assets, which is posted by the institution to secure mark-to-market exposures to derivative contracts and credit derivatives, is subjected to an additional outflow of 20%.
b. Increased liquidity needs resulting from a material deterioration in the credit quality of the institution.
   Institutions notifies to the competent authorities all contracts entered into the contractual conditions of which lead, within 30 calendar days following a material deterioration of the credit quality of the institution, to liquidity outflows or additional collateral needs. If the competent authorities consider such contracts material in relation to the potential liquidity outflows of the institution, they require the institution to add an additional outflow for those contracts corresponding to the additional collateral needs resulting from a material deterioration in the credit quality of the institution such as a downgrade in its external credit assessment by three notches. EBA’s CRR does not explicitly mention the additional run-off applicable to downgrade triggers. Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45)

additional outflows resulting from material deterioration in the credit quality of the institution receives a run-off of 100%.

c. Increased liquidity needs resulting from the impact of an adverse market scenario on the institution's derivatives transactions, financing transactions and other contracts if material.
   The institution adds an additional outflow corresponding to collateral needs that results from the impact of an adverse market scenario on the institution's derivatives transactions, financing transactions and other contracts if material. EBA's CRR does not explicitly mention the additional run-off applicable to the impact of an adverse market scenario. Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45) additional outflows resulting from the impact of an adverse market scenario receives a run-off of 100%.
d. Increased liquidity needs corresponding to the market value of securities or other assets sold short and to be delivered within the 30 calendar days horizon.
   The institution adds an additional outflow corresponding to the market value of securities or other assets sold short and to be delivered within the 30-day horizon unless the institution owns the securities to be delivered or has borrowed them at terms requiring their return only after the 30-day horizon and the securities do not form part of the institutions liquid assets. EBA's CRR does not explicitly mention the additional run-off applicable to mark-to-market value of securities or other assets sold short. Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45) additional outflows corresponding to the market value of securities or other assets sold short receives a run-off of 0% when covered by collateralized securities financing transactions and by 100% otherwise.
e. Increased liquidity needs corresponding to excess collateral the institution holds that can be contractually called at any time by the counterparty.
   The institution adds an additional outflow corresponding to the excess collateral the institution holds that can be contractually called at any time by the counterparty. EBA's CRR does not explicitly mention the additional run-off applicable to excess collateral that can be contractually called at any time. Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45) additional outflows corresponding to excess collateral that that can be contractually called at any time by the counterparty receives a run-off of 100%.
f. Increased liquidity needs corresponding to collateral that is due to be returned to counterparty.
   The institution adds an additional outflow corresponding to collateral that is due to be returned to the counterparty. EBA's CRR does not explicitly mention the additional run-off applicable to collateral that is due to be returned. Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45) additional outflows corresponding to collateral that is due to be returned to the counterparty receives a run-off of 100%.
g. Increased liquidity needs corresponding to assets that qualify as liquid assets that can be substituted for assets corresponding to assets that does not qualify as liquid assets without the consent of the institution.
   Additional outflows corresponding to assets that qualify as liquid assets that can be substituted for assets corresponding to assets that do not qualify as liquid assets without the consent of the institution. EBA's CRR does not explicitly mention the additional run-off applicable to

exchangeable collateral. Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45) additional outflows corresponding to exchangeable collateral shall receive a run-off of 100%.

h. Increased liquidity needs resulting from undrawn committed credit and liquidity facilities.

Institutions report outflows from committed credit facilities and committed liquidity facilities, which are determined as a percentage of the maximum amount that can be drawn within the next 30 calendar days. This maximum amount that can be drawn may be assessed net of any liquidity requirement for trade finance off-balance sheet items and net of the value of collateral to be provided if the institution can reuse the collateral and if the collateral is held in the form of liquid assets. The collateral to be provided are not be assets issued by the counterparty of the facility or one of its affiliated entities. If the necessary information is available to the institution, the maximum amount that can be drawn for credit and liquidity facilities are determined as the maximum amount that could be drawn given the counterparty's own obligations or given the pre-defined contractual drawdown schedule coming due over the next 30 calendar days.

- Undrawn Committed Credit and Liquidity Facilities to Retail and Small Business Customers (SME)

  The maximum amount that can be drawn of undrawn committed credit facilities and undrawn committed liquidity facilities within the next 30 days are multiplied by 5% if they qualify for the retail exposure class under the Standardized or IRB approaches for credit risk.
- Committed credit and liquidity facilities to non-financial corporations, sovereigns and central banks, PSEs and multilateral development banks.

  The maximum amount that can be drawn of undrawn committed credit facilities and undrawn committed liquidity facilities within the next 30 days are multiplied by 10% where they meet the following conditions:
  - They do not qualify for the retail exposure class under the Standardized or IRB approaches for credit risk
  - They are provided to clients that are not financial customers
  - They are not provided for the purpose of replacing funding of the client in situations where he is unable to obtain its funding requirements in the financial markets.
- Committed liquidity facilities extended to an SSPE

  The committed amount of a liquidity facility that has been provided to an SSPE for the purpose of enabling such an SSPE to purchase assets other than securities from clients that are not financial customers is multiplied by 10% to the extent that it exceeds the amount of assets currently purchased from clients and where the maximum amount that can be drawn is contractually limited to the amount of assets currently purchased.
- Committed credit and liquidity facilities extended to credit institutions, financial institutions and SSPEs

The institution reports the maximum amount (which is multiplied by 100%) that can be drawn of other undrawn committed credit facilities and undrawn committed liquidity facilities within the next 30 calendar days. This applies in particular to the following:

- Liquidity facilities that the institution has granted to SSPEs other than those mentioned above
- Arrangements under which the institution is required to buy or swap assets from an SSPE
- Facilities extended to credit institutions
- Facilities extended to financial institutions and investment firms
- Facilities extended to other clients (as per EBA LCR calculation)

- Committed credit and liquidity facilities granted for the purpose of funding promotional loans
  Institutions set up and sponsored by a least one Member State's central or regional government, where credit/liquidity faculties are granted provided to institutions for the sole purpose of funding promotional loans. These loans are available to not financial customers to promote public policy objectives of the Union and/or that Member State's central/regional government.

i. Other contingent funding obligations and other contractual cash outflows.
   Institutions regularly assess the likelihood and potential volume of liquidity outflows during the next 30 calendar days as far as products or services are concerned, which are not captured in previous sections and which they offer or sponsor or which potential purchasers consider to be associated with them, including but not limited to liquidity outflows resulting from any contractual arrangements such as other off-balance sheet and contingent funding obligations, including, but not limited to uncommitted funding facilities, undrawn loans and advances to wholesale counterparties, mortgage loans that are agreed but not yet drawn down, credit cards, overdrafts, planned outflows related to renewal or extension of new retail or wholesale loans, planned derivative payables and trade finance off-balance sheet related products. These outflows are assessed under the assumption of a combined idiosyncratic and market wide stress scenario.
   For this assessment, institutions take particular account of material reputational damage that results from not providing liquidity support to such products or services. Institutions report not less than annually to the competent authorities those products and services for which the likelihood and potential volume of the liquidity outflows referred above are material and the competent authorities determine the outflows to be assigned. The competent authorities may apply an outflow rate up to 5 % for trade finance off-balance sheet related products. The competent authorities at least annually report to EBA the types of products or services for which they have determined outflows on the basis of the reports from institutions.
   Trade off-balance sheet related products receive a run-off of 5% and outflows for other products/services are determined by competent authorities at least annually.

4.1.3.10.5 Cash Inflow Computation

a. Cash Inflows - Maturing secured lending and capital market-driven transactions collateralized by liquid/non-liquid assets
   Monies due from secured lending (means any transaction giving rise to an exposure secured by collateral which does not include a provision conferring upon the institution the right to receive margin at least daily) and capital market-driven transactions (means any transaction giving rise to an exposure secured by collateral which includes a provision conferring upon the institution the right to receive margin at least daily) if they are collateralized by liquid assets, is not taken into account up to the value net of haircuts of the liquid assets and is taken into account in full for the remaining monies due

Collateral	Cash Inflow Rate
Monies due from secured lending and capital market-driven transactions collateralized by liquid assets should not be taken into account up to the value net of haircuts	0%
Monies unsecured or not collateralized by liquid assets shall be taken into account in full for the remaining monies due;	100%

b. Cash Inflows - Any undrawn credit or liquidity facilities and other commitments received
   Any undrawn credit or liquidity facilities and any other commitments received is not be taken into account.
c. Cash Inflows - Non-financial customers for the purpose of principal payment
   Monies due from customers that are not financial customers for the purposes of principal payment is reduced by 50% of their value or by the contractual commitments to those customers to extend funding, whichever is higher.
   This does not apply to monies due from secured lending and capital market-driven transactions (means any transaction giving rise to an exposure secured by collateral which includes a provision conferring upon the institution the right to receive margin at least daily) that are collateralized by liquid assets (means transferable assets that are of highly liquidity and credit quality).
   Institutions that have received a commitment (credit and liquidity facilities that are provided to institutions for the sole purpose of directly or indirectly funding promotional loans) in order for them to disburse a promotional loan to a final recipient may take an inflow into account up to the amount of the outflow they apply to the corresponding commitment to extend those promotional loans.
d. Cash Inflows – Derivatives
   Outflows and inflows expected over the 30 day horizon from the contracts listed below, are reflected on a net basis across counterparties and are multiplied by 100 % in the event of a net inflow. Net basis mean also net of collateral to be received that qualifies as liquid assets.

e. Cash Inflows - Others

Monies due that the institution owing those monies treats them as deposits in order to obtain clearing, custody or cash Management or other comparable services from the institution is multiplied by 5% to the extent to which they are covered by a Deposit Guarantee Scheme.

Monies due that the institution owing those monies treats them as deposits in the context of common task sharing within an institutional protection scheme, or as a legal or statutory minimum deposit by another entity being a Member of the same institutional protection scheme shall be multiplied by 25%.

Monies due that the institution owing those monies treats them as deposits to maintain an established operational relationship other than to obtain clearing, custody or cash management or other comparable services from the institution are multiplied by 25%.

Monies due that the institution owing those monies treats them as deposits to obtain cash clearing and central credit institution services and where the credit institution belongs to a network in accordance with legal or statutory provisions is multiplied by 25%.

Monies due that the institution owing those monies treats them as deposits from credit institutions placed at central credit institutions that are considered as liquid assets are multiplied by 100%.

Assets with an undefined contractual end date are taken into account with a 20% inflow provided that the contract allows the bank to withdraw and request payment within 30 days.

Monies due from self-liquidating short term trade financing transactions connected to exchange of goods and services with a residual maturity of up to 30 days, are taken into account in full as inflows.

Institutions take liquidity inflows which are to be received in third countries where there are transfer restrictions or which are denominated in non-convertible currencies into account only to the extent that they correspond to outflows respectively in the third country or currency in question.

f. Cash Inflows – Caps

Institutions report their liquidity inflows. Capped liquidity inflows are the liquidity inflows limited to 75 % of liquidity outflows.

Inflow amount for cap excludes deposits placed with other institutions where exposure to the counterparty is to its parent undertaking, its subsidiary, a subsidiary of its parent undertaking and which meet the conditions in list A:

i. List A

- The counterparty is an institution, a financial institution or an ancillary services undertaking subject to appropriate prudential requirements.
- The counterparty is included in the same consolidation as the institution on a full basis.
- The counterparty is subject to the same risk evaluation, measurement and control procedures as the institution.
- The counterparty is established in the same Member State as the institution.
- There is no current or foreseen material practical or legal impediment to the prompt transfer of own funds or repayment of liabilities from the counterparty to the institution

Institutions exempt from limit the liquidity inflows from deposits placed with other institutions where the exposures to the counterparty is with which the institutions have entered into an institutional protection scheme that is a contractual or statutory liability arrangement which protects those institutions and in particular ensures their liquidity and solvency to avoid bankruptcy where necessary and which meet the conditions in list B:

ii. List B

- The requirements set out in points (i), (iv) and (v) of List A are met.
- The arrangements ensure that the institutional protection scheme is able to grant support necessary under its commitment from funds readily available to it.
- The institutional protection scheme disposes of suitable and uniformly stipulated systems for the monitoring and classification of risk, which gives a complete overview of the risk situations of all the individual members and the institutional protection scheme as a whole, with corresponding possibilities to take influence; those systems suitably monitor defaulted exposures.
- The institutional protection scheme conducts its own risk review which is communicated to the individual members.
- The institutional protection scheme draws up and publishes on an annual basis, a consolidated report comprising the balance sheet, the profit-and-loss account, the situation report and the risk report, concerning the institutional protection scheme as a whole, or a report comprising the aggregated balance sheet, the aggregated profit-and-loss account, the situation report and the risk report, concerning the institutional protection scheme as a whole.
- Members of the institutional protection scheme are obliged to give advance notice of at least 24 months if they wish to end the institutional protection scheme.
- The multiple use of elements eligible for the calculation of own funds (hereinafter referred to as “multiple gearing”) as well as any inappropriate creation of own funds between the members of the institutional protection scheme are eliminated.
- The institutional protection scheme is based on a broad membership of credit institutions of a predominantly homogeneous business profile.
- The adequacy of the systems referred to in points (iii) and (iv) is approved and monitored at regular intervals by the relevant competent authorities.

Institutions exempt liquidity inflows from monies due from borrowers and bond investors related to mortgage lending funded by bonds eligible (means covered bonds) from this limit.

Institutions exempt inflows from promotional loans that the institutions have passed through. Subject to the prior approval of the competent authority responsible for supervision on an individual basis, the institution may fully or partially exempt inflows where the provider is a parent or a subsidiary institution of the institution or another subsidiary of the same parent institution or linked to the institution by a relationship.

4.1.3.11 Calculation of Total Net Cash Outflow

This total net cash outflows is required to compute the denominator of the Liquidity Coverage Ratio.

The total net cash outflows is defined as the total expected cash outflows minus total expected cash inflows for the subsequent 30 calendar days. Total expected cash outflows are calculated by multiplying the outstanding balances of various categories or types of liabilities and off-balance sheet commitments by the rates at which they are expected to run off or be drawn down. Total expected cash inflows are calculated by multiplying the outstanding balances of various categories of contractual receivables by the rates at which they are expected to flow in up to an aggregate cap of 75% of total expected cash outflows.

Total net cash outflows over the next 30 days = Outflows - Min ((inflows – inflows cap exemption amount); 75% of outflows) + inflows cap exemption amount).

This requires that a bank must maintain a minimum amount of stock of HQLA equal to 25% of the total cash outflows.

Banks are not be permitted to double count items, that is, if an asset is included as part of the “stock of HQLA” (that is, the numerator), the associated cash inflows are not counted as cash inflows (that is,. part of the denominator). Where there is potential that an item is counted in multiple outflow categories, (example, committed liquidity facilities granted to cover debt maturing within the 30 calendar day period), a bank only has to assume up to the maximum contractual outflow for that product.

4.1.3.12 Calculation of Liquidity Coverage Ratio

Liquidity Coverage Ratio is calculated as below:

$$\text{Liquidity Coverage Ratio} = \frac{\text{Total Stock of High Quality Liquid Assets *100}}{\text{Total Net Cash Outflow}}$$

4.2 Net Stable Funding Ratio Calculation as Per Capital Requirements Regulation

4.2.1 Overview

The Net Stable Funding Ratio (NSFR) is defined as the amount of available stable funding relative to the amount of required stable funding. This ratio is equal to at least 100% on an ongoing basis. “Available stable funding” is defined as the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. The amount of such stable funding required ("Required stable funding") of a specific institution is a function of the liquidity characteristics and residual maturities of the various assets held by that institution as well as those of its off-balance sheet (OBS) exposures.

The NSFR aims to ensure that a firm has an acceptable amount of stable funding to support its assets and activities over the medium/long term (over a one year period).

$$\textbf{NSFR} = \frac{\textbf{Available amount of stable funding}}{\textbf{Required amount of stable funding}} \geq 100\%$$

4.2.1.1 Asset Reclassification Rules

Asset reclassification for EHQLA and HQLA are done as part of LCR process and remain valid for NSFR as well. In addition, the assets those are not classified under EHQLA or HQLA can be categorized to “Other Liquid Asset” or “Other Non Liquid Asset” based on below criteria.

a. EBA NSFR Domestic Currency Sovereign Bonds
Sovereign bonds issued in domestic currency rated below ECAI 2 OR of minimum issue size less then EUR 100 million (or the local currency equivalent) is reclassified as ‘Other Liquid Assets’. For this purpose the issuer type is considered as either Sovereign (that is, Central Government) or Central Banks.
b. Classified as ‘Other Liquid Assets’ when conditions mentioned in the below points are met else as ‘Other Non Liquid Assets’
c. BA NSFR EEA Currencies Bonds Issued by Local Government Institutions
Bonds issued by local government institutions in EEA currencies, rated below ECAI 2 OR of minimum issue size less than EUR 250 million (or the local currency equivalent) and a maximum time to maturity of 10 years is reclassified as ‘Other Liquid Assets’.
d. EBA NSFR ECAI 1 Rated Covered Bonds Issued by Credit Institutions
Covered bonds issued by Credit Institutions (including Banks) rated ECAI 1 (that is, of highest credit quality) having minimum issue size less than EUR 250 million
e. EBA NSFR RMBS Issued by Credit Institutions
RMBS issued by Credit Institutions (including Banks) rated ECAI 1 having minimum issue size less than of EUR 100 million (or the local currency equivalent)
f. EBA NSFR Common Equity Shares or Gold
Common equity shares or Gold funds not classified as HQLA when not central bank eligible but are tradable.
g. EBA NSFR Gold Funds
Gold funds not classified as HQLA when not central bank eligible but are tradable.
h. EBA NSFR Assets Backed Securities
Asset Backed Securities (including RMBS) not classified as HQLA when are tradable and central bank eligible. Also must be of highest credit quality (i.e. rated ECAI 1)
i. EBA NSFR Credit claims
Credit Claims when non-tradable and being central bank eligible

4.2.1.2 Business Assumptions

New business assumptions related to RSF are created to estimate the NSFR under stressed condition.

