# BANKING DASHBOARD

## Problem Statement

Develop a basic understanding of risk analytics in banking and financial services and understand how data is used to minimise the risk of losing money while lending to customers.

## Solution

With our dashboards which are created using Power BI latest tools help the company to make a decision based on the applicant's profile, like if the applicant is likely to repay the loan then approving the loan otherwise not.

## About Dataset

This dataset basically contains information about bank details ,various client details which consists of multiple tables which are interlinked with each other through keys like primary key and foreign key.

The various tables are Banking Relationship, Client-Banking, Gender, Investment Advisor and Period.

## Data Cleaning

1. Creating a new column Engagement Days in Client-Banking table how many days the client spent from the date of joining in banks.

```
Engagement Days = DATEDIFF(Banking[Joined Bank], TODAY(), DAY)
```

2. Creating a new column using conditional formating named as Processing Fees for the column Fee Structure like if fee structure is high then processing fee would be 0.05

```
= Table.AddColumn(#"Replaced Value5", "Processing Fees", each if [Fee Structure] = "High" then 0.05 else if [Fee Structure] = "Mid" then 0.03 else if
    [Fee Structure] = "Low" then 0.01 else 0)
```

| d | Risk Weighting | BRId | GenderId | IAId | Income Band | Processing Fees |
|---|---|---|---|---|---|---|
| 1 | 2 | Retails | Male | 1 | Low | 0.05 |
| 1 | 3 | Institutional | Male | 2 | Medium | 0.05 |
| 1 | 3 | Private Banks | Female | 3 | Medium | 0.05 |

3. Creating bins using conditional formatting for the Estimated Income < 100000 as low and <300000 as Mid with the column named as Income Band in Clients-Banking table.

```
= Table.AddColumn(#"Replaced Value1", "Custom", each if [Estimated Income] >= 300000 then "High" else if [Estimated Income] >= 100000 then "Medium"
    else "Low")
```

| g | Properties Owned | Risk Weighting | BRId | GenderId | IAId | Custom |
|---|---|---|---|---|---|---|
| 1134475.3 | 1 | 2 | 1 | Male | 1 | Low |
| 2000526.1 | 1 | 3 | 2 | Male | 2 | Medium |
| 548137.58 | 1 | 3 | 3 | Female | 3 | Medium |

## Calculated Functions

### 1. Total Deposit

```
Total Deposit = SUM(Banking[Bank Deposits]) + SUM(Banking[Saving Accounts])
+ SUM(Banking[Foreign Currency Account]) + SUM(Banking[Checking Accounts])
```

### 2. Total Loan

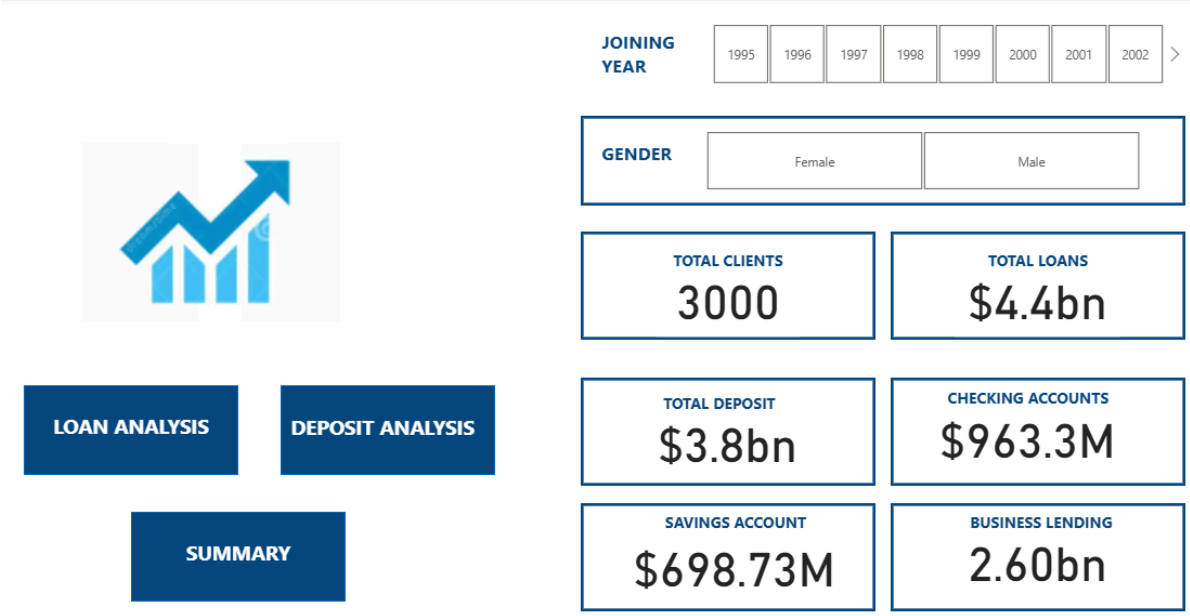
```
Total Loan = SUM(Banking[Bank Loans]) + SUM(Banking[Business Lending]) +
SUM(Banking[Credit Card Balance])
```

