**Step 1: Data Import**

Import both datasets into PowerBI for analysis.

**Step 2: Data Cleaning**

Open the Power Query Editor and conduct the following cleaning processes:

* Duplicate Removal: No duplicates were found in either dataset.
* Missing Values Handling:
  + For Dataset1, no missing values were detected.
  + For Dataset2, the columns 'DEFAULT\_FLAG', 'FORBEARANC\_FL', and 'WATCH\_LIST' had 'Y' or NULL. We replaced NULL with 'N'. Columns from 'Column11' to 'Column15' only had NULL values, so they were removed.
* Data Normalization: Checked data types and confirmed that they were logical. Also, ensured that data formatting was consistent across all columns. Provisions and Client\_ID columns were set to 'Do not summarize'.

**Step 3: Data Modeling**

Auto-detect functionality identified relationships between the datasets based on the 'FACILITY\_ID'. Many-to-one relationships were activated.

**Step 4: Measure Creation**

Created measures to reflect coverage ratios for each IFRS9 stage, NPE ratio, and forborne exposure:

* Coverage Ratios: Calculated as the ratio of total provisions to total outstanding amounts for each IFRS9 stage:
  + Stage 1 Coverage Ratio = SUMX( FILTER('Dataset2\_Interview test', 'Dataset2\_Interview test'[IFRS9\_STAGING] = "STAGE\_1"), 'Dataset2\_Interview test'[PROVISIONS] ) / SUMX( FILTER('Dataset2\_Interview test', 'Dataset2\_Interview test'[IFRS9\_STAGING] = "STAGE\_1"), 'Dataset2\_Interview test'[OUTSTANDING\_AMOUNT] )
  + Stage 2 Coverage Ratio = SUMX( FILTER('Dataset2\_Interview test', 'Dataset2\_Interview test'[IFRS9\_STAGING] = "STAGE\_2"), 'Dataset2\_Interview test'[PROVISIONS] ) / SUMX( FILTER('Dataset2\_Interview test', 'Dataset2\_Interview test'[IFRS9\_STAGING] = "STAGE\_2"), 'Dataset2\_Interview test'[OUTSTANDING\_AMOUNT] )
  + Stage 3 Coverage Ratio = SUMX( FILTER('Dataset2\_Interview test', 'Dataset2\_Interview test'[IFRS9\_STAGING] = "STAGE\_3"), 'Dataset2\_Interview test'[PROVISIONS] ) / SUMX( FILTER('Dataset2\_Interview test', 'Dataset2\_Interview test'[IFRS9\_STAGING] = "STAGE\_3"), 'Dataset2\_Interview test'[OUTSTANDING\_AMOUNT] )
* Non-Performing Exposure (NPE) Ratio: Computed as the proportion of total outstanding amount that is non-performing:
  + NPE Ratio = CALCULATE( SUM('Dataset2\_Interview test'[OUTSTANDING\_AMOUNT]), 'Dataset2\_Interview test'[PERFORMING\_STATUS] = "NPE" ) / SUM('Dataset2\_Interview test'[OUTSTANDING\_AMOUNT])
* Forborne Exposure: Estimated total forborne exposure and proportion of forborne exposure to the total outstanding amount:
  + Total Forborne Exposure = CALCULATE( SUM('Dataset2\_Interview test'[OUTSTANDING\_AMOUNT]), 'Dataset2\_Interview test'[FORBEARANCE\_FL] = "Y" )
  + Proportion Forborne Exposure = [Total Forborne Exposure] / SUM('Dataset2\_Interview test'[OUTSTANDING\_AMOUNT])

**Step 5: Visualization Creation**

Created various visualizations:

* Coverage Ratio: Created a stacked column chart showing each stage's coverage ratio over time.
* Non-Performing Exposure Ratio: Displayed the NPE Ratio on a card visualization, and created a treemap and bar chart showing provisions and outstanding amounts by IFRS9 staging.
* Forborne Exposure: Showed total and proportional forborne exposure on card visualizations.

Additional filters like 'EXPOSURE\_TYPE', 'WATCH\_LIST', and 'DEFAULT\_FLAG' were included to enhance the interactivity and insights of the dashboard.