All these new business assumptions have the common assumption properties as defined below:

- Assumption Category: Value Change
- Assumption Sub Category: Required Stable Funding Factor
- Based On: Sub Account Balance
- Assumption Unit: Percentage
- Assumption Name: EBA NSFR RSF Assumption 1
- Assumption Description: Assets assigned a 0% RSF Factor
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Cash Central Bank Reserves	NA	EHQLA	NA	0%
Debt Security	Central Bank	EHQLA	Less Than 6 Months	0%

- Assumption Name: EBA NSFR RSF Assumption 2A
- Assumption Description: Assets assigned a 5% RSF Factor – Securities issued by Sovereigns, Central Banks and MDBs
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Definition				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Debt Security	Sovereigns MDBs and Supranational Institutions	EHQLA	NA	5%

Assumption Definition				
Debt Security	Central Bank	EHQLA	Greater Than or Equal to 6 Months	5%

- Assumption Name: EBA NSFR RSF Assumption 2B
- Assumption Description: Assets assigned a 5% RSF Factor – Other EHQLA Assets
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection		
LRM - Underlying Asset Level	LRM – NSFR Factor Status	Required Stable Funding Factor
EHQLA	Unassigned	5%

- Assumption Name: EBA NSFR RSF Assumption 3
- Assumption Description: Assets assigned a 10% RSF Factor
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

ssumption Parameter Selection					
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Party Type	LRM - Underlying Asset Level	LRM - Cash Flow Time Bucket	LRM - Re-Hypothecat ion Flag	Required Stable Funding Factor
Loans	Banks	EHQLA	Less Than 6 Months	Yes	10%
Loans	Banks	EHQLA	Less Than 6 Months	No	15%

- Assumption Name: EBA NSFR RSF Assumption 4
- Assumption Description: Assets assigned a 15% RSF Factor
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Debt Security Covered Bond	Sovereign Central Banks PSEs MDBs and Supranational Institutions Corporate	HQLA	NA	15%
Loans	Banks	HQLA Other Liquid Assets	Less Than 6 Months	15%

*Loans to Banks classified as EHQLA and qualifying for 15% RSF factor are included as part of business assumption 3

- Assumption Name: EBA NSFR RSF Assumption 5A
- Assumption Description: Assets assigned a 50% RSF Factor – Loans to Financial Institutions and Central Banks
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Loans	Banks Central Banks	HQLA Other Liquid Assets	Between 6 to 12 Months	50%

- Assumption Name: EBA NSFR RSF Assumption 5B
- Assumption Description: Assets assigned a 50% RSF Factor – Encumbered HQLA
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection			
LRM - LRM Standard Product Type (LEVEL 1)	LRM – Encumbrance Period Bands	LRM - Underlying Asset Level	Required Stable Funding Factor
LRM Standard Product Type	Between 6 to 12 Months	HQLA	50%

- Assumption Name: EBA NSFR RSF Assumption 5C
- Assumption Description: Assets assigned a 50% RSF Factor – RMBS and Corporate Debt Securities
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM - Basel Credit Rating	Required Stable Funding Factor
RMBS	NA	Other Liquid Assets	ECAI 1	50%
Debt Security	Corporate	Other Liquid Assets	ECAI 2 ECAI 3	50%

- Assumption Name: EBA NSFR RSF Assumption 5D
- Assumption Description: Assets assigned a 50% RSF Factor – Exchange Traded Equities
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM – Exchange Traded	Required Stable Funding Factor
Equity	Corporate	Other Liquid Assets	Yes	50%

- Assumption Name: EBA NSFR RSF Assumption 5E
- Assumption Description: Assets assigned a 50% RSF Factor – Operational Deposits
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection		
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Party Type	Required Stable Funding Factor
Operational Deposits Placed	Banks	50%

- Assumption Name: EBA NSFR RSF Assumption 5F
- Assumption Description: Assets assigned a 50% RSF Factor – Non HQLA Loans

Assumption Parameter Selection				
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Issuer Type	LRM - Underlying Asset Level	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Loans	Corporate Retail SME Sovereigns PSEs	Other Liquid Assets	Less Than 1 Year	50%

- Assumption Name: EBA NSFR RSF Assumption 6A
- Assumption Description: Assets assigned a 65% RSF Factor – Residential Mortgages
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection			
LRM - LRM Standard Product Type (LEVEL 1)	LRM – RML Qualifying Status	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Residential Mortgage	Yes	Greater than or Equal to 1 Year	65%

- Assumption Name: EBA NSFR RSF Assumption 6B
- Assumption Description: Assets assigned a 65% RSF Factor – Other unencumbered loans
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection					
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Party Type	LRM - Underlying Asset Level	LRM - Basel Credit	LRM - Cash Flow Time Bucket	Required Stable Funding

Assumption Parameter Selection					
			Rating		Factor
Loans	PSEs Corporate	Other Liquid Assets	ECAI 1	Greater than or Equal to 1 Year	65%
Loans	Sovereign Central Bank	Other Liquid Assets	ECAI 1 ECAI 2	Greater than or Equal to 1 Year	65%

- Assumption Name: EBA NSFR RSF Assumption 7A
- Assumption Description: Assets assigned an 85% RSF Factor - Loans
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection					
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Party Type	LRM - Underlying Asset Level	LRM - Basel Credit Rating	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Loans	PSEs Corporate	Other Liquid Assets Other Non Liquid Assets	Below ECAI 1	Greater than or Equal to 1 Year	85%
Loans	Sovereign Central Bank	Other Liquid Assets	Below ECAI 2	Greater than or Equal to 1 Year	85%
Loans	Retail	NA	NA	Greater than or Equal to 1 Year	85%

- Assumption Name: EBA NSFR RSF Assumption 7B
- Assumption Description: Assets assigned an 85% RSF Factor – Gold and other precious metals
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection	
LRM - LRM Standard Product Type	Required Stable Funding Factor
Gold Silver Precious Metals	85%

- Assumption Name: EBA NSFR RSF Assumption 7C
- Assumption Description: Assets assigned an 85% RSF Factor – Debt Securities
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection					
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Fully Performing Assets	LRM - Underlying Asset Level	LRM – Exchange Traded	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Debt Security	Yes	Other Liquid Assets Other Non Liquid Assets	NA	Greater than or Equal to 1 Year	85%

- Assumption Name: EBA NSFR RSF Assumption 7D
- Assumption Description: Assets assigned an 85% RSF Factor – Exchange Traded Equities
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection					
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Party Type	LRM - Underlying Asset Level	LRM – Exchange Traded	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Equity	Banks	Other Liquid Assets Other Non Liquid Assets	Yes	Greater than or Equal to 1 Year	85%

- Assumption Name: EBA NSFR RSF Assumption 8A
- Assumption Description: Assets assigned a 100% RSF Factor – Encumbered Assets
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection		
LRM - LRM Standard Product Type (LEVEL 1)	LRM – Encumbrance Period Bands	Required Stable Funding Factor
LRM Standard Product Type	Greater than or Equal to 1 Year	100%

- Assumption Name: EBA NSFR RSF Assumption 8B
- Assumption Description: Assets assigned a 100% RSF Factor – Loans to Financial Institutions
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection			
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Standard Party Type	LRM - Cash Flow Time Bucket	Required Stable Funding Factor
Loans	Banks	More than 1 Year	100%

- Assumption Name: EBA NSFR RSF Assumption 8C
- Assumption Description: Assets assigned a 100% RSF Factor – Non Performing Loans
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection		
LRM - LRM Standard Product Type (LEVEL 1)	LRM - Fully Performing Assets	Required Stable Funding Factor
Loans	No	100%

- Assumption Name: EBA NSFR RSF Assumption 8D
- Assumption Description: Assets assigned a 100% RSF Factor – Default assignment for all other assets
- Filter On: Amount Type = EOP Balance (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection	
LRM – NSFR Factor Status	Required Stable Funding Factor
Unassigned	100%

- Assumption Name: EBA NSFR RSF Assumption 9A
- Assumption Description: RSF Factor Assignment for Off Balance Sheet Assets – Credit Facilities
- Filter On: Amount Type = Undrawn Amount (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection		
LRM - LRM Standard Product Type (LEVEL 1)	LRM- Unconditionally Cancellable Limit Indicator	Required Stable Funding Factor
Line of Credit	No	5%
Line of Credit	Yes	0%

- Assumption Name: EBA NSFR RSF Assumption 9B
- Assumption Description: RSF Factor Assignment for Off Balance Sheet Assets – Trade Finance
- Filter On: Amount Type = Undrawn Amount (this can be added as a filter or alternatively using another source hierarchy on Amount Type dimension)

Assumption Parameter Selection	
LRM - LRM Standard Product Type (LEVEL 1)	Required Stable Funding Factor
Trade Finance	5%

After all the RSF factors based on business assumptions are run, the NSFR is calculated based on the below formula.

$$\textbf{NSFR} = \frac{\textbf{Available amount of stable funding}}{\textbf{Required amount of stable funding}}$$

4.2.2 Pre-configured Regulatory LCR Scenario

This section explains the business assumptions which support inflow and outflow percentage / rates as per:

- **Corrigendum to Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012**
- **DIRECTIVE 2013/36/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms**
- **EBA FINAL draft Implementing Technical Standards on supervisory reporting under Regulation (EU) No 575/2013**
- **Report on appropriate uniform definitions of extremely high quality liquid assets (extremely HQLA) and high quality liquid assets (HQLA) and on operational requirements for liquid assets under Article 509(3) and (5) CRR**

- **Implementing Technical Standards amending Commission Implementing Regulation (EU) No 680/2014 (ITS on supervisory reporting) with regard to the Liquidity Coverage Ratio (LCR)**

Note:

- For detailed Processes and Tasks, refer to the Run Chart.

4.2.2.1 Regulation Addressed through Business Assumptions

	Business Assumption Name	Business Assumption Description	EBA LCR Guideline Reference
1	EBA LCR Outflow Insured Operational Dep Run Off	Outflows from Insured Operational Deposits Run-Off	CRR Article 422(3)(a) + DA
2	EBA LCR Outflow Insured Non-Operational Dep Run Off	Outflows from Insured Non-Operational Deposits Run-Off	CRR Article 422(3)(a) + DA
3	EBA LCR Outflow Uninsured Operational Dep Run Off	Outflows from Uninsured Operational Deposits Run-Off	CRR Article 422(3)(a) + DA
4	EBA LCR Outflow Oper-Dep Recvd As Cntrl Cred Inst Run-Off	Outflows from Run-Off of Operational Deposits placed at Central Credit Institution, considered as HQLA by depositing institution	CRR Article 422(3)(d) + DA
5	EBA LCR Outflow Uninsured Non-Operational Dep Run Off	Outflows from Uninsured Non-Operational Deposits Run-Off	CRR Article 422(3)(a) + DA
6	EBA LCR Outflow Insured Retail Dep Run Off	Outflows from Insured Retail Deposits Run-Off	CRR Article 421(1)(a) + DA
7	EBA LCR Outflow Uninsured Retail Dep Run Off	Outflows from Uninsured Retail Deposits Run-Off	CRR Article 421(2) + DA
8	EBA LCR Outflow Retail Deposits Higher Run Off	Outflows from Uninsured Retail Deposits Higher Run-Off Categories	CRR Article 421(3) + DA
9	EBA LCR Outflow Third Country Retail Dep Higher Run Off	Outflows from Higher Run-Off of Retail Deposits taken	CRR Article 421(4) + DA

	Business Assumption Name	Business Assumption Description	EBA LCR Guideline Reference
		in Non EEA Country	
10	EBA LCR Outflow Non-EHQLA Coll Post Derivative	Additional Outflows due to Valuation Changes in Non-EHQLA collateral posted for Derivatives	CRR Article 423(1) + DA
11	EBA LCR Outflow Credit Rating Downgrade	Additional Outflows due to additional collateral requirement caused by Credit Rating downgrade	CRR Article 423(2) + DA
12	EBA LCR Outflow Short Position Wth No Undrly Cover Pos	Additional Outflows due to Short Position delivery within liquidity horizon and Institution does not possess securities to be delivered	CRR Article 423(4) + DA
13	EBA LCR Addl Outflow Short Position Wth Undrly Cover Pos	Additional Outflows due to Short Position delivery within liquidity horizon and Institution owns or has borrowed securities to be delivered	CRR Article 423(4) + DA
14	EBA LCR Outflow Excess Collateral Call Val	Additional Outflows due to excess collateral held by institution that can be contractually called at any time	CRR Article 423(5)(a) + DA
15	EBA LCR Outflow Due Collateral Val Chn	Additional Outflows due to collateral that is due to be returned	CRR Article 423(5)(b) + DA
16	EBA LCR Outflow Cont Fundg Drawdown Trade Finance	Outflows from Contingent Funding Obligation - Off Balance Sheet Trade Finance	CRR Article 420(2) + DA
17	EBA LCR Outflow Cont Fundg Drawdown Committed Revocable Fac	Outflows from Contingent Funding Obligation - Undrawn Committed	CRR Article 420(2) + DA

	Business Assumption Name	Business Assumption Description	EBA LCR Guideline Reference
		Revocable Credit & Liquid facilities	
18	EBA LCR Outflow Cont Fundg Drwdwn Ret Committed Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to Retail Customers	CRR Article 424(2) + DA
19	EBA LCR Outflow Cont Fundg Non-Ret Non-Fin Comm Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to Non-Retail Non-Financial Customers	CRR Article 424(3)(a)(b) + DA
20	EBA LCR Outflow Cont Fundg Sspe Committed Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to SSPE	CRR Article 424(4) + DA
21	EBA LCR Outflow Cont Fundg Non-Ret Fin Comm Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to Non-Retail Financial Customers	CRR Article 424(5)(c) + DA
22	EBA LCR Outflow Cont Fundg Committed Irrevcbl Promo Loan Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued for directly or indirecly funding Promotional Loans	CRR Article 424(6) + DA
23	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By Liq Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from	CRR Article 422(2)(a)

	Business Assumption Name	Business Assumption Description	EBA LCR Guideline Reference
		Exposure covered up to value of HQLA Mitigants	
24	EBA LCR Outflow Sl And Cap Mkt - Cb Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure to the extent not covered by HQLA Mitigants and Lender is Central Bank	CRR Article 422(2)(e)
25	EBA LCR Outflow Sl And Cap Mkt - Uncovered Exp Run Off	Outflows from Secured Lending and Capital Market Transactions - Run-Off from portion of Exposure not covered by Mitigants	CRR Article 422(2)(a)
26	EBA LCR Outflow Sl Cap Mkt Oth Enty Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Other Entities Exposure covered by Non-HQLA Mitigants	CRR Article 422(2)(c)
27	EBA LCR Outflow Sl Cap Mkt Sov Mdb Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Sovereign and MDB Exposures covered by Non-HQLA Mitigants	CRR Article 422(2)(d)
28	EBA LCR Outflow Sl Ans Cap Mkt Pse Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Public Sector Entities Exposures covered by Non-HQLA Mitigants	CRR Article 422(2)(d)
29	EBA LCR Inflow Undrawn Credit Or Liquidity Fac	Inflows from Undrawn credit or liquidity facilities from Intra-Company or Central Credit Institutions	CRR Article 425(4)

	Business Assumption Name	Business Assumption Description	EBA LCR Guideline Reference
30	EBA LCR Inflow Non Financial Customers	Inflows from Monies due from Non-Financial Customers	CRR Article 425(2)(a)
31	EBA LCR Inflow Open Maturity Assets Run Off	Inflow from Monies due from Undefined Contractual End Date Assets	CRR Article 425(2)(c)
32	EBA LCR Inflow Placed Operational Deposits Run Off	Inflows from Operational Deposits placed with other institutions and have not been already accounted as Liquid Asset	CRR Article 422(3)(a) + DA
33	EBA LCR Inflow Placed Non-Operational Deposits Run Off	Inflows from Non-Operational Deposits placed with other institutions	CRR Article 422(3)(a) + DA
34	EBA LRM Inflow Secured Lending And Capital Market Txn	Inflows from Secured Lending and Capital Market Driven Transactions in the liquidity horizon	CRR Article 425(2)(d)
35	EBA LCR Inflow Major Index Equity Investment	Inflows from position in Major index equity instrument and have not been already accounted as Liquid Asset	CRR Article 425(2)(f)

4.3 Liquidity Coverage Ratio Calculation as Per Delegated Act

4.3.1 Overview

The EBA Delegated Act (DA) Liquidity Coverage Ratio calculations cater to the guidelines on liquidity coverage requirement for Credit Institutions that were published by the European Commission in October 2014 as a supplement to Regulation (EU) 575/2013. The Commission proposed a number of adjustments to reflect the Union specificities, most notably for certain covered bonds and securitized assets.

Liquidity coverage ratio addresses the short-term liquidity needs of an institution during a stress situation. It estimates whether the stock of high quality liquid assets is sufficient to cover the net cash outflows under stress situations over a specified future period, in general, lasting 30 calendar days (or LCR horizon). Liquidity coverage ratio is calculated at the legal entity level, on a standalone and consolidated basis.