### 3. Total Fees

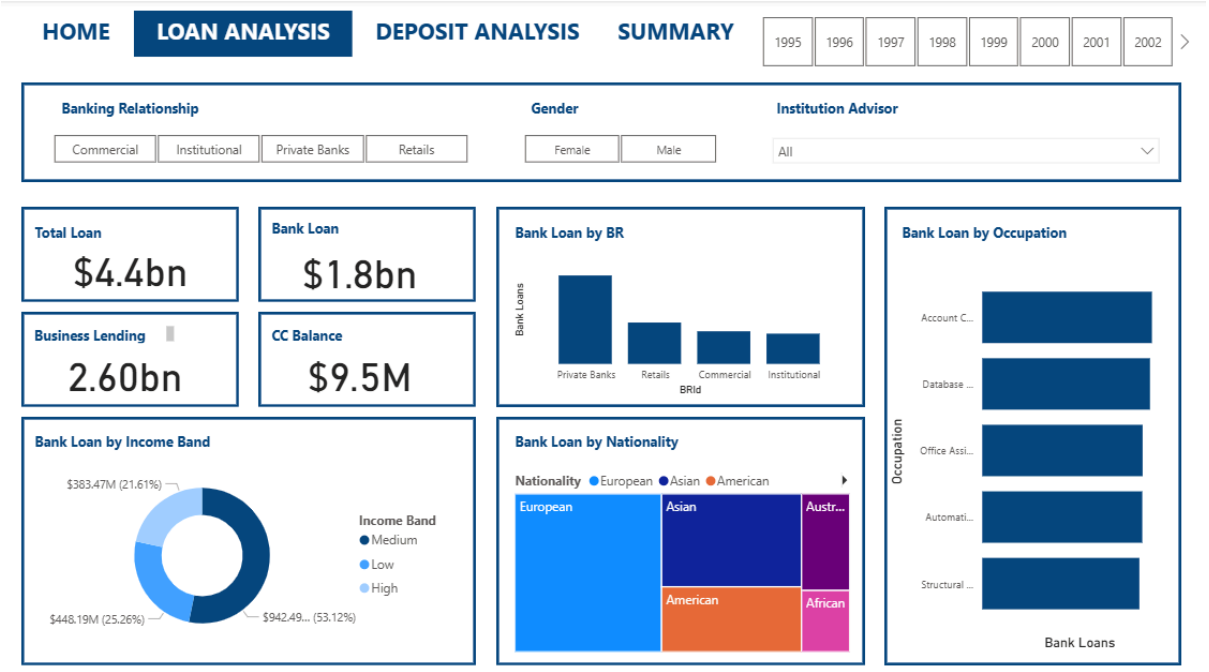
```
Total Fees = SUMX(Banking, Banking[Total Loan] * Banking[Processing Fees])
```

## Visualization and Results

## Home:




## Loan Analysis



# Loan Analysis Report

## Overview

Total loans amount to $4.4 billion, composed of $1.8 billion in direct bank loans, $2.6 billion in business lending, and $9.5 million in credit card balances. Loan allocation patterns mirror the deposit trends, with Private Banks holding the majority share, reinforcing their dominance across both lending and deposit portfolios.

### 1. **Banking Relationship**

- Private Banks lead significantly in loan issuance, followed by Retail, Commercial, and Institutional segments.
- This concentration indicates that high-value clients under Private Banking are driving the lending volume.
- Retail and Commercial relationships contribute moderate shares, while Institutional lending remains limited.

### 2. **Loan Composition**

- Business lending forms nearly 59% of the total loan book, while standard bank loans account for 41%.
- The minimal credit card balance shows weak consumer credit penetration, signifying corporate and high-net-worth client orientation rather than mass-market lending.

### 3. **Income Band Analysis**

- High-income clients hold $942.49M (53.12%), medium-income $448.19M (25.26%), and low-income $383.47M (21.61%).
- The portfolio is weighted toward high-income borrowers, indicating strong asset quality but limited diversification across income brackets.

### 4. **Nationality Distribution**

- European clients dominate the loan portfolio, with Asian borrowers following closely.
- American, Australian, and African groups account for smaller proportions.
- The Eurocentric exposure suggests geographic risk concentration, requiring diversification to mitigate regional dependency.

5. **Occupational Distribution**

- Top borrowing occupations include Account Coordinators, Database Professionals, and Office Assistants.
- Technical and structural roles contribute lower proportions.
- This pattern reflects a mix of middle- to upper-income professionals accessing credit, consistent with the high-income bias observed across metrics.

