**Loan Portfolio & Risk Analysis**

ABC Bank is operating across multiple countries under Finance sector. They want to analyze its loan portfolio to gain insights into loan performance, identify risk factors, and optimize lending practices. They aim to leverage Power BI to analyze loan data, monitor key performance indicators, and make data-driven decisions.

**Objective**:

To do visualization and analysis on loan dataset using Power BI Desktop and service.

Power BI is a powerful business intelligence tool that can be utilized in various ways to improve Bank operations and decision-making.

Using Power BI, the bank can create a high-level overview dashboard of its loan portfolio. Power BI enables the bank to monitor loan performance, identify risks, and make informed decisions to optimize its loan portfolio

Power BI can help assess loan risks by highlighting credit risks. By analyzing loan data and visualizing key risk indicators, the bank can identify potential risks, implement proactive measures, and minimize credit losses.

By leveraging the capabilities of Power BI in loan analysis, the bank can optimize its lending practices, mitigate risks, and ensure a healthy loan portfolio.

**Environment:**

* Power BI Desktop
* Power BI Service

**Source Dataset**

The bank collects loan-related data from various sources, including loan application forms, credit bureaus, internal systems, and financial statements. This data includes borrower information, loan terms, credit scores, repayment history in the below 2 excel files.

* Bank Loan.xls
* Bank Region.csv

 

Metadata Information on Status Column:

* A – Contract Finished no Problems
* B – Contract Finished loan not payed
* C – Running Contract, ok so far
* D – Running Contract, client in debt

**Problem Statement:**

The collected data needs to be integrated. It may require cleaning, transforming, and aggregating the data to ensure consistency and accuracy.

General Remarks:

Follow all the best practices in the report. Load only the required source data. Have proper data types and retain only needed columns. Give proper business names to columns and visuals. Align in proper layout. Display all amount in $. Show percentages with 2 decimal points.

Design a Power BI report which answers the below questions for the Bank.

1. What is the Total loan amount given for how many customers across how many cities?
2. What is the demographic profile of the bank's customer and how does it vary across Country, State and City?
3. How may Customers own home or live in rent or in Mortgage?
4. What Term loans are taken by Customers?
5. What are the top 5 reasons for loan taken by Customers?
6. Under what Segment Customers fall under?
7. Bank should be able to choose data for different Years. They would like to focus on any single year, currently 2015.
8. Title of the page should have the year selected by the Bank

Bank should get a collective view on Loan Risk where they could do analysis on the below questions

1. What is the total loan amount of the year selected and what is Year on Year growth on that?
2. How many loan defaulters are there? Find it from Status column

|  |  |
| --- | --- |
| A | Fully Paid |
| B | Default |
| C | Timely Payment |
| C | Late Payment |

1. What is the Credit rating of the Customers. Find it using Credit Score.

|  |  |
| --- | --- |
| Above 800 | Excellent |
| Above 740 and Below 800 | Very Good |
| Above 670 and Below 740 | Good |
| Above 580 and Below 670 | Fair |
| Above 300 and Below 580 | Poor |
| Below 580 | Very Poor |

1. How is the growth of Bank over Month?
2. Find out the no of customers and no of defaulters against Market
3. What are the top countries with highest number of defaulters?
4. How Credit score is affected by owning homes and no of years in Job?
5. Bank should able to choose data for different Country/State/City, Status of Loan and Year. They would like to focus on any single year, currently 2015.
6. Customer should able to choose Loan Demographics and Loan Risk Analysis with a click of a button
7. Bank need to view full Customer details with customer, location, Credit Rating, Credit Score and Loan Status upon clicking Country. This will be country level view. They could able to download it in csv format.
8. Create phone view with key metrics and visuals

Customer should have a single page view where they ask Q&A in Power BI Service.

1. What is the total loan amount and number of defaulters?
2. How many Customers Bank has across Region (Country/State/City)?
3. What is the growth of Bank over month?
4. Customer will be consuming both report and dashboard as a single unit

Additional Requirements: (Good to have)

1. Customer can get additional features on the Country view page, upon clicking a button to show credit rating of the customers. By default this visual need not be visible.