4.3.2 Inputs

LRM application requires the below inputs for LCR calculation:

- Liquidity haircut for each asset level, which are provided through business assumption with assumption category as valuation change and assumption sub category as haircut.
- Business assumption that defines the outflow percentage. It is defined through appropriate business assumptions. For example, retail deposit Run off is defined through business assumption with category as incremental cash flow and sub category as Run-off.
- Business assumption that defines the inflow percentage. It is defined through appropriate business assumptions. For example, Roll over reverse repo is defined through business assumption with category as cash flow movement and sub category as roll over.
- Liquidity Horizon is specified as the Run time parameter

4.3.3 Process Flow

This section provides a high level LCR Calculation Process Flow (Under EBA Delegated Act):

- Identification of Asset Levels
- Identification of Eligible HQLA
- Calculation of Stock of HQLA
- Operational Amount Calculation
- Deposit Stability Identification
- Cash Flow Aggregation
- Business Assumption

- Cash Inflows and Outflows
- Calculation of Liquidity Coverage Ratio

The application supports an out-of-the-box delegated act LCR calculation that has the regulatory scenarios with associated HQLA haircuts, inflow and outflow rates pre-configured in the form of business assumptions as prescribed by the European Banking Authority as part of the Commission Delegated Regulation (EU) 2015/61.

4.3.3.1 Identification of Asset Levels

High quality liquid assets are assets that can be easily sold or used as collateral to obtain funds at little or no loss of value even under stress scenarios. All assets, whether owned by the bank or received from counterparties as collateral, that meet the high quality liquid asset criteria specified by BIS, are classified as follows :

- Level 1 Assets
- Level 2A Assets
- Level 2B Assets

Level 1 assets excluding covered bonds can be included without limit, level 1 covered bonds can only comprise 70% of the stock of level 1 assets and Level 2 assets can only comprise 40% of the stock of HQLA. Of this, Level 2B assets can only comprise of 15% of stock of HQLA. Any asset not classified as an HQLA are considered an Other Asset.

Note:

i. The application assigns relevant regulatory haircut to each asset classified as HQLA as part of the pre-configured regulatory scenario. This haircut can be modified by the user for the purposes of stress testing.
ii. The value included in the stock of HQLA is net of any hedge termination cost or gain, as applicable.

4.3.3.1.1 Identification and Treatment of Level 1 Assets

The application identifies the following assets as HQLA Level 1 assets:

1. Cash which includes coins, banknotes and restricted cash. The value included in the stock of HQLA is the cash balance Central bank reserves, to the extent that the central bank policies allow them to be drawn down in times of stress. These include bank’s overnight deposits and term deposits that can be withdrawn immediately Central bank reserves, include the balance held by a bank with the central bank directly, or through a correspondent bank less any minimum reserve requirement. The value of eligible term deposits that is included is the amount net of any withdrawal penalty.

2. Assets issued or guaranteed by one of the following:

   - European Central Bank or the

- Central bank of a Member State
- Central government of a Member State

3. Assets which satisfy the following conditions:
   - Issuer type or guarantor type is one of the following:
     - Central bank
     - Central Government
   - The party, i.e. issuer or guarantor, belongs to a third country.
   - The party is assigned a minimum of credit quality step 1 credit assignment.
4. Assets which satisfy the following conditions:
   - Issuer type or guarantor type is one of the following:
     - Regional Government
     - Local Authority
     - Public Sector Entity
   - The exposure to the party is treated similar to the exposure to its respective central government, whether belonging to a Member State or a third country.
5. Assets which satisfy the following conditions:
   - Issuer type or guarantor type is one of the following:
     - Central bank
     - Central Government
   - The party, i.e. issuer or guarantor, belongs to a third country.
   - The party is not assigned a credit quality step 1 credit assessment.

   Such assets are included in the stock of HQLA only up to the extent of the bank's net stressed cash outflows in that currency arising from bank's operations in that foreign jurisdiction.
6. Assets which satisfy the following conditions:
   - Issuer type or guarantor type is one of the following:
     - International Organization
     - Multilateral Development Bank
   - The party is assigned a credit quality step 1 credit assessment.
7. Assets issued by credit institutions which satisfy the following criteria:

- The institution is backed by a Member State central government, regional government or local authority
- The exposure to the regional government or local authority is treated similar to the exposure to its respective central government.
- The backing authority is obligated to ensure the financial viability of the institution.

8. Assets issued by credit institutions which satisfy the following criteria:
   - The institution is a promotional lender
   - 90% of its loan is guaranteed a Member State central government, regional government or local authority
   - The exposure to the regional government or local authority is treated similar to the exposure to its respective central government.
9. Covered bonds which satisfy the following criteria:
   - Are subject to special supervision which protects bondholders and whose proceeds are invested in a manner that enables the issuer to pay claims on the bonds when they arise.
   - Have an issue size of at least EUR 500 million
   - Are assigned a minimum of credit quality step 1 credit assessment or a risk weight of <=10%
   - Not more than 15% of outstanding issue of covered bond is collateralized by assets issued by institutions assigned a credit quality step 1
   - The institution and issuer meet the transparency requirements which accord preferential treatment to covered bonds.
   - The underlying asset pool is in excess of 2% of the outstanding amount of the covered bond.
10. Sight deposits of the credit institution, which belongs to an institutional protection scheme or a cooperative network, maintained with the central institution of the network, where the central credit institution is legally required to invest the deposit amount in liquid assets of a specified level. The amount included in the stock of level 1 assets is that portion of the deposit which is invested in Level 1 assets.
11. Assets issued by credit institutions which satisfy the following conditions:
    - Guarantor type is one of the following:
      - Central Government
      - Regional Government
      - Local Authority

- The guarantor belongs to a Member State.
- The exposure to the guarantor is treated similar to the exposure to its respective central government.
- The guarantee was given prior to 30 June 2014.
- The guarantee is direct, explicit, irrevocable and unconditional and covers the failure to pay principal and interest when due.

The amount included in the stock of HQLA is only to the extent guaranteed prior to 30 June 2014.

12. Senior bonds issued by member state-sponsored impaired assets management agencies of the following countries:
    - Ireland
    - Spain
    - Slovenia

Such bonds are included in the stock of HQLA only till 31 December 2023.

13. Investments in Collective Investment Units (CIUs) which satisfy the following criteria:
    - The following information relating to the CIU is published:
      - The categories of assets in which the CIU is authorized to invest
      - if investment limits apply, the relative limits and the methodologies to calculate them
      - business of the CIU on an annual basis
    - The underlying assets of the CIU are liquid assets which are classified as level 1 assets. This is classified by the application.
      - Should not be self-issued
      - The issuer is subject to special supervision and it ensures sufficient cooperation with competent authority

    Note:

    The maximum value of investment in CIUs by a particular entity included in stock of HQLA is EUR 500 million across all CIUs held by the entity.

The application assigns and applies a 0% haircut to all assets classified as level 1 except covered bonds and CIU’s. Covered bonds classified as level 1 assets are assigned a haircut of 7%.

CIUs classified as level 1 assets, are assigned haircuts as below:

- 0% on coins, banknotes and exposures to central banks

    - 12% on covered bonds
    - 5% on other level 1 assets

4.3.3.1.2 Identification and Treatment of Level 2A Assets

The application identifies the following assets as HQLA Level 2A assets:

1. Assets which satisfy the following conditions:
    - Issuer type or guarantor type is one of the following:
        - Regional Government
        - Local Authority
        - Public Sector Entity
    - The party, i.e. issuer or guarantor, belongs to a Member State
    - The exposure is assigned a risk weight of <=20%
2. Assets which satisfy the following conditions:
    - Issuer type or guarantor type is one of the following:
        - Central Bank
        - Central Government
        - Regional Government
        - Local Authority
        - Public Sector Entity
    - The party, i.e. issuer or guarantor, belongs to a third country.
    - The exposure is assigned a risk weight of <=20%
3. Covered bonds which satisfy the following criteria:
    - Are subject to special supervision which protects bondholders and whose proceeds are invested in a manner that enables the issuer to pay claims on the bonds when they arise.
    - Have an issue size of at least EUR 250 million
    - Are assigned a minimum of credit quality step 2 credit assessment or a risk weight of <=20%
    - Not more than 15% of outstanding issue of covered bond is collateralized by assets issued by institutions assigned a credit quality step 1
    - The institution and issuer meet the transparency requirements which accord preferential treatment to covered bonds.

- The underlying asset pool is in excess of 7% of the outstanding amount of the covered bond when the issue size is >= 500 EUR million.
- The underlying asset pool is in excess of 2% of the outstanding amount of the covered bond when the issue size is >=250 and <500 EUR million provided the bonds are assigned a minimum credit quality step 1 credit assessment or risk weight of <=10%.

4. Covered bonds issued by credit institutions in third countries which satisfy the following criteria:
   - Are subject to special supervision, in the third country, which protects bondholders and whose proceeds are invested in a manner that enables the issuer to pay claims on the bonds when they arise.
   - Have an issue size of at least EUR 250 million
   - Are assigned a minimum of credit quality step 1 credit assessment or a risk weight of <=10%
   - Not more than 15% of outstanding issue of covered bond is collateralized by assets issued by institutions assigned a credit quality step 1
   - The institution and issuer meet the transparency requirements which accord preferential treatment to covered bonds.
   - The underlying asset pool is in excess of 7% of the outstanding amount of the covered bond when the issue size is >= 500 EUR million and 2% of the outstanding amount when the issue size is >=250 and <500 EUR million.
   - Backed by a pool of assets of one or more of the types mentioned below:
     - Debt securities, issued or guaranteed by third country's central government or central bank or multilateral development bank or international organization that are assigned a minimum of credit quality step 1
     - Debt securities, issued or guaranteed by third country's public sector entity or regional government or local authority bank that are assigned a minimum of credit quality step 1, and the exposure is assigned a minimum of credit quality step 2
     - Residential loans having a maximum loan-to-value (LTV) ratio of 80% and assigned a risk weight <= 35%
     - Loans secured by commercial immovable property having maximum LTV ratio of 60%
     - Maritime loans having a maximum LTV ratio of 60%
5. Corporate debt securities which satisfy the following conditions:

    - Are assigned a rating of credit quality step 1 or risk weight <= 20%
    - The issue size is >= EUR 250 million
    - The time to maturity when the security was issued was <=10 years

6. Sight deposits of the credit institution, which belongs to an institutional protection scheme or a cooperative network, maintained with the central institution of the network, where the central credit institution is legally required to invest the deposit amount in liquid assets of a specified level. The amount included in the stock of level 2A assets is that portion of the deposit which is invested in Level 2A assets.
7. Investments in Collective Investment Units (CIUs) which satisfy the following criteria:
    - The following information relating to the CIU is published:
        - the categories of assets in which the CIU is authorized to invest
        - if investment limits apply, the relative limits and the methodologies to calculate them
        - business of the CIU on an annual basis
    - The underlying assets of the CIU are liquid assets which are classified as level 2A assets. This is classified by the application.
    - Should not be self-issued
    - The issuer is subject to special supervision and it ensures sufficient cooperation with competent authority

Note:
The maximum value of investment in CIUs by a particular entity included in stock of HQLA is EUR 500 million across all CIUs held by the entity.

The application assigns and applies a 15% haircut to all assets classified as level 2A except CIU's. CIU's classified as level 2A assets are assigned a haircut of 20%.

4.3.3.1.3 Identification and Treatment of Level 2B Assets

The application identifies the following assets as HQLA Level 2B assets:

1. Asset backed security meeting below mentioned criteria:
    - Has a rating of at least credit quality step 1 or risk weight up to 20%
    - Are Senior bonds
    - Underlying asset are one of the following types:
        - First lien residential loan having either maximum Loan-To-Value ratio (LTV) of 80% or maximum Loan-To-Income ratio (LTI) of 60%
        - Fully Guaranteed Residential Loans

   - Commercial Loans or Leases or Credit Facilities
   - Auto Loans or Leases
   - Personal Loans or Credit Facilities
- Are not self-issued

Asset backed securities fulfilling above criteria, are assigned haircuts as below:

- 25% on first lien residential loans, fully guaranteed residential loans, and auto loans and leases
- 35% on commercial loans, leases, credit facilities, or personal loans

2. Corporate debt securities which satisfy the following conditions:
   - Are assigned a minimum rating of credit quality step 3 or risk weight >= 20% and <=100%
   - The issue size is >= EUR 250 million
   - The time to maturity when the security was issued was <=10 years

   The application assigns and applies a 50% haircut to all corporate debt securities classified as level 2B.

3. Shares which satisfy the following conditions:
   - Are a component of a major stock index
   - Issuer type is not a financial institution or its affiliated entities
   - Price has not decreased or haircut has not increased by more than 40% over a 30-day period during a relevant period of significant liquidity stress which is specified by the bank
   - Are denominated in the domestic currency of the legal entity's home jurisdiction. If denominated in a foreign currency, they are included in the stock of HQLA as level 2B assets only to the extent of the bank's net stressed cash outflows in that currency arising from bank's operations in that foreign jurisdiction.

   The application assigns and applies a 50% haircut to all shares classified as level 2B.

4. Restricted-use committed liquidity facility provided by the following:
   - European Central Bank
   - Central Bank of a Member State
   - Central Bank of a third country

The application assigns and applies a 0% haircut to all restricted-use committed liquidity facility classified as level 2B.

5. Exposures in the form of extremely high quality covered bonds meeting below mentioned criteria's:
   - Issue size of at least EUR 250 million
   - Institution periodically receives information about pool, geographical distribution, maturity structure, loan percentage more than 90 days past due
   - The underlying asset pool is in excess of 10% of the outstanding amount of the covered bond
   - National law to protect bondholders supervises issuer and the covered bonds. The laws of third countries are at least equal to respective union laws
   - Backed exclusively by a pool of assets having below mentioned asset types fulfilling accompanying criteria:
     - Debt security issued or guaranteed by member state's central government or central bank or ECB or public sector entity or regional government or local authority
     - Residential loan having maximum Loan-To-Value ratio (LTV) of 80% and risk weight up to 35%
     - Residential loan fully guaranteed by eligible credit protection provider having maximum Loan-To-Income ratio (LTI) of 33%

   The application assigns and applies a 30% haircut to all covered bonds classified as level 2B.
6. Sight deposits of the credit institution, which belongs to an institutional protection scheme or a cooperative network, maintained with the central institution of the network, meeting one of the following criteria:
   - The central credit institution is legally required to invest the deposit amount in liquid assets of a specified level, and has invested the deposit amount in level 2B liquid assets. In this case, the amount included in the stock of level 2B assets is that portion of the deposit which is invested in Level 2B assets.
   - The central credit institution has no obligation to invest the deposit amount in liquid assets
7. Liquidity Facility provided by central institution of an institutional network of cooperative banks or institutional protection scheme. Considered as level 2B up to portion of funding not collateralized by any specific liquid asset

The application assigns and applies a 25% haircut such liquid facilities classified as level 2B.

8. Non-interest bearing asset which satisfy the following conditions:
   - Issuer type or guarantor type is one of the following:
     - Central Bank
     - Central Government
     - Regional Government
     - Local Authority
     - Public Sector Entity
   - The party, i.e. issuer or guarantor, belongs to a third country.
   - The exposure is assigned a minimum rating of credit quality step 5 or risk weight of <=100%
   - Is not an obligation of a financial institution or any of its affiliated entities

   The application assigns and applies a 50% haircut to all non-interest bearing assets classified as level 2B.

9. Asset backed security meeting below mentioned criteria's:
   - Has a rating of at least credit quality step 1 or risk weight up to 20%
   - Is a Senior bond
   - Underlying asset pool is First lien residential loan having maximum Loan-To-Value ratio (LTV) of > 80% and maximum Loan-To-Income ratio (LTI) of > 45%
   - Are not self-issued
   - Asset backed security issue date >= 1-Oct-2015 meets below criteria:
     - Underlying of Asset Based Security is not subject to Loan-to-Income Ratio
     - Underlying Loan is issue date <1-Oct-2015
     - Such Asset backed security are included in the stock of HQLA only till 1-October-2025

10. Investments in Collective Investment Units (CIUs) which satisfy the following criteria:
    - The following information relating to the CIU is published:
      - the categories of assets in which the CIU is authorized to invest
      - if investment limits apply, the relative limits and the methodologies to calculate them

    - business of the CIU on an annual basis
  - The underlying assets of the CIU are liquid assets which are classified as level 2B assets. This is classified by the application.
  - Should not be self-issued
  - The issuer is subject to special supervision and it ensures sufficient cooperation with competent authority

    Note:

    The maximum value of investment in CIUs by a particular entity included in stock of HQLA is EUR 500 million across all CIUs held by the entity.

CIUs classified as level 2B assets are assigned haircuts as below:

- 30% on level 2B securitizations backed by residential and auto loans
- 35% on level 2B covered bonds
- 40% on level 2B securitizations backed by commercial and personal loans
- 55% on level 2B corporate bonds, shares and non-interest Bearing assets

4.3.3.2 Identification of Eligible HQLA

The application identifies whether a bank's asset, or a mitigant received under re-hypothecation rights meets all the operational requirements prescribed by the regulator. If an asset classified as HQLA meets all the relevant general requirements and operational criteria it is identified as eligible HQLA and included in the stock of HQLA. The application checks for the following general requirements and operational criteria:

- Unencumbered

  The application looks at the encumbrance status and includes only those assets in the stock which are unencumbered. If partially encumbered, then the portion of the asset that is unencumbered is considered as HQLA and included in the stock. If an asset is pledged to the central bank or a PSE, but is not used, the unused portion of such an asset is included in the stock. The application assigns the usage of a pledged asset in the ascending order of asset quality i.e. the lowest quality collateral is marked as used first.