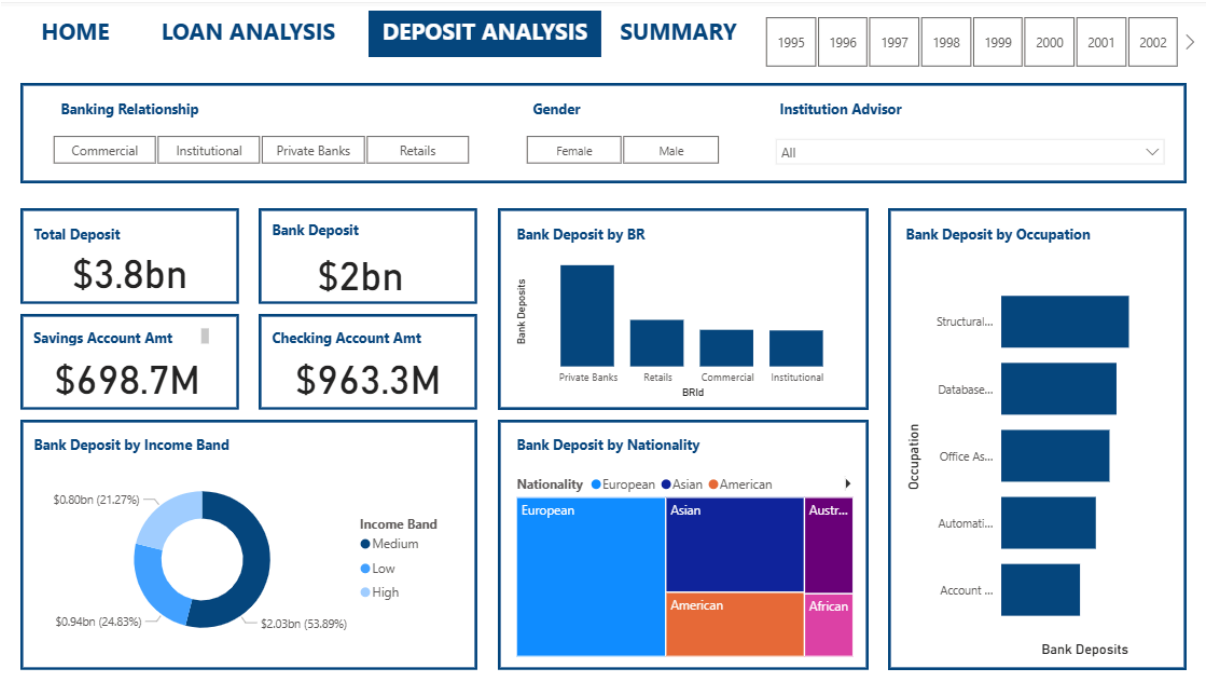
### Key Insight Summary

- Loan exposure concentrated in Private Banking and high-income clients.
- Business lending dominates, reflecting enterprise-focused credit strategy.
- Geographic and income band concentration risks are evident.
- Consumer credit underrepresented; growth potential in mass retail and card products.

### Analytical Implication

Current loan distribution ensures portfolio stability via high-creditworthiness clients but limits growth scalability. Strategic expansion into diversified income tiers and geographies is necessary to balance risk-return and stimulate sustained lending growth.

## Deposit Analysis



# Deposit Analysis Report

## Overview

Total deposits stand at $3.8 billion, comprising $2 billion in bank deposits, $963.3 million in checking accounts, and $698.7 million in savings accounts. The dataset segments deposits by banking relationship, income band, nationality, and occupation, revealing concentration patterns in both institutional and demographic dimensions.

### 1. **Banking Relationship**

- Private Banks dominate deposit volume, followed by Retails, Commercial, and Institutional clients.
- This indicates a high-value, low-volume client structure driving the majority of funds, suggesting reliance on fewer high-net-worth customers.

### 2. **Deposit Composition**

- Checking accounts represent roughly 25% of total deposits, while savings accounts make up about 18%.
- The residual portion may include other categories or fixed-term deposits not displayed here.

### 3. Income Band Analysis

- High-income clients contribute $2.03 billion (≈54%), medium-income $0.94 billion (≈24%), and low-income $0.80 billion (≈21%).
- The deposit base is thus heavily skewed toward high-income customers, confirming a premium client bias.

### 4. **Nationality Distribution**

- European clients hold the largest share of deposits, followed by Asian and American customers.
- Minority representation from Australian and African clients remains comparatively small.
- Geographic diversification is limited, with strong Euro-centric concentration.

### 5. Occupational Distribution

- Top deposit-contributing occupations include Structural, Database, and Office Associate roles, with minor participation from Automation and Accounting-related positions.
- This pattern aligns with mid-to-high-income professional demographics.