- Exclusion of Certain Re-hypothecated Assets
  - Any asset that a bank receives under a re-hypothecation right is not considered eligible HQLA if the counterparty or beneficial owner of the asset has a contractual right to withdraw the asset at any time within 30 calendar days.
- Operational Capability to Monetize HQLA
  - An asset is considered HQLA only if the bank has ready access to their liquid asset holdings, demonstrated the operational capability to monetize such an asset and has

periodically monetized such an asset via outright sale or repurchase agreement. The application captures this information for each asset as a flag.

- HQLA Under the Control of the Liquidity Management Function
  - To be considered eligible HQLA the asset are required to be under the control of the management function of the bank that manages liquidity. The application captures this information for each asset as a flag.
- Termination of Transaction Hedging HQLA
  - If a HQLA is hedged by a specific transaction, then the application considers the impact of closing out the hedge to liquidate the asset that is, the cost of or gain from terminating the hedge while computing the stock of HQLA. The hedge termination cost or gain is adjusted to the market value of the asset for inclusion in the stock of HQLA.
- Exclusion of Certain Issuers
  - An asset issued by the institution, its parent, subsidiaries or affiliates does not qualify to be included in the stock of HQLA. The application identifies the self-issued flag based on the issuer of the asset and excludes self-issued assets from the stock of HQLA. Similarly, certain assets issued by financial institutions are excluded from the stock of HQLA. This is addressed during the classification of an asset as an HQLA.
  - Liquid and readily marketable

    The application checks the following criteria for determining whether an asset is liquid and readily marketable:

    - Availability of timely and observable market prices
    - Listed on a recognized exchange
    - High trading volumes
    - Presence of active secondary market
    - Presence of a two-way market

    This is addressed during the classification of an asset as an HQLA.

4.3.3.3 Calculation of Stock of HQLA

A minimum of 30% of liquidity buffer has to be comprised of Level 1 assets excluding Covered Bonds.

Total Unadjusted L1 excl. EHQCB liquidity buffer = A

Adjusted L1 excl EHQCB Assets = A + Inflow – Outflow = B

Total Unadjusted L1 EHQCB assets = C

Adjusted L1 EHQCB assets (before Cap) = C + Inflow – Outflow = D

Minimum of 30% has to be comprised of Level 1 liquid assets excluding covered bonds. So the Cap adjusted L1A EHQCB is derived as below:

Adjusted L1 EHQCB assets (after Cap) = Minimum (D, B*70/30) = E

Excess L1 EHQCB Assets = D – E = F

Total unadjusted L2A Assets = G

Adjusted L2A (before Cap) = G + Inflow – Outflow = H

Level 2 Assets (level 2A + Level 2B) can be of maximum 40% of the total Liquid assets and minimum of 30% has to be comprised of Level 1 liquid assets excluding covered bonds. So the Cap adjusted L2A is derived as below:

Adjusted L2A (after Cap) = Minimum (H, (B+E) * 40/60, Max (B*70/30 – E, 0)) = I

Excess L2A Assets = H – I = J

Total unadjusted L2B Assets = K

Adjusted L2B (before Cap) = K + Inflow – Outflow = L

In addition to Level 2 and Level 1 asset composition rules, Level2B assets can be of maximum 15% of total liquid assets:

Adjusted L2B (after Cap) = Minimum (L, (B+E+I) * 15/85, Max ((B+E)*40/60 – I), Max (B*70/30 – E – I, 0)) = M

Excess L2B Assets = L – M = N

Total Excess Liquid Assets = F + J + N = P

Total HQLA = A + C + G + K – Minimum ((A+C+G+K), P)

4.3.3.4 Operational Amount Calculation

The application supports a new methodology to compute the operational portion of the EOP balance of operational deposits. The regulation requires banks to apply the lower outflow rate only on that portion of the operational deposit balance that is truly held to meet operational needs.

The steps involved in computing the operational balance are as follows:

1. All deposits classified as operational as per regulatory guidelines are identified. This is a separate process in LRM.
2. The EOP balances of eligible operational accounts are obtained over a user defined historical window including the As of Date. To identify historical observations, the f_reporting_flag has to be updated as 'Y' for one execution of the Run per day in the LRM Run Management Execution Summary UI. The application looks up the balance for such accounts against the Run execution for which the Reporting Flag is updated as "Y" for each day in the past. The historical window is captured in the Set up Master as part of the parameter named DAYS_HIST_OPER_BAL_CALC_UPD.
3. A rolling 5 day average is calculated for each account over the historical window.
4. The average of the 5-day rolling averages computed in step is calculated.
5. The operational balance is calculated as Minimum (Current EOP Balance; Average computed in step 4).
6. The non-operational balance is calculated as Current EOP Balance – Operational Balance.
7. The operational insured balance is calculated as Minimum (Operational Balance; Insured Balance). The insured and uninsured balances are calculated as part of a separate process.
8. The operational uninsured balance is calculated as Operational Balance – Insured Operational Balance.
9. The non-operational insured balance is calculated as Minimum [Non-operational Balance; (Insured Balance – Insured Operational Balance)].
10. The non-operational uninsured balance is calculated as Non-operational Balance – Insured Non-operational Balance.

The operational deposit computation process is illustrated below assuming a 15-day historical window instead of 90-days and for the As of date 28th February 2017. The historical balances for 15-days including the As of date are provided below.

Clients With Operational Accounts	Eligible Operational Accounts	Historical Time Window														As of Date
		2/14/2017	2/15/2017	2/16/2017	2/17/2017	2/18/2017	2/19/2017	2/20/2017	2/21/2017	2/22/2017	2/23/2017	2/24/2017	2/25/2017	2/26/2017	2/27/2017	2/28/2017
A	10001	102,000	102,125	102,250	102,375	102,500	102,625	102,750	102,875	103,000	103,125	103,250	103,375	103,500	103,625	103,750
	10296	23,500	23,550	23,600	23,650	23,700	23,750	23,800	23,850	23,900	23,950	24,000	24,050	24,100	24,150	24,200
B	31652	65,877	59,259	59,234	59,209	59,184	59,159	59,134	59,109	59,084	59,059	59,034	59,009	58,984	58,959	58,934

The rolling averages and cumulative average are computed as follows:

Clients with Operational Accounts	Eligible Operational Accounts	5-day Rolling Average											Cumulative Average (a)
		2/18/2017	2/19/2017	2/20/2017	2/21/2017	2/22/2017	2/23/2017	2/24/2017	2/25/2017	2/26/2017	2/27/2017	2/28/2017	
A	10001	102,250	102,375	102,500	102,625	102,750	102,875	103,000	103,125	103,250	103,375	103,500	95136

Clients with Operational Accounts	Eligible Operational Accounts	5-day Rolling Average											Cumulative Average (a)
		2/18/2017	2/19/2017	2/20/2017	2/21/2017	2/22/2017	2/23/2017	2/24/2017	2/25/2017	2/26/2017	2/27/2017	2/28/2017	
	10296	23,600	23,650	23,700	23,750	23,800	23,850	23,900	23,950	24,000	24,050	24,100	22721
B	31652	60,553	59,209	59,184	59,159	59,134	59,109	59,084	59,059	59,034	59,009	58,984	56931

The operational and non-operational balances are computed as follows:

Clients with Operational Accounts	Eligible Operational Accounts	Current Balance (b)	Operational Balance (c = a – b)	Non-Operational Balance	Insured Balance	Uninsured Balance	Insured Operational Balance	Uninsured Operational Balance	Insured Non-Operational Balance	Uninsured Non-Operational Balance
A	10001	103,750	95,136	8,615	100,000	3,750	95,136		4,865	3,750
	10296	24,200	22,721	1,480		24,200		22,721		1,480
B	31652	58,934	56,931	2,003	58,934		56,931		2,003	

Note:

1. Negative historical balances are replaced by zero for the purposes of this computation.
2. For operational accounts that have an account start date >= 90 historical days including the As of Date, missing balances are replaced by previous available balance.
3. For operational accounts that have an account start date < 90 historical days including the As of Date:
    i. Missing balances between account start date and As of Date are replaced by previous available balance.
    ii. Rolling average is calculated only for the period from account start date to the As of Date.

4.3.3.5 Deposit Stability Identification

A stable deposit is a deposit whose outstanding balance is either fully or partially covered by deposit insurance provided by the relevant national deposit insurance organization and which satisfies one of the following conditions

It is held in a transactional account by the depositor

Or

The depositor has an established relationship with the reporting legal entity.

The first step in identifying deposit stability is to allocate deposit insurance limit at an account level. Deposit insurance limit is typically available at a legal entity-customer combination and sometimes at a legal entity-customer-ownership category combination. The application requires users to provide the following parameters for the purposes of allocating insurance at an account levelOwnership Category

OFS LRM obtains the insurance limit for each customer per ownership category level as download. Ownership categories include single accounts, joint accounts, trusts etc. Some jurisdictions provide for a separate limit to a customer based on the ownership category of accounts. If a particular customer gets a single limit irrespective of whether the accounts are held as single, joint or a combination, the ownership category should have a single default value.

1. Product Type

   This is a list of product types that are covered under the respective jurisdiction’s deposit insurance scheme. The insurance limit is allocated on priority basis or proportionately to only those accounts of a customer whose product types matches those that are covered by the deposit insurance.

2. Product Type Prioritization

   The sequence in which the insured amount is to be allocated to each product type is captured. For instance, the product prioritization may be specified as current account, savings account and term deposit. This means that the insured amount is allocated first to current account held by the customer. After current accounts have been fully covered, the remaining amount is allocated to savings accounts and finally to term deposits.

NOTE: In case product type prioritization is not specified, the default allocation will be proportionate to the EOP balance of each account irrespective of the product type.

3. Currency Eligibility for Insurance

   This is a list of currencies in which the accounts are denominated that are eligible for insurance coverage under a deposit insurance scheme. Some jurisdictions cover foreign currency deposits under their deposit insurance schemes. If eligible currencies are specified for the purpose of insurance, then the insured balance is allocated to all accounts belonging to the particular legal entity which have the associated attributes required for assigning the insured balance.

4. Insurance Limit

   This is the deposit balance of a given customer that is covered under the deposit insurance scheme. Customers having account in multiple legal entities get a separate deposit insurance limit per legal entity.

   Once the insurance parameters are provided, the application allocates the insurance limit to all eligible accounts for a particular customer under a given ownership category as per the procedure given below:

a. Arrange all accounts in the descending order of their outstanding balances.

b. Allocate the insurance limit available to account 1 to n – 1 as per the formula given below:

$$\boldsymbol{Insured\ Amount = If}\ [\{(\boldsymbol{Insurance\ Limit\ Available - Outstanding\ Balance}) \geq \boldsymbol{0}\}; \boldsymbol{Outstanding\ Balance\ else\ 0}]$$

Where,

Insurance Limit Available : Limit available post allocation to previous accounts

= Insurance Limit Available$_{x-1}$ – Insured Amount $_{x-1}$

x : Number of accounts up to the current account to which insured amount is to be allocated

n : Total number of accounts of a customer which are eligible for insurance coverage under a given ownership category

c. Allocate the remaining available insurance to the last account i.e. account n.

d. If a part of the insurance limit remains unallocated after step 3, it is allocated to the first account which was skipped as part of step 2.

NOTE: In case of joint accounts, the EOP balance is either allocated equally to all account holders or allocated to the primary account holder only based on user selection. This amount is then used to determine total balance eligible for insurance allocation.

An illustration of this procedure is detailed as follows for all accounts belonging to customer A which are eligible for insurance coverage under the Single and Joint ownership categories. Each ownership category has a separate limit of €100,000.

Account No.	Ownership Category	EOP Balance	Insurance Limit Available (b)	Remaining Insurance Limit (b - a)	Insured Amount	Uninsured Amount
100017	Single	139483	100000	-39483	10426	129057
200811		72918	100000	27082	72918	0
200898		82043	27082	-54961	10426	71617
319810		32055	27082	-4973	10426	21629
289511		16656	27082	10426	10426	6230
510007	Joint	59557	100000	40443	59557	0
421678		25612	40443	14831	25612	0
129840		20584	14831	-5753	0	20584

Once the insurance limit is allocated at an account level, the application determines the deposit stability as follows:

1. Stable Deposits

   A stable deposit is that portion of a deposit which is fully covered by deposit insurance provided by an effective deposit insurance scheme or a public guarantee that provides equivalent protection and which satisfies one of the following conditions:

a. It is held in a transactional account by the depositor

Or

b. The depositor has an established relationship with the reporting legal entity, which makes a withdrawal unlikely.

Stable deposits receive a 5% run-off rate unless they meet additional deposit criteria.

2. Highly Stable Deposits

All "stable" deposits identified as per the criteria specified in point 1 above are classified as meeting additional insurance criteria if the insurance scheme under which they are covered satisfies the following conditions.

a. Has available financial means, raised ex ante by contributions made by members at least annually

b. Has adequate means of ensuring ready access to additional funding in the event of a large call on its reserves, including access to extraordinary contributions from member credit institutions and adequate alternative funding arrangements to obtain short-term funding from public or private third parties

c. Ensures a seven working day repayment period from the date of application of the 3% outflow

Such deposits receive a 3% run-off rate.

3. Less Stable Deposits

All insured and uninsured deposit balances that do not meet the stable deposits criteria specified earlier are classified as less stable deposits: This includes:

- Insured balance of deposits meeting stable deposits criteria but denominated in ineligible foreign currencies
- Uninsured balance of deposits meeting stable deposits criteria
- Insured balance of deposits which are not transactional account and the customer has no established relationship with the bank
- Deposit balance where the insurance coverage status is Uninsured

Such deposits receive a 10% run-off rate.

4. High Run-off Deposits

Two additional stability criteria are supported for the deposit balances that are subject to higher outflows if they meet the regulatory criteria for such higher rates. The application identifies the less stable deposits that meet the higher outflow rate criteria as specified by the regulator and classifies them into the following 2 types:

- High Run-off Deposits Category 1 – which meet the criteria for receiving a higher outflow rate between 10% and 15%
- High Run-off Deposits Category 2 – which meet the criteria for receiving a higher outflow rate between 15% and 20%

4.3.3.6 Cash Flow Aggregation

Cash Flow aggregation is based on a list of LRM dimensions which users can choose using the Application preference option under LRM applications. Refer section Application Preferences in OFS Liquidity Risk Management Release V8.0.5.0.0 User Guide on OHC Documentation Library for more information.

4.3.3.7 Business Assumption

A list of pre-configured business Assumptions as per the regulatory requirement is provided out-of-the-box. For EBA specific business assumptions refer Pre-configured Regulatory LCR Scenarios.

4.3.3.8 Cash Inflows and Outflows

4.3.3.8.1 Cash Outflows – Retail Deposits

A retail deposit consists of a liability to a natural person or to an SME (Small Medium Sized Enterprise), where the natural person or the SME would qualify for the retail exposure class under the Standardized or IRB approaches for credit risk, or a liability to a company where the total annual sales for the consolidated group of which the firm is a part is less than EUR 50 million and where the aggregate deposits by all such enterprises on a group basis do not exceed EUR 1 million.

Retail deposits are categorized into the following:

a. Retail deposits covered by a Deposit Guarantee Scheme or an equivalent deposit guarantee scheme in a third country and deposit is either of the following:
    i. Part of an established relationship making withdrawal highly unlikely
    ii. Held in a transactional account, including accounts to which salaries are regularly credited;
b. Other retail deposits that do not fall under point a) (that is retail deposits covered by a DGS which do not qualify under i) or ii) or uninsured retail deposits)
c. Retail deposits which, owing to the behavior of local depositors, are subject to different outflow rates in excess of the runoff rates applicable to retails deposits a and b
d. Retail deposits in third countries where higher outflows are applied
e. Retail deposits that are exempted from the outflow calculation where specific conditions are met.

Determination of established relationship making withdrawal highly unlikely:

A retail deposit should be considered to be part of an established relationship when the depositor meets at least one of the following criteria:

i. has an active contractual relationship with the institution of at least 12 months duration
ii. has borrowing relationship with institution for residential loans or other long term loans
iii. has at least one other active product, other than a loan, with the credit institution

Determination of transactional account:

Retail deposit should be considered as being held in a transactional account when salaries, income or transactions are regularly credited and debited respectively against the account (regularity of transactions and what is included in salaries are not prescribed by EBA).

Determination of Stable account:

Retail deposit should be considered as stable, if it is not categorized as a higher outflow rate and falls under any of the below criteria:

a. Part of established relationship making withdrawal highly unlikely
b. Held in transactional account

4.3.3.8.2 Eligible Retail Deposits

Deposits that are not excluded from the deposit guarantee scheme are eligible retail deposits. Saving products evidenced by a certificate of deposit made out to a named person; non-financial undertakings should in principle be covered. Member States shall ensure that credit institutions mark eligible deposits in a way that allows an immediate identification of such deposits; DGSs may at any time request credit institutions to inform them about the aggregated amount of eligible deposits of every depositor.

These are insured deposits (to the extent covered by DGS) that are part of an established relationship making withdrawal highly unlikely or held in a transactional account, including accounts to which salaries are regularly credited.

4.3.3.8.3 Retail Deposits Taken out in Third Countries

Institutions shall multiply retail deposits that they have taken in third countries by a higher percentage, if such percentage is provided by comparable third countries reporting requirements.

4.3.3.8.4 Retail Deposits Subject to Different Outflow Rates

A set of risk factors are defined in the guidelines to identify retail deposits subject to higher outflows. The prominent characteristics displayed by retail deposits that can lead to higher outflows include factors such as volatility, volume of deposit, and relationship with the customer, distribution channel, currency of the deposit and yield. The criteria seek to capture volatility observed by the institutions during stress periods and assumed in stress scenarios.

- Higher Outflow Rate Category 1: Between 10% to 15 % outflow rate shall be applied to these deposits.
- Higher Outflow Rate Category 2: Between 15% to 20% outflow rate shall be applied to these deposits.

4.3.3.8.5 Retail Deposits Categories Excluded From Calculation of Outflows

Credit institutions may exclude from the calculation of outflows certain clearly circumscribed categories of retail deposits as long as in each and every instance the institution rigorously applies the following for the whole category of those deposits, unless in individually justified circumstances of hardship for the depositor:

- Within 30 days, the depositor is not allowed to withdraw the deposits; or
- for early withdrawals within 30 days, the depositor has to pay a penalty that includes the loss of interest between the date a penalty that includes the loss of interest between the date of withdrawal and the contractual maturity plus a material penalty that does not have to exceed the interest due for the time elapsed between date of deposit and the date of withdrawal.

4.3.3.8.6 Cash Outflows – Operational Deposits

a. Credit institutions shall multiply by 25% liabilities resulting from deposits that are maintained as follows:
    i. by the depositor in order to obtain clearing, custody, cash management or other comparable services in the context of an established operational relationship from the credit institution
    ii. in the context of common task sharing within an institutional protection scheme or within a group of cooperative credit institutions permanently affiliated to a central body, or as a legal or contractually established deposit by another credit institution that is a Member of the same institutional protection scheme or cooperative network, provided those deposits are not recognized as liquid assets for the depositing credit institution. Refer Article 27 of the Delegated Act.
    iii. by the depositor in the context of an established operational relationship other than that mentioned in point (a)
    iv. by the depositor to obtain cash clearing and central institution services and where the credit institution belongs to one of the networks or schemes referred to in Article 16.

b. By derogation from paragraph 1, credit institutions shall multiply by 5% the portion of liabilities resulting from deposits referred to in paragraph 1(a) which is covered by a deposit guarantee scheme

c. Deposits from credit institutions placed at the central institution that are considered as liquid assets for the depositing credit institution in accordance with Article 16 shall be multiplied by a 100% outflow rate for the central institution on the amount of these liquid assets after haircut.

d. Clearing, custody, cash management or other comparable services referred to in points (a) and (d) of paragraph 1 only cover such services to the extent that they are rendered in the context of an established relationship which is critically important to the depositor.

e. Deposits arising out of a correspondent banking relationship or from the provision of prime brokerage services shall not be treated as an operational deposit and shall receive a 100% outflow rate.

4.3.3.8.7 Cash Outflows – Other Liabilities

EBA Delegated Act Other liabilities mention about the outflow categories as below:

a. Liabilities resulting from the institution's own operating expenses (additional outflows)
b. Secured lending and capital market-driven transactions (secured wholesale funding)
c. Collateral Swaps maturing within next 30 calendar days
d. Non-financial customers (unsecured wholesale funding)
e. Other liabilities (unsecured wholesale funding)

a. Liabilities resulting from the institution's own operating expenses (additional outflows):

- This consists of liabilities resulting from the institution's own operating expenses. Operating expenses receive a run-off of 0%.

b. Secured lending and capital market-driven transactions (secured wholesale funding):

- Secured lending transaction: any transaction giving rise to an exposure secured by collateral which does not include a provision conferring upon the institution the right to receive margin at least daily.
- Capital market-driven transaction: any transaction giving rise to an exposure secured by collateral which includes a provision conferring upon the institution the right to receive margin at least daily.
- Credit institutions shall multiply liabilities resulting from secured lending or capital market – driven transactions maturing in next 30 calendar days by rates ranging from 0% to 100% based on conditions specified as specified in the Act.
  - 0% if they are collateralized by assets that would qualify as level 1 assets in accordance with Article 10, with the exception of extremely high quality covered bonds referred to in Article 10(1)(f), or if the lender is a central bank;
  - 7% if they are collateralized by assets that would qualify as extremely high quality covered bonds referred to in Article 10(1)(f);
  - 15% if they are collateralized by assets that would qualify as level 2A assets in accordance with Article 11;
  - 25%:
    - if they are collateralized by the assets referred to in points (I), (ii) or (iv) of Article 13(2)(g)
    - if they are collateralized by assets that would not qualify as liquid assets in accordance with Articles 10 and 11 and the lender is the central government, a public sector entity of the Member State or of a third country in which the credit institution has been authorized or has established a branch, or a multilateral development bank
  - 35% if they are collateralized by the subcategories of assets referred to in points (iii) or (v) of Article 13(2)(g);
  - 50% if they are collateralized by:
    - corporate debt securities that would qualify as level 2B assets in accordance with Article 12(1)(b);

    - shares that would qualify as level 2B assets in accordance with Article 12(1)(c);
  - 100% where they are collateralized by assets that would not qualify as liquid assets in accordance with Title II, with the exception of transactions covered by point (d) (ii) of this paragraph or if the lender is a central bank.

c. Collateral Swaps maturing within next 30 calendar days:

- Collateral swaps that mature within the next 30 days shall lead to an outflow for the excess liquidity value of the assets borrowed compared to the liquidity value of the assets lent unless the counterparty is a central bank in which case a 0% outflow shall apply.

d. Non-financial customers (unsecured wholesale funding):

- Institutions shall multiply liabilities resulting from deposits by clients that are not financial customers, sovereigns, central banks, multilateral development banks, public sector entities, credit unions authorized by a competent authority, personal investment companies or by clients that are deposit brokers, to the extent they are not held for operational purposes by 40 % and shall multiply the amount of these liabilities covered by a Deposit Guarantee Scheme.

e. All other liabilities (unsecured wholesale funding):

This includes all other liabilities that do not fall under other sections. (that is unsecured wholesale funding). Considering the Delegated Act 10.10.2014 specifying the LCR (EBA/CP/2014/45) other liabilities shall receive a run-off of 100%.

- Competent authorities may grant the permission to apply a lower outflow on a case by case basis, when all of the following conditions are fulfilled:
  - There are reasons to expect a lower outflow even under a combined market and idiosyncratic stress of the provider
  - The counterparty is the parent or subsidiary institution of the credit institution or another subsidiary of the same parent institution or linked to the institution by a relationship within the meaning of Article 12(1) of Directive 83/349/EEC or a member of the same institutional protection scheme referred to in Article 113(7) of Regulation (EU) No 575/2013 or the central institution or an affiliate of a network or cooperative group as referred to in Article 10 of that Regulation;
  - The lower outflow rate does not fall below the inflow rate applied by the counterparty;
  - The credit institution and the counterparty are established in the same Member State.

- Competent authorities may waive the condition set out in point (d) of paragraph 1 where Article 20(1) (b) of Regulation (EU) No 575/2013 is applied. In that case, ensure that the following additional objective criteria are met:
  - The liquidity provider and receiver shall present a low liquidity risk profile

- There are legally binding agreements and commitments between the group entities regarding the undrawn credit or liquidity line

- The liquidity risk profile of the liquidity receiver shall be taken into account adequately in the liquidity risk management of the liquidity provider

4.3.3.8.8 Cash Outflows – Additional Outflows

Additional requirements pertaining to outflows consist of the following:

a. Increased liquidity needs resulting from collateral posted for derivatives.
b. Increased liquidity needs resulting from a material deterioration in the credit quality of the institution.
c. Increased liquidity needs resulting from the impact of an adverse market scenario on the institution’s derivatives transactions, financing transactions and other contracts if material.
d. Netted outflow from Derivative contracts over the 30-day horizon.
e. Increased liquidity needs corresponding to the market value of securities or other assets sold short and to be delivered within the 30 calendar days horizon.
f. Increased liquidity needs corresponding to (i) excess collateral held by the institution (ii) collateral due to be returned or (iii) substitutable collateral.

a. Increased liquidity needs resulting from collateral posted for derivatives:

- Collateral other than cash and Level 1 (non-Covered Bond) liquid assets, which is posted by the institution to secure mark-to-market exposures to derivative contracts and credit derivatives, shall be subject to an additional outflow of 20%.

- Level 1 Covered Bond Collaterals, which is posted by the institution to secure mark-to-market exposures to derivative contracts and credit derivatives, shall be subject to an additional outflow of 10%.

b. Increased liquidity needs resulting from a material deterioration in the credit quality of the institution:

- Credit institutions shall calculate and notify to the competent authorities an additional outflow for all contracts entered into the contractual conditions of which lead within 30 calendar days and following a material deterioration of the credit quality of the credit institution to additional liquidity outflows or collateral needs. Where competent authorities consider such outflows material in relation to the potential liquidity outflows of the credit institution, they shall require the credit institution to add an additional outflow for those contracts corresponding to the additional collateral needs or cash outflows resulting from a material deterioration in the credit quality of the credit institution corresponding to a downgrade in its external credit assessment by three notches. The credit institution shall apply a 100% outflow rate to those additional collateral or cash outflows.

c. **Increased liquidity needs resulting from the impact of an adverse market scenario:**

- The credit institution shall add an additional outflow corresponding to collateral needs that would result from the impact of an adverse market scenario on the credit institution's derivatives transactions, financing transactions and other contracts if material. This calculation shall be made in accordance with the delegated act to be adopted by the Commission pursuant to Article 423(3) of Regulation (EU) No 575/2013.

d. **Netted outflow from Derivative contracts over the 30-day horizon:**

- Credit institutions shall take outflows and inflows expected over 30 calendar days from the contracts listed in Annex II of Regulation (EU) No 575/2013 into account on a net basis in accordance with Article 21. In the case of a net outflow, the credit institution shall multiply the result by 100% outflow rate. Credit institutions shall exclude from such calculations those liquidity requirements that are part of the increased liquidity due to (i) cash or level 1 collateral for derivatives (ii) result of material deterioration in credit quality of the institution or (iii) result of adverse market scenario.

e. **Increased liquidity needs corresponding to the market value of securities or other assets sold short and to be delivered within the 30-day horizon:**

- The credit institution shall add an additional outflow corresponding to 100% of the market value of securities or other assets sold short and to be delivered within 30 calendar days unless the credit institution owns the securities to be delivered or has borrowed them at terms requiring their return only after 30 calendar days and the securities do not form part of the liquid assets of credit institutions. If the short position is being covered by a collateralized securities financing transaction, the credit institution shall assume the short position will be maintained throughout the 30 calendar day period and receive a 0% outflow.

f. **Increased liquidity needs corresponding to (i) excess collateral held by the institution (ii) collateral due to be returned or (iii) substitutable collateral:**

The credit institution shall add an additional outflow corresponding to 100% of:

- The excess collateral the credit institution holds that can be contractually called at any times by the counterparty;
- Collateral that is due to be posted to a counterparty within 30 calendar days;
- Collateral that corresponds to assets that would qualify as liquid assets for the purposes of Title II that can be substituted for assets corresponding to assets that would not qualify as liquid assets for the purposes of Title II without the consent of the credit institution.

g. **Increased liquidity needs due to loss of funding from structured financing instruments maturing within 30 days:**

- Credit institutions shall assume a 100% outflow for loss of funding on asset-backed securities, covered bonds and other structured financing instruments maturing within 30 calendar days, when these instruments are issued by the credit institution itself or by conduits or SPVs sponsored by the credit institution.

h. Increased liquidity needs due to loss of funding from financing facilities:

- Credit institutions shall assume a 100% outflow for loss of funding on asset-backed commercial papers, conduits, securities investment vehicles and other such financing facilities. This 100% outflow rate shall apply to the maturing amount or to the amount of assets that could potentially be returned or the liquidity required.

i. Outflow due to Assets borrowed on an unsecured basis:

- Assets borrowed on an unsecured basis and maturing within 30 calendar days shall be assumed to run-off in full, leading to a 100% outflow of liquid assets unless the credit institution owns the securities and they do not form part of the credit institution's liquidity buffer.

j. Outflow due to Assets of one client being netted with short sell of another client:

- In relation to the provision of prime brokerage services, where a credit institution has financed the assets of one client by internally netting them against the short sales of another client, such transactions shall be subject to a 50% outflow for the contingent obligation, since in the event of client withdrawals the credit institution may be obliged to find additional sources of funding to cover these positions.

k. Deposits received as collateral:

- Deposits received as collateral shall not be considered liabilities for the purposes and shall receive a run-off of 0%.

4.3.3.8.9 Cash Inflow Computation

a. Maturing secured lending and capital market-driven transactions:

Maturing secured lending and capital market-driven transactions collateralized by liquid/non-liquid assets are classified as inflows, and are used to compute the Net Cash Outflows.

Monies due from secured lending and capital market-driven transactions as defined in points (2) and (3) of Article 192 of Regulation (EU) No 575/2013 collateralized by liquid assets, shall not be taken into account up to the value of the liquid assets net of the haircuts applicable in accordance with Title II. Monies due for the remaining value or where they are collateralized by assets that do not qualify as liquid assets in accordance with Title II shall be taken EN 53 EN into account in full. No inflow shall be allowed if the collateral is used to cover a short position according to Article 30(5).

Monies due from positions in major index equity instruments provided that there is no double counting with liquid assets shall receive an inflow rate of 100%. Those monies shall include monies contractually due within 30 calendar days, such as cash dividends and cash due from sold but not yet settled, if they are not recognized as liquid assets as per delegated act liquid asset requirements.

b. Any undrawn credit or liquidity facilities and other commitments received:

Any undrawn credit or liquidity facilities and any other commitments received from entities other than central banks and those referred to in Article 34 shall not be taken into account. These facilities will be identified in the business using hierarchy LRM – STANDARD PRODUCT TYPE and selecting the "Line of Credit Received" and where the issuer type is not "Central Bank". Undrawn committed liquidity facilities from the central bank which are recognized as liquid assets in accordance with Article 14 shall not be taken into account as an inflow;

Special conditions for credit or liquidity facilities:

- Competent authorities may authorize the application of a higher inflow rate on a case by case basis for undrawn credit and liquidity facilities when all of the following conditions are fulfilled:
- there are reasons to expect a higher inflow even under a combined market and idiosyncratic stress of the provider;
- the counterparty is the parent or a subsidiary of the credit institution or another subsidiary of the same parent or linked to the credit institution by a relationship within the meaning of Article 12(1) of Directive 83/349/EEC or a member of the same institutional protection scheme referred to in Article 113(7) of
- Regulation (EU) No 575/2013 or the central institution or an affiliate of a network or cooperative group as referred to in Article 10 of Regulation (EU) No 575/2013;
- where the inflow rate exceeds 40%, a corresponding symmetric outflow rate is applied by the counterparty by way of derogation from Article 31;
- The credit institution and the counterparty are established in the same Member State.

Since the above conditions are based on national discretion, these must be handled during implementation.

c. Non-financial customers for the purpose of principal payment:

Monies due from non-financial customers shall be reduced for the purposes of principal payment by 50% of their value or by the contractual commitments to those customers to extend funding, whichever is higher. For the purposes of this point, non-financial customers shall include corporate, sovereigns, multilateral development banks and public sector entities;

By derogation credit institutions that have received a commitment referred to in Article 31(9) in order for them to disburse a promotional loan to a final recipient, or have received a similar commitment from a multilateral development bank or a public sector entity, may take an inflow into account up to the amount of the outflow they apply to the corresponding commitment to extend those promotional loans.

d. Derivatives:

Outflows and inflows expected over the 30 day horizon from the contracts listed below, shall be reflected on a net basis across counterparties and shall be multiplied by 100 % in the event of a net inflow. Net basis shall mean also net of collateral to be received that qualifies as liquid assets.

- Interest-rate contracts:
  - single-currency interest rate swaps;
  - basis-swaps;
  - forward rate agreements;
  - interest-rate futures;
  - interest-rate options purchased;
  - Other contracts of similar nature.
- Foreign-exchange contracts and contracts concerning gold:
  - cross-currency interest-rate swaps;
  - forward foreign-exchange contracts;
  - currency futures;
  - currency options purchased;
  - other contracts of a similar nature;
  - Contracts of a nature similar to (a) to (e) concerning gold.
- Contracts of a nature similar to those in points 1(a) to (e) and 2(a) to (d) concerning other reference items or indices. This includes as a minimum all instruments specified in points 4 to 7, 9 and 10 of Section C of Annex I to Directive 2004/39/EC not otherwise included in point 1 or 2 of this list.

e. Others:

Monies due from central banks and financial customers. In relation to the latter, inflows from the following transactions in particular shall be regarded as subject to the 100% inflow rate:

- Trade finance transactions referred to in point (b) of the second subparagraph of Article 162(3) of Regulation (EU) No 575/2013 with a residual maturity of less than 30 calendar days;
- Securities maturing within 30 calendar days;

Monies due that the credit institution owing those monies treats in accordance with Article 27, with the exception of deposits at the central institution referred to in Article 27(3), shall be multiplied by a corresponding symmetrical inflow rate. Where the corresponding rate cannot be established, a 5% inflow rate shall be applied;

Assets with an undefined contractual end date shall be taken into account with a 20% inflow rate, provided that the contract allows the credit institution to withdraw or to request payment within 30 days;

Credit institutions shall not take into account inflows from any new obligations entered into.

Credit institutions shall take liquidity inflows which are to be received in third countries where there are transfer restrictions or which are denominated in nonconvertible currencies into account only to the extent that they correspond to outflows respectively in the third country or currency in question.

4.3.3.8.10 Calculation of Total Net Cash Outflows

The total net cash outflows is defined as the total expected cash outflows minus total expected cash inflows for the subsequent 30 calendar days. Total expected cash outflows are calculated by multiplying the outstanding balances of various categories or types of liabilities and off-balance sheet commitments by the rates at which they are expected to run off or be drawn down. Total expected cash inflows are calculated by multiplying the outstanding balances of various categories of contractual receivables by the rates at which they are expected to flow in up to an aggregate cap of 75% of total expected cash outflows. This requires that a bank must maintain a minimum amount of stock of HQLA equal to 25% of the total cash outflows.

Total net cash outflows over the next 30 calendar days = Outflows - Min (inflows; 75% of outflows).

Banks will not be permitted to double count items, i.e. if an asset is included as part of the “stock of HQLA” (i.e. the numerator), the associated cash inflows cannot also be counted as cash inflows (i.e. part of the denominator). Where there is potential that an item could be counted in multiple outflow categories, (e.g. committed liquidity facilities granted to cover debt maturing within the 30 calendar day period), a bank only has to assume up to the maximum contractual outflow for that product.

4.3.3.9 Calculation of Liquidity Coverage Ratio

Liquidity Coverage Ratio is calculated as below:

$$\textbf{Liquidity Coverage Ratio} = \frac{\text{Total Stock of High Quality Liquid Assets *100}}{\textbf{Total Net Cash Outflow over the next 30 days}}$$

4.3.4 Pre-configured Regulatory LCR Scenario

This section explains the business assumptions which support inflow and outflow percentage / rates as per the Commission delegated regulation (EU) 2015/61.

NOTE: For detailed processes and tasks, refer the run chart.

4.3.4.1 Regulation Addressed through Business Assumptions

No.	Business Assumption Name	Business Assumption Description	EBA DA Reference
1	EBA LCR Outflow Insured Operational Dep Run Off	Outflows from Insured Operational Deposits Run-Off	DA Article 27 (1) (a)
2	EBA LCR Outflow Insured Non-Operational Dep Run Off	Outflows from Insured Non-Operational Deposits Run-Off	DA Article 27 (1) (a)
3	EBA LCR Outflow Uninsured Operational Dep Run Off	Outflows from Uninsured Operational Deposits Run-Off	DA Article 27 (1) (a)
4	EBA LCR Outflow Oper-Dep Recvd As Cntrl Cred Inst Run-Off	Outflows from Run-Off of Operational Deposits placed at Central Credit Institution, considered as HQLA by depositing institution	DA Article 27(1)(d), 27(3)
5	EBA LCR Outflow Insured Retail Dep Run Off	Outflows from Insured Retail Deposits Run-Off	DA Article 24 (1), DA Article 25
6	EBA LCR Outflow Uninsured Retail Dep Run Off	Outflows from Uninsured Retail Deposits Run-Off	DA Article 25(1)
7	EBA LCR Outflow Retail Deposits Higher Run Off	Outflows from Uninsured Retail Deposits Higher Run-Off Categories	DA Article 25(3)
8	EBA LCR Outflow Third Country Retail Dep Higher Run Off	Outflows from Higher Run-Off of Retail Deposits taken in Non EEA Country	DA Article 25 (5)
9	EBA LCR Outflow Non-Level1 Non Cb Coll Post Derivative	Additional Outflows due to Valuation Changes in Level1 Non Covered Bond collateral posted for Derivatives	DA Article 30(1)
10	EBA LCR Outflow Non-Level1 Cb Coll Post Derivative	Additional Outflows due to Valuation Changes in Level1 Non Covered Bond collateral posted for Derivatives	DA Article 30(1)
11	EBA LCR Outflow Short Position Wth No Undrly Cover Pos	Additional Outflows due to Short Position delivery within liquidity horizon and Institution does not possess securities to be delivered	DA Article 30(5)
12	EBA LCR Addl Outflow Short Position	Additional Outflows due to Short Position	DA Article 30(5)

No.	Business Assumption Name	Business Assumption Description	EBA DA Reference
	Wth Undrly Cover Pos	delivery within liquidity horizon and Institution owns or has borrowed securities to be delivered	
13	EBA LCR Outflow Excess Collateral Call Val	Additional Outflows due to excess collateral held by institution that can be contractually called at any time	DA Article 30(6)(a)
14	EBA LCR Outflow Due Collateral Val Chn	Additional Outflows due to collateral that is due to be returned	DA Article 30(6)(b)
15	EBA LCR Outflow Due To Substitutable Collateral Val Chn	Additional Outflows due to substitutable collateral	DA Article 30(6)(c)
16	EBA LCR Outflow Net Derivatives	Additional Outflows due to excess collateral held by institution under nettable derivatives.	DA Article 30(6)(c)
17	EBA LCR Outflow Due To Unsecured Asset Borrowing	Additional Outflows due to unsecured asset borrowings	DA Article 30(11)
18	EBA LCR Outflow Due To Internal Netting For Short Selling	Additional Outflows due to internal netting for short selling	DA Article 30(12)
19	EBA LCR Outflow Cont Fundg Drawdown Trade Finance	Outflows from Contingent Funding Obligation - Off Balance Sheet Trade Finance	DA Article 23(2)
20	EBA LCR Outflow Cont Fundg Drawdown Committed Revocable Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Revocable Credit & Liquid facilities	DA Article 23(2)
21	EBA LCR Outflow Cont Fundg Drwdwn Ret Committed Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to Retail Customers	DA Article 31(3)
22	EBA LCR Outflow Cont Fundg Non-Ret Non-Fin Comm Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to Non-Retail Non-Financial Customers	DA Article 31(4)
23	EBA LCR Outflow Cont Fundg Sspe Committed Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to SSPE	DA Article 31(6)
24	EBA LCR Outflow Cont Fundg Non-Ret Fin Comm Irrevcbl Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued to Non-Retail Financial	DA Article 31(8)(a)

No.	Business Assumption Name	Business Assumption Description	EBA DA Reference
		Customers	
25	EBA LCR Outflow Cont Fundg Committed Irrevcbl Promo Loan Fac	Outflows from Contingent Funding Obligation - Undrawn Committed Irrevocable Credit & Liquid facilities issued for directly or indirectly funding Promotional Loans	DA Article 31 (9)
26	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By L1 Non Cb Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value of Level 1 Mitigants except Covered Bonds	DA Article 28(3) (a)
27	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By L1 Covered Bond Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value of Level 1 Covered Bond Mitigants	DA Article 28(3) (b)
28	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By L2a Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value of Level 2A Mitigants	DA Article 28(3) (C)
29	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By L2b Sec Res Loan Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value of Level 2B Sec Mitigants(Res Loans)	DA Article 28(3) (d)(i)
30	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By Non L1 Andl2a Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value Mitigants(Not L1 or L2A)	DA Article 28(3) (d) (ii)
31	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By L2b Sec Aut Loan Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value of Level 2B Sec Mitigants(Auto Loans)	DA Article 28(3) (e)
32	EBA LCR Outflow Sl And Cap Mkt - Exp Cov By L2b Cor Ds Mitigant	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure covered up to value of Level 2B Corporate Debt Security and Shares Mitigants	DA Article 28(3) (f)
33	EBA LCR Outflow Sl And Cap Mkt - Cb Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Exposure to the extent not covered by HQLA Mitigants and Lender is Central Bank	DA Article 28(3) (a)

No.	Business Assumption Name	Business Assumption Description	EBA DA Reference
34	EBA LCR Outflow Sl And Cap Mkt - Uncovered Exp Run Off	Outflows from Secured Lending and Capital Market Transactions - Run-Off from portion of Exposure not covered by Mitigants	DA Article 28(3) (g)
35	EBA LCR Outflow Collateral Swap	Outflows from Collateral Swaps with Non Central Bank counterparty maturing in next 30 days with an excess of mitigant borrowed.	DA Article 28(4)
36	EBA LCR Outflow Sl Cap Mkt Oth Enty Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Other Entities Exposure covered by Non-HQLA Mitigants	DA Article 28(3)(g)
37	EBA LCR Outflow Sl Cap Mkt Sov Mdb Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Sovereign and MDB Exposures covered by Non-HQLA Mitigants	CRR Article 422(2)(d)
38	EBA LCR Outflow Sl Ans Cap Mkt Pse Exp Cov By Non-Liq Mit	Outflows from Secured Lending and Capital Market Transactions - Run-Off from Public Sector Entities Exposures covered by Non-HQLA Mitigants	CRR Article 422(2)(d)
39	EBA LCR Outflow Short Position Wth No Undrly Cover Pos	Additional Outflows due to Short Position delivery within liquidity horizon and Institution does not possess securities to be delivered	DA Article 30(5)
40	EBA DA - LRM Inflow Secured Lending And Capital Market Txn	Inflows from Secured Lending and Capital Market Driven Transactions in the liquidity horizon	DA Article 32 - 3 (b)
41	EBA DA - Inflow Major Index Equity Investment	Inflows from position in Major index equity instrument and have not been already accounted as Liquid Asset	DA Article 32 - 2(b)
42	EBA DA - Inflow Undrawn Credit Or Liquidity Fac	Inflows from Undrawn credit or liquidity facilities from Intra-Company or Central Credit Institutions	DA Article 34. 1
43	EBA DA - Inflow Non Financial Customers	Inflows from Monies due from Non-Financial Customers	DA Article 32 - 3(a)
44	EBA DA - Inflow Open Maturity Assets Run Off	Inflow from Monies due from Undefined Contractual End Date Assets	DA Article 32 - 3(i)

No.	Business Assumption Name	Business Assumption Description	EBA DA Reference
45	EBA DA - Inflow Placed Operational Deposits Run Off	Inflows from Operational Deposits placed with other institutions and have not been already accounted as Liquid Asset	DA
46	EBA LCR Inflow Placed Non-Operational Deposits Run Off	Inflows from Non-Operational Deposits placed with other institutions	DA
47	EBA LCR DA Inflow From Margin Loan	Inflows from Contractual Margin Loans where credit institution is not using the collateral to cover any short selling.	DA Article 32

5 Appendix A – Data Transformations/Functions used inLRM

This section provides information about the Data Transformations (DTs) or functions used in LRM application.

- **FN_UPD_LIQUIDITY_HORIZON**

  This function updates the Liquidity Horizon to 30 days in FCT_LRM_RUN_PARAM table for current Run Skey.

- **TB_DATE_ASSIGNMENT**

  This function performs the following:

  a. Identifies the dates between the bucket start day and bucket end day.
  b. Populates the intermediate dates based on the chosen FIC-MIS date, in FSI_LRM_TIME_BUCKET_DAYS.
  c. The business day convention (prior, conditional prior, following, no-Adjustment) gets applied, taking into account the holiday calendar applicable for a Legal Entity, and gets populated in FSI_LRM_TIME_BUCKET_DETAILS for each Legal Entity.

- **EBA_WHOLESALERETAIL_IDFN**

  This function identifies wholesale or retail indicator for each account. It performs the following:

  a. Reads the annual sales threshold and aggregate deposit threshold amount from SETUP_MASTER table.
  b. Populates the financial information such as balance sheet, profit and loss statement and ratios of various parties such as Customer, Issuer and Guarantor in FCT_PARTY_FINANCIALS along with financial period start and end date.
  c. Identifies the retail customer in FSI_LRM_INSTRUMENT based on aggregate deposit threshold amount.
  d. Updates the high value (EOP balance between €100000 and €500000, or local DGS amount) and very high value (EOP balance > €500000 or local DGS amount) indicator for each customer in FSI_LRM_INSTRUMENT.
  e. Identifies wholesale or retail customer in FSI_LRM_INSTRUMENT based on party type (retail or corporate).

- **EBA_UPD_UNDERLYING_AST**

  This function updates all the attributes of the underlying assets, mitigants or placed collateral of an account such as asset level, fair value, market value, and so on, in the FSI_LRM_INSTRUMENT table. For example, consider a loan contracts for which a mitigant is received. This loan account is captured in STG_LOAN_CONTRACTS table and the mitigant information is captured in STG_MITIGANTS. The link between the loan account and the mitigant is captured in STG_ACCOUNT_MITIGANT_MAP table. From STG_ACCOUNT_MITIGANT_MAP table, data moves to FCT_ACCOUNT_MITIGANT_MAP table.

The function identifies the account mitigant mapping from FCT_ACCOUNT_MITIGANT_MAP and updates the attributes of the mitigant against the loan account in FSI_LRM_INSTRUMENT table. For example, if the market value of the mitigant is $500, then the function updates the column FSI_LRM_INSTRUMENT.N_UNDERLYING_RECV_LEG_MKT_RCY as $500 for the loan contract account.

Similarly, consider another example of repo contract where the bank has placed collateral. The repo contract is captured in STG_REPO_CONTRACTS and moved to FSI_LRM_INSTRUMENT table. The collateral placed against the repo contract is captured in STG_PLACED_COLLATERAL table. The relationship between placed collateral and the REPO contract is captured in STG_ACCT_PLACED_COLL_MAP and is moved to FCT_ACCT_PLACED_COLL_MAP.

The function updates the asset level of the placed collateral against the repo contract in FSI_LRM_ISNTRUMENT table, which indicates that the FSI_LRM_INSTRUMENT.N_UNDERLYING_ASSET_LEVEL_SKEY is updated.

Similarly, the function updates the following attributes of the underlying asset (Mitigant/Placed Collateral) in FSI_LRM_ISNTURMENT table:

- N_UNDERLYING_ASSET_LEVEL_SKEY
- N_UNDERLYING_MKT_RCY
- N_UNDERLYING_FAIR_RCY
- F_UNDERLY_QUALIF_UNENCUMB
- N_UNDERLY_RISK_WEIGHT_SKEY
- N_UNDERLY_STD_ISSUER_TYPE_SKEY
- N_UNDERLY_STD_PROD_TYPE_SKEY
- N_UNDERLYING_INST_BASEL_RATING
- F_UNDERLY_COLL_COVER_SHORT_POS
- F_UNDRLY_COVER_BANK_SHORT_POS
- F_UNDRLY_COVER_CUST_SHORT_POS
- F_UNDERLY_ISSUER_FINAN_ENTITY

- F_UNDERLY_REHYPOTHECATED_FLAG
- F_UNDERLYING_ISSUER_US_FLAG
- F_UNDERLYING_GUARANTOR_US_FLAG
- F_UNDRLYNG_PLACED_HQLA_FLAG
- F_UNDERLYING_HELD_BY_CLIENT
- F_UNDRLYNG_ASST_SEGREGATED_IND
- N_HQLA_MIT_VAL_RCY
- N_NON_HQLA_MIT_VAL_RCY
- N_EXP_NOT_COV_BY_HQLA_MIT_RCY

These columns are used for calculating the adjustments to be performed in the stock of HQLA process and also in business as usual assumptions.

This DT identifies the underlying asset of an account from the mapping tables (FCT_ACCOUNT_MITIGANT_MAP and FCT_ACCT_PLACED_COLL_MAP), reads the attributes of the underlying asset (mitigant from FCT_MITIGANTS and placed collateral from FSI_LRM_INSTRUMENT) and updates the same against the account in FSI_LRM_INSTURMENT table using the following steps:

a. Assigns the used portion of a placed collateral in FCT_ACCT_PLACED_COLL_MAP table, that is, updates FCT_ACCT_PLACED_COLL_MAP.N_DRWN_PORTION_COLL_AMT.
b. Assigns the underlying asset level.
c. Assigns the underlying asset level Skey of SUBSTITUTABLE COLLATERAL to
   - Derivative Products
   - Non-Derivative Products

   Updates the N_COLL_SUBSTITU_ASSET_LVL_SKEY and N_SBSTBL_ASST_LVL_ENT_SKEY of FSI_LRM_INSTRUMENT table
d. Assigns revised maturity date Skey for ('CS','REVREPO','DRB','SECBORR') product, that is FLI.N_REVISED_MATURITY_DATE_SKEY.
e. Updates the encumbrance percent in FSI_LRM_INSTRUMENT against the placed collateral records, that is, FLI.N_PERCENT_ENCUMBERED.

- **EBA_INS_UNINS_AMT_CALC**

  This function calculates the insured and uninsured amounts, and updates this information at an account-customer combination in the FSI_LRM_ACCT_CUST_DETAILS table.

  See Deposit Stability Identification for details on Insurance Calculation.

- **UPD_PROCESS_SCENARIO_KEY**

  This function updates the process scenario Skey in DIM_FCST_RATES_SCENARIO tables. It performs the following:

  a. Reads the current Run information from FCT_LRM_RUN_PARAM and DIM_RUN tables.
  b. Populates the Contractual/Business as usual Run name, Run type, Run description into DIM_FCST_RATES_SCENARIO table from DIM_RUN.
  c. Updates the process key for current Run in FCT_AGG_BASE_CCY_LR_GAP table storing liquidity risk gap measures in base currency.
  d. Updates the process key for current Run in FCT_AGG_BASE_CCY_LR_GAP table storing liquidity risk gap measures in consolidated currency.
  e. Updates both local and natural, inflow and outflow amount columns in FCT_AGG_CASH_FLOWS using exchange rate conversion.
  f. Updates both inflow and outflow local currency amount columns in FCT_ACCOUNT_CASH_FLOWS using exchange rate conversion.
  g. Updates both local and natural currency amount columns in FCT_LRM_LE_SUMMARY using exchange rate conversion.

- **FN_UNDERLYING_ASSET_ASSIGNMENT**

  This function computes the excess portion of SLR government securities as follows: Total Market Value of SLR Eligible Government Securities - Minimum SLR + Net CBLO Collateral Where, The market value of SLR eligible securities is computed as the sum of all securities where SLR Eligible flag = 'Y' and Issuer or Guarantor Type = 'Sovereign' or 'Government'. The minimum SLR refers to the mandatory SLR which is to be excluded. The Net CBLO Collateral value is calculated as follows:

  Net CBLO Collateral = Total Collateral Received under Collateralized Lending Obligation (CLO) - Total Collateral Posted under Collateralized Borrowing Obligation (CBO).

6 Appendix B – User Configuration and Settings

6.1 Standard Reclassifications

The regulatory guidelines specify classifications and computations based on certain generic product and party types. Each bank, internally, will have its own product and party types, which differ from bank to bank. In order to ensure consistency in computations, the application supports two standard dimensions based on the regulatory guidelines:

- Standard Product Type
- Standard Party Type

The bank specific product and party types, which are accepted as a download in the staging tables, are required to be reclassified to standard product and party types supported by OFS LRM respectively.

6.1.1 Standard Product Type Reclassification

Banks should to map their specific product types to the Standard Product Types as part of the rule RBI LCR - Standard Product Type Reclassification. The application then reclassifies the bank product types to Standard Product Types and utilizes the Standard Product Types for further processing.

6.1.2 Standard Party Type Reclassification

Banks are required to map their specific party types to the Standard Party Types as part of the rule LRM - Standard Party Type Reclassification. The application then reclassifies the bank party types to Standard Party Types and utilizes the Standard Party Types for further processing. Party types include customer type, issuer type and guarantor type.

7 Appendix C – Generic Calculations

This section documents some common calculations addressed by OFS LRM across jurisdictions for the purpose of computing regulatory ratios.

7.1 Calculation of Contractually Required Collateral

Contractually required collateral is the amount of collateral that is contractually due from one party to the other based on the current exposure and collateral position. This amount has to be paid to the party at the earliest and results in an outflow for the party owing the collateral and inflow to the party to whom the collateral is due. It can be of two types based on the direction of the exposure:

- Contractually Due Collateral
- Contractually Receivable Collateral

7.1.1 In Case of Derivatives

7.1.1.1 Calculation of Contractually Due Collateral

The application computes the value of collateral that a bank is required to post contractually to its derivative counterparty as per the below procedure:

1. If Secured Indicator = No, then the contractually due collateral is 0. Else,
2. If Secured Indicator = Yes and CSA Type = One way then the contractually due collateral is 0. Else,
3. If Secured Indicator = Yes, CSA Type = Two way and Gross Exposure is >= 0, then the contractually due collateral is 0. Else,
4. If Secured Indicator = Yes, CSA Type = Two way and Gross Exposure is <0, the application computes the contractually due collateral as follows:

$$\boldsymbol{Contractually\ Due\ Collateral} = \boldsymbol{Max}[\mathbf{0}, \{\boldsymbol{Abs}(\boldsymbol{Gross\ Exposure}) - \boldsymbol{Threshold} - \boldsymbol{Collateral\ Posted}\}]$$

Where,

Threshold: Unsecured exposure that a party to a netting agreement is willing to assume before making collateral calls.

The contractually due collateral is assumed to be posted and therefore receives the relevant outflow rate specified by the regulator as part of the pre-configured business assumptions for LCR calculations.

7.1.1.2 Calculation of Contractually Receivable Collateral

The application computes the value of collateral that a derivative counterparty is required to post contractually to the bank as per the below procedure:

1. If Secured Indicator = No, then the contractually receivable collateral is 0. Else,

2. If Secured Indicator = Yes and Gross Exposure is <= 0, then the contractually receivable collateral is 0. Else,
3. If Secured Indicator = Yes and Gross Exposure is >0, then the application computes the contractually receivable collateral as follows:

$$\textit{Contractually Receivable Collateral} = \textit{Max}[\mathbf{0}, \{\textit{Abs}(\textit{Gross Exposure}) - \textit{Threshold} - \textit{Collateral Received}\}]$$

The contractually receivable collateral does not receive a pre-specified inflow rate from the regulator and is, therefore, excluded from the LCR calculations. However, the application computes this for the purpose of reporting.

7.1.2 In case of Other Assets and Liabilities:

NOTE: This functionality is available only for RBI Contractual Run.

7.1.2.1 Calculation of Contractually Due Collateral

1. If Balance Sheet Category = Asset, then the contractually due collateral is 0. Else,
2. If Balance Sheet Category = Liability, and Secured Indicator = N, then the contractually due collateral is 0. Else,
3. If Balance Sheet Category = Liability, and Secured Indicator = Y, then the application computes the contractually due collateral as follows

$$\textit{Contractually Due Collateral} = \textit{Max}[\mathbf{0}, \{\textit{EOP Balance of Liability} - \textit{Collateral Posted}\}]$$

7.1.2.2 Calculation of Contractually Receivable Collateral

1. If Balance Sheet Category = Liability, then the contractually due collateral is 0. Else,
2. If Balance Sheet Category = Asset, and Secured Indicator = N, then the contractually due collateral is 0. Else,
3. If Balance Sheet Category = Asset, and Secured Indicator = Y then the application computes the contractually due collateral as follows

$$\textit{Contractually Receivable Collateral} = \textit{Max}[\mathbf{0}, \{\textit{EOP Balance of Asset} - \textit{Collateral Received}\}]$$

7.2 Calculation of Excess Collateral

Excess collateral is the value of collateral posted or received that is in excess of the collateral required based on the current levels of exposure and collateral position. This amount can be withdrawn by the party which has provided the collateral in excess of its exposure and results in an outflow to the party holding the excess collateral and an inflow to the party who has provided the excess collateral. It can be of two types:

- Excess Collateral Due
- Excess Collateral Receivable

7.2.1 In Case of Derivatives

7.2.1.1 Calculation of Excess Collateral Due

The application computes the value of collateral that a derivative counterparty has posted to the bank, in excess of the contractually required collateral, and therefore can be withdrawn by the counterparty, as per the below procedure:

1. If Secured Indicator = No, then the excess collateral due is 0. Else,
2. If Secured Indicator = Y and Gross Exposure is <=0, the application computes the excess collateral due as follows:

$$\boldsymbol{Excess\ Collateral\ Due = Min[Adjusted\ Collateral\ Received, Non-segregated\ Collateral\ Received]}$$

Where,

Adjusted collateral received:	Collateral received from the counterparty less customer withdrawable collateral
Customer withdrawable collateral:	Collateral received under re-hypothecation rights that can be contractually withdrawn by the customer within the LCR horizon without a significant penalty associated with such a withdrawal

3. If Secured Indicator = Y and Gross Exposure is >0, the application computes the excess collateral due as follows:

$$\boldsymbol{Excess\ Collateral\ Due = Min[Max\{0, Adjusted\ Collateral\ Received - Gross\ Exposure\}, Non-segregated\ Collateral\ Received]}$$

The excess collateral due is assumed to be recalled by the counterparty and therefore receives the relevant outflow rate specified by the regulator as part of the pre-configured business assumptions for LCR calculations.

7.2.1.2 Calculation of Excess Collateral Receivable

The application computes the value of collateral that the bank has posted to its derivative counterparty, in excess of the contractually required collateral, and therefore can be withdrawn by the bank, as per the below procedure:

1. If Secured Indicator = No, then the excess collateral receivable is 0. Else,
2. If Secured Indicator = Y and Gross Exposure is >=0, the application computes the excess collateral receivable as follows:

$$\boldsymbol{Excess\ Collateral\ Receivable = Min[Adjusted\ Collateral\ Posted, Non-segregated\ Collateral\ Posted]}$$

Where,

Adjusted collateral posted: Collateral posted by the bank less firm withdrawable collateral

Firm withdrawable collateral: Collateral provided under re-hypothecation rights that can be contractually withdrawn by the bank within the LCR horizon without a significant penalty associated with such a withdrawal

3. If Secured Indicator = Y and Gross Exposure is <0, the application computes the excess collateral receivable as follows:

$$\boldsymbol{Excess\ Collateral\ Receivable} = \boldsymbol{Min}[\boldsymbol{Max}\{\mathbf{0}, \boldsymbol{Adjusted\ Collateral\ Posted} - \boldsymbol{Abs}(\boldsymbol{Gross\ Exposure})\}, \boldsymbol{Non} - \boldsymbol{segregated\ Collateral\ Posted}]$$

The excess collateral receivable does not receive a pre-specified inflow rate from the regulator and is, therefore, excluded from the LCR calculations. However, the application computes this for the purpose of reporting.

7.2.2 In case of Other Assets and Liabilities

NOTE: This functionality is available only for RBI Contractual Run.

7.2.2.1 Calculation of Excess Collateral Due

1. If Balance Sheet Category = Liability, then the contractually due collateral is 0. Else,
2. If Balance Sheet Category = Asset, and Secured Indicator = N, then the contractually due collateral is 0. Else,
3. If Balance Sheet Category = Asset, and Secured Indicator = Y, then the application computes the contractually due collateral as follows

$$\boldsymbol{Excess\ Collateral\ Due} = \boldsymbol{Min}[\boldsymbol{Max}\{\mathbf{0}, \boldsymbol{Adjusted\ Collateral\ Received} - \boldsymbol{EOP\ Balance\ of\ Asset}\}, \boldsymbol{Non} - \boldsymbol{segregated\ Collateral\ Received}]$$

7.2.2.2 Calculation of Excess Collateral Receivable

1. If Balance Sheet Category = Asset, then the contractually due collateral is 0. Else,
2. If Balance Sheet Category = Liability, and Secured Indicator = N, then the contractually due collateral is 0. Else,
3. If Balance Sheet Category = Liability, and Secured Indicator = Y, then the application computes the contractually due collateral as follows

$$\boldsymbol{Excess\ Collateral\ Receivable} = \boldsymbol{Min}[\boldsymbol{Max}\{\mathbf{0}, \boldsymbol{Adjusted\ Collateral\ Posted} - \boldsymbol{EOP\ Balance\ of\ Liability}\}, \boldsymbol{Non} - \boldsymbol{segregated\ Collateral\ Posted}]$$

7.3 Calculation of Downgrade Impact Amount

7.3.1 Calculation of Downgrade Impact Amount for Derivatives

The downgrade impact amount for derivatives is calculated as follows:

1. If a downgrade trigger does not exist for the derivatives contract or netting agreement, the downgrade impact amount is 0. Else,
2. If Net Exposure >0, the downgrade impact amount is 0. Else,
3. If Net Exposure <=0, the downgrade impact amount is calculated as follows:

$$\boldsymbol{Downgrade\ Impact\ Amount} = \boldsymbol{Max}[\mathbf{0}, \{\boldsymbol{Abs}(\boldsymbol{Net\ Exposure}) - \boldsymbol{Contractually\ Due\ Collateral}\}]$$

7.3.2 Calculation of Downgrade Impact Amount for Other Liabilities

In case of other liabilities, including annuities, that have an associated downgrade, the downgrade impact amount is calculated as follows:

1. If a downgrade trigger does not exist for the liability account, the downgrade impact amount is 0. Else,
2. The downgrade impact amount for liabilities other than derivatives and securitizations is calculated as follows:

$$\boldsymbol{Downgrade\ Impact\ Amount} = \boldsymbol{Max}[\mathbf{0}, (\boldsymbol{EOP\ Balance} - \boldsymbol{Collateral\ Posted})]$$

NOTE: Any liability account that is triggered due to a particular level of ratings downgrade has an outflow corresponding to a pre-specified percentage of the downgrade impact amount. For instance, if a 3-notch downgrade is specified, then the downgrade impact amount will outflow only for those accounts that have a trigger of 1-notch, 2-notches and 3-notches. If a 2-notch downgrade is specified, then the downgrade impact amount will outflow only for those accounts that have a trigger of 1-notch and 2-notches.The ratings downgrade and the outflow percentage as specified by the regulator are part of the pre-configured business assumptions for LCR calculations.

7.4 Calculation of Net Derivative Cash Inflows and Outflows

7.4.1 Cash Flow Netting at Derivative Contract Level

Cash flows from each derivative contract are netted as follows:

1. If the cash inflows and outflows are denominated in the same currency and occur in the same time bucket:
   a. The cash inflows and outflows are summed up and the net value is computed as follows:

      $\boldsymbol{Net\ Cash\ Flow} = \boldsymbol{Cash\ Outflow} - \boldsymbol{Cash\ Inflow}$

   b. If the net cash flow is positive and there is no netting agreement associated with the derivative contract, the value is treated as net derivative cash outflow.

   c. If the net cash flow is negative and there is no netting agreement associated with the derivative contract, the value is treated as net derivative cash inflow.

2. If the cash inflows and outflows are denominated in different currencies but settle within the same day:
   a. The cash inflows and outflows are summed up after being converted to the reporting currency and the net value is computed.
   b. If the net cash flow is positive and there is no netting agreement associated with the derivative contract, the value is treated as net derivative cash outflow.
   c. If the net cash flow is negative and there is no netting agreement associated with the derivative contract, the value is treated as net derivative cash inflow.
3. If the cash inflows and outflows are denominated in different currencies and do not settle within the same day:
   a. The cash outflows from each derivative contract without an associated netting agreement are summed up and treated as net derivative cash outflow.
   b. The cash inflows from each derivative contract without an associated netting agreement are summed up and treated as net derivative cash inflow.

NOTE: If a derivative contract has a netting agreement associated with it, the cash flow is further netted across contracts at the netting agreement level.

7.4.2 Cash Flow Netting at Netting Agreement Level

For derivative contracts which have a netting agreement associated with them, the net cash flows computed at the derivative contract level are further netted across multiple contracts under the same netting agreement as follows:

1. In case of derivative contracts, that belong to a single netting agreement, whose payment netting agreement flag is Yes:
   a. The cash inflows and outflows occurring in each time bucket, denominated in each currency, are summed up across all contracts whose payment netting agreement flag is Yes and the net value is computed.
   b. If the net cash flow is positive, the value is treated as net derivative cash outflow.
   c. If the net cash flow is negative, the value is treated as net derivative cash inflow.
2. In case of derivative contracts, that belong to a single netting agreement, whose payment netting agreement flag is No:
   a. The cash outflows occurring in each time bucket, denominated in each currency, are summed up separately for each derivative contract whose payment netting agreement flag is No and treated as net derivative cash outflow.
   b. The cash inflows occurring in each time bucket, denominated in each currency, are summed up separately for each derivative contract whose payment netting agreement flag is No and treated as net derivative cash inflow.

NOTE: Cash flow netting for netting agreements is done separately for each currency. Cash flows are not netted across currencies, instead, the inflows and outflows converted into the reporting currency are summed up separately to report the net derivatives cash inflow and net derivatives cash outflow at an entity level.

7.5 Calculation of Twenty Four Month Look-back Amount

The application computes the 24 month look-back amount, for the purpose of defining outflows due to increased liquidity needs related to market valuation changes on derivatives as per the procedure given below:

- The Mark-to-Market (MTM) value of collateral outflows and inflows due to valuation changes on derivative transactions are captured at a legal entity level. The values over a 24-month historical time window from the “as of date” are identified.
- The application computes the largest 30-day absolute net collateral flow occurring within each rolling 30-day historical time window as follows:
  i. The net Mark-to-Market collateral change is computed for each day within a particular 30-day historical time window as follows:

$$\boldsymbol{Net\ MTM\ Collateral\ Change} = \boldsymbol{MTM\ Colateral\ Outflows - MTM\ Collateral\ Inflows}$$

  ii. The cumulative net Mark-to-Market collateral change is computed for each day within a particular 30-day historical time window as follows:

$$\boldsymbol{Cumulative\ Net\ MTM\ Collateral\ Change} = \sum_{\boldsymbol{1}}^{\boldsymbol{i}} \boldsymbol{Net\ MTM\ Collateral\ Change}$$

  Where,

i	:	Each day within a particular 30-day historical time window
n	:	Each 30-day historical time window

  iii. The absolute net Mark-to-Market collateral change is computed for each day within the rolling 30-day historical time window as follows:

$$\boldsymbol{Absolute\ Net\ MTM\ Collateral\ Change} = \boldsymbol{Abs}(\boldsymbol{Cumulative\ Net\ MTM\ Collateral\ Change})$$

  iv. The largest 30-day absolute net collateral flow occurring within the rolling 30-day historical time window is identified as follows:

$$\boldsymbol{Largest\ 30 - day\ Absolute\ Net\ Collateral\ Flow} = \boldsymbol{Max}(\boldsymbol{Absolute\ Net\ MTM\ Collateral\ Change_i})$$

Note: Steps (i) to (iv) are repeated for each rolling 30-day historical time window.

- The 24-month look-back amount is calculated as follows:

$$\boldsymbol{24 - Month\ Lookback\ Amount} = \boldsymbol{Max}(\boldsymbol{Largest\ 30 - day\ Absolute\ Net\ Collateral\ Flow_n})$$

Note:

1. This calculation is done for each legal entity separately.
2. The largest 30-day absolute net collateral flow is computed in 30 day blocks on a rolling basis that is first 30-day block is As of Date to As of Date - 29; second 30-day block is As of Date - 1 to As of Date - 30 and so on.
3. The 24 month look-back amount is computed as the maximum of the largest absolute net collateral flow during all rolling 30-day periods in each 24 month period.

   The 24-month look-back calculations are illustrated below considering a 34-day historical time window instead of 24-months. This results in 5 rolling 30-day windows.

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
As of Date to As of Date - 29	As of Date	65	14	51	51	51
	As of Date - 1	65	9	56	107	107
	As of Date - 2	74	83	-9	98	98
	As of Date - 3	71	97	-26	72	72
	As of Date - 4	84	89	-5	67	67
	As of Date - 5	8	57	-49	18	18
	As of Date - 6	40	59	-19	-1	1
	As of Date - 7	42	87	-45	-46	46
	As of Date - 8	100	6	94	48	48

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 9	41	30	11	59	59
	As of Date - 10	45	9	36	95	95
	As of Date - 11	9	32	-23	72	72
	As of Date - 12	59	67	-8	64	64
	As of Date - 13	61	10	51	115	115
	As of Date - 14	22	36	-14	101	101
	As of Date - 15	63	81	-18	83	83
	As of Date - 16	36	3	33	116	116
	As of Date - 17	61	22	39	155	155
	As of Date - 18	94	37	57	212	212
	As of Date - 19	3	18	-15	197	197
	As of Date - 20	13	27	-14	183	183
	As of Date - 21	24	56	-32	151	151
	As of Date - 22	57	75	-18	133	133
	As of Date - 23	66	87	-21	112	112

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 24	33	71	-38	74	74
	As of Date - 25	29	30	-1	73	73
	As of Date - 26	64	25	39	112	112
	As of Date - 27	54	39	15	127	127
	As of Date - 28	51	6	45	172	172
	As of Date - 29	35	31	4	176	176
As of Date - 1 to As of Date - 30	As of Date - 1	65	9	56	56	56
	As of Date - 2	74	83	-9	47	47
	As of Date - 3	71	97	-26	21	21
	As of Date - 4	84	89	-5	16	16
	As of Date - 5	8	57	-49	-33	33
	As of Date - 6	40	59	-19	-52	52
	As of Date - 7	42	87	-45	-97	97
	As of Date - 8	100	6	94	-3	3
	As of Date - 9	41	30	11	8	8

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 10	45	9	36	44	44
	As of Date - 11	9	32	-23	21	21
	As of Date - 12	59	67	-8	13	13
	As of Date - 13	61	10	51	64	64
	As of Date - 14	22	36	-14	50	50
	As of Date - 15	63	81	-18	32	32
	As of Date - 16	36	3	33	65	65
	As of Date - 17	61	22	39	104	104
	As of Date - 18	94	37	57	161	161
	As of Date - 19	3	18	-15	146	146
	As of Date - 20	13	27	-14	132	132
	As of Date - 21	24	56	-32	100	100
	As of Date - 22	57	75	-18	82	82
	As of Date - 23	66	87	-21	61	61
	As of Date - 24	33	71	-38	23	23

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 25	29	30	-1	22	22
	As of Date - 26	64	25	39	61	61
	As of Date - 27	54	39	15	76	76
	As of Date - 28	51	6	45	121	121
	As of Date - 29	35	31	4	125	125
	As of Date - 30	93	68	25	150	150
As of Date - 2 to As of Date - 31	As of Date - 2	74	83	-9	-9	9
	As of Date - 3	71	97	-26	-35	35
	As of Date - 4	84	89	-5	-40	40
	As of Date - 5	8	57	-49	-89	89
	As of Date - 6	40	59	-19	-108	108
	As of Date - 7	42	87	-45	-153	153
	As of Date - 8	100	6	94	-59	59
	As of Date - 9	41	30	11	-48	48
	As of Date - 10	45	9	36	-12	12

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 11	9	32	-23	-35	35
	As of Date - 12	59	67	-8	-43	43
	As of Date - 13	61	10	51	8	8
	As of Date - 14	22	36	-14	-6	6
	As of Date - 15	63	81	-18	-24	24
	As of Date - 16	36	3	33	9	9
	As of Date - 17	61	22	39	48	48
	As of Date - 18	94	37	57	105	105
	As of Date - 19	3	18	-15	90	90
	As of Date - 20	13	27	-14	76	76
	As of Date - 21	24	56	-32	44	44
	As of Date - 22	57	75	-18	26	26
	As of Date - 23	66	87	-21	5	5
	As of Date - 24	33	71	-38	-33	33
	As of Date - 25	29	30	-1	-34	34

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 26	64	25	39	5	5
	As of Date - 27	54	39	15	20	20
	As of Date - 28	51	6	45	65	65
	As of Date - 29	35	31	4	69	69
	As of Date - 30	93	68	25	94	94
	As of Date - 31	51	97	-46	48	48
As of Date - 3 to As of Date - 32	As of Date - 3	71	97	-26	-26	26
	As of Date - 4	84	89	-5	-31	31
	As of Date - 5	8	57	-49	-80	80
	As of Date - 6	40	59	-19	-99	99
	As of Date - 7	42	87	-45	-144	144
	As of Date - 8	100	6	94	-50	50
	As of Date - 9	41	30	11	-39	39
	As of Date - 10	45	9	36	-3	3
	As of Date - 11	9	32	-23	-26	26

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 12	59	67	-8	-34	34
	As of Date - 13	61	10	51	17	17
	As of Date - 14	22	36	-14	3	3
	As of Date - 15	63	81	-18	-15	15
	As of Date - 16	36	3	33	18	18
	As of Date - 17	61	22	39	57	57
	As of Date - 18	94	37	57	114	114
	As of Date - 19	3	18	-15	99	99
	As of Date - 20	13	27	-14	85	85
	As of Date - 21	24	56	-32	53	53
	As of Date - 22	57	75	-18	35	35
	As of Date - 23	66	87	-21	14	14
	As of Date - 24	33	71	-38	-24	24
	As of Date - 25	29	30	-1	-25	25
	As of Date - 26	64	25	39	14	14

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 27	54	39	15	29	29
	As of Date - 28	51	6	45	74	74
	As of Date - 29	35	31	4	78	78
	As of Date - 30	93	68	25	103	103
	As of Date - 31	51	97	-46	57	57
	As of Date - 32	12	31	-19	38	38
As of Date - 4 to As of Date - 33	As of Date - 4	84	89	-5	-5	5
	As of Date - 5	8	57	-49	-54	54
	As of Date - 6	40	59	-19	-73	73
	As of Date - 7	42	87	-45	-118	118
	As of Date - 8	100	6	94	-24	24
	As of Date - 9	41	30	11	-13	13
	As of Date - 10	45	9	36	23	23
	As of Date - 11	9	32	-23	0	0
	As of Date - 12	59	67	-8	-8	8

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 13	61	10	51	43	43
	As of Date - 14	22	36	-14	29	29
	As of Date - 15	63	81	-18	11	11
	As of Date - 16	36	3	33	44	44
	As of Date - 17	61	22	39	83	83
	As of Date - 18	94	37	57	140	140
	As of Date - 19	3	18	-15	125	125
	As of Date - 20	13	27	-14	111	111
	As of Date - 21	24	56	-32	79	79
	As of Date - 22	57	75	-18	61	61
	As of Date - 23	66	87	-21	40	40
	As of Date - 24	33	71	-38	2	2
	As of Date - 25	29	30	-1	1	1
	As of Date - 26	64	25	39	40	40
	As of Date - 27	54	39	15	55	55

Rolling 30-Day Period	Day	Mark-To-Market Collateral Outflows Due To Derivative Transaction Valuation Changes (a)	Mark-To-Market Collateral Inflows Due To Derivative Transaction Valuation Changes (b)	Net Mark-To-Market Collateral Change (c = a – b)	Cumulative Net Mark-To-Market Collateral Change (d = Cumulative c)	Absolute Net Mark-To-Market Collateral Change [e = Abs (d)]
	As of Date - 28	51	6	45	100	100
	As of Date - 29	35	31	4	104	104
	As of Date - 30	93	68	25	129	129
	As of Date - 31	51	97	-46	83	83
	As of Date - 32	12	31	-19	64	64
	As of Date - 33	34	36	-2	62	62

The largest 30-day absolute net collateral flow for each rolling 30-day period and the 24 month look-back value (in this example, the 34 day look-back value) are computed as follows:

Rolling 30-Day Period	Largest 30-Day Absolute Net Collateral Flow [f = Max (e)]	24 Month Look-back Value [Max (f)]
As of Date to As of Date - 29	212	212
As of Date - 1 to As of Date - 30	161	
As of Date - 2 to As of Date - 31	153	
As of Date - 3 to As of Date - 32	144	

Rolling 30-Day Period	Largest 30-Day Absolute Net Collateral Flow [f = Max (e)]	24 Month Look-back Value [Max (f)]
As of Date - 4 to As of Date - 33	140	

7.6 Calculation of Operational Amount

The regulator prescribed lower outflow rate for operational deposits is to be applied only to that portion of the EOP balance that is truly held to meet operational needs. LRM supports a new methodology to compute the operational portion of the EOP balance of operational deposits. The steps involved in computing the operational balance are as follows:

1. All deposits classified as operational as per regulatory guidelines are identified. This is a separate process in LRM.
2. The EOP balances of eligible operational accounts are obtained over a 90-day historical window including the As of Date i.e. As of Date – 89 days. To identify historical observations, the f_reporting_flag has to be updated as ‘Y’ for one execution of the Run per day in the LRM Run Management Execution Summary UI. The application looks up the balance for such accounts against the Run execution for which the Reporting Flag is updated as “Y” for each day in the past.

   Note:

   The historical time window is captured as a parameter in the SETUP_MASTER table. The default value is 90 days which can be modified by the user. To modify this value, you can update the value under the component code DAYS_HIST_OPER_BAL_CALC_UPD
3. A rolling 5 day average is calculated for each account over the historical window.
4. The average of the 5-day rolling averages computed in step 3 is calculated.
5. The operational balance is calculated as follows:

   Note:

   The calculation of the operational balance can be either a direct download from the staging tables, or through the historical balance approach.

$$Operational\ Balance = Min\ (Current\ EOP\ Balance, Average\ Computed\ in\ Step\ 4)$$

Note:

i. LRM application supports the functionalities mentioned in steps 2 to 5, for the following Run Purposes:
   - EBA Delegated Act Run
   - RBI Run.

ii. The operational balance calculation based on historical lookback is optional. You can choose to compute the operational balances using this method or provide the value as a download. To provide the value as download, update the value in the SETUP_MASTER table under the component code HIST_OPERATIONAL_BAL_CALC_UPD as N . If the value is 'Y' then the value would be calculated through historical balance approach.

6. The non-operational balance is calculated as follows:

$$Non-operational\ Balance = Current\ EOP\ Balance - Operational\ Balance$$

7. The operational insured balance is calculated as follows:

$$Operational\ Insured\ Balance = Min\ (Operational\ Balance, Insured\ Balance)$$

The insured and uninsured balances are calculated as part of a separate process i.e. the insurance allocation process which is explained in detail in the relevant section under each jurisdiction.

8. The operational uninsured balance is calculated as follows:

$$Operational\ Uninsured\ Balance = Operational\ Balance - \ Insured\ Operational\ Balance$$

9. The non-operational insured balance is calculated as follows:

$$Non-operational\ Insured\ Balance = Min\ [Non-operational\ Balance, (Insured\ Balance - \ Insured\ Operational\ Balance)]$$

10. The non-operational uninsured balance is calculated as follows:

$$Non-operational\ Uninsured\ Balance = Non-operational\ Balance - \ Insured\ Non-operational\ Balance$$

The operational deposit computation process is illustrated below assuming a 15-day historical window instead of 90-days and for the "as of date" 28^{th} February 2017. The historical balances for 15-days including the "as of date" are provided below.

Clients With Operational Accounts	Eligible Operational Accounts	Historical Time Window														As of Date
		2/14/2017	2/15/2017	2/16/2017	2/17/2017	2/18/2017	2/19/2017	2/20/2017	2/21/2017	2/22/2017	2/23/2017	2/24/2017	2/25/2017	2/26/2017	2/27/2017	2/28/2017
A	10001	102,000	102,125	102,250	102,375	102,500	102,625	102,750	102,875	103,000	103,125	103,250	103,375	103,500	103,625	103,750
	10296	23,500	23,550	23,600	23,650	23,700	23,750	23,800	23,850	23,900	23,950	24,000	24,050	24,100	24,150	24,200
B	31652	65,877	59,259	59,234	59,209	59,184	59,159	59,134	59,109	59,084	59,059	59,034	59,009	58,984	58,959	58,934

The rolling averages and cumulative average are computed as follows:

Clients with Operational Accounts	Eligible Operational Accounts	5-day Rolling Average											Cumulative Average (a)
		2/18/2017	2/19/2017	2/20/2017	2/21/2017	2/22/2017	2/23/2017	2/24/2017	2/25/2017	2/26/2017	2/27/2017	2/28/2017	
A	10001	102,250	102,375	102,500	102,625	102,750	102,875	103,000	103,125	103,250	103,375	103,500	95136
	10296	23,600	23,650	23,700	23,750	23,800	23,850	23,900	23,950	24,000	24,050	24,100	22721
B	31652	60,553	59,209	59,184	59,159	59,134	59,109	59,084	59,059	59,034	59,009	58,984	56931

The operational and non-operational balances are computed as follows:

Clients with Operational Accounts	Eligible Operational Accounts	Current Balance (b)	Operational Balance (c = a – b)	Non-Operational Balance	Insured Balance	Uninsured Balance	Insured Operational Balance	Uninsured Operational Balance	Insured Non-Operational Balance	Uninsured Non-Operational Balance
A	10001	103,750	95,136	8,615	100,000	3,750	95,136		4,865	3,750
	10296	24,200	22,721	1,480		24,200		22,721		1,480
B	31652	58,934	56,931	2,003	58,934		56,931		2,003	

Note:

4. Negative historical balances are replaced by zero for the purposes of this computation.
5. For operational accounts that have an account start date >= historical days including the “as of date”, missing balances are replaced by previous available balance.
6. For operational accounts that have an account start date < historical days including the “as of date”:
   - iii. Missing balances between account start date and “as of date” are replaced by previous available balance.
   - iv. Rolling average is calculated only for the period from account start date to the “as of date”.
7. The methodology to compute operational balance is optional and is currently available only in the RBI and EBA Delegated Act Runs. The option to provide the operational balance as a download is still supported by the application.

7.7 Calculation of HQLA Transferability Restriction

Regulators across jurisdictions recognize the existence of liquidity transfer restrictions, for banks that operate in multiple jurisdictions. Such transfer restrictions have implications to the group-wide consolidated LCR calculations and hence require to be treated appropriately. OFS LRM, in the LCR consolidation process, includes the restricted HQLA from a subsidiary in the consolidated stock of HQLA only to the extent of that subsidiary's liquidity needs i.e. its net cash outflow, in accordance with the regulatory requirements. The treatment of transferability restriction during consolidation is as follows:

1. The net cash outflows are computed for a subsidiary, on a consolidated basis. The consolidation entity is the subsidiary itself in this case. If the subsidiary is a leaf level entity, then the net cash outflow is calculated on a standalone basis.
2. The restricted and unrestricted stock of level 1, level 2A and level 2B (level 2B RMBS and Level 2B non-RMBS in case of BIS) is computed for the subsidiary on a consolidated basis. OFS LRM captures the HQLA transferability restriction at an account level through the flag F_TRANSFERABILITY_RESTRICTION.
3. The application checks whether the stock of restricted level 1 assets > net cash outflows. If yes, it includes the stock of restricted level 1 assets in the calculation of its immediate parent entity's stock of HQLA up to the extent of its own net cash outflows computed as part of step 1. If no, the entire stock of restricted level 1 assets is included in the consolidated calculations.
4. The application checks whether the stock of restricted level 1 + level 2A assets > net cash outflows. If yes, it includes the stock of restricted level 2A assets in the calculation of its immediate parent entity's stock of HQLA up to the extent of its own net cash outflows computed as part of step 1 less stock of restricted level 1 assets. If no, the entire stock of restricted level 2A assets is included in the consolidated calculations.
5. The application checks whether the stock of restricted level 1 + level 2A + level 2B assets > net cash outflows. If yes, it includes the stock of restricted level 2B assets in the calculation of its immediate parent entity's stock of HQLA up to the extent of its own net cash outflows computed as part of step 1 less stock of restricted level 1 + level 2A assets. If no, the entire stock of restricted level 2B assets is included in the consolidated calculations.
6. The unrestricted level 1, 2A and 2B assets are included fully in the calculation of its immediate parent entity's stock of HQLA.
7. Steps 1 to 6 are repeated for each sub-consolidation level within the organization structure of the consolidation entity till the consolidation entity itself.

Note:

1. In case of BIS, step 5 is split into 2 steps, first for level 2B RMBS assets and then for on-RMBS assets.
2. The allocation of restricted assets is done in the descending order of asset quality in order to maximize the stock of HQLA.
3. This calculation is part of the LCR consolidation process. To get a complete view of the process, refer to the section of the user guide that describes the consolidation process for each jurisdiction.

Oracle Financial Services Liquidity Risk
Management
November 2017

Oracle Corporation
World Headquarters
500 Oracle Parkway
Redwood Shores, CA 94065
U.S.A.

Worldwide Inquiries:
Phone: +1.650.506.7000
Fax: +1.650.506.7200

oracle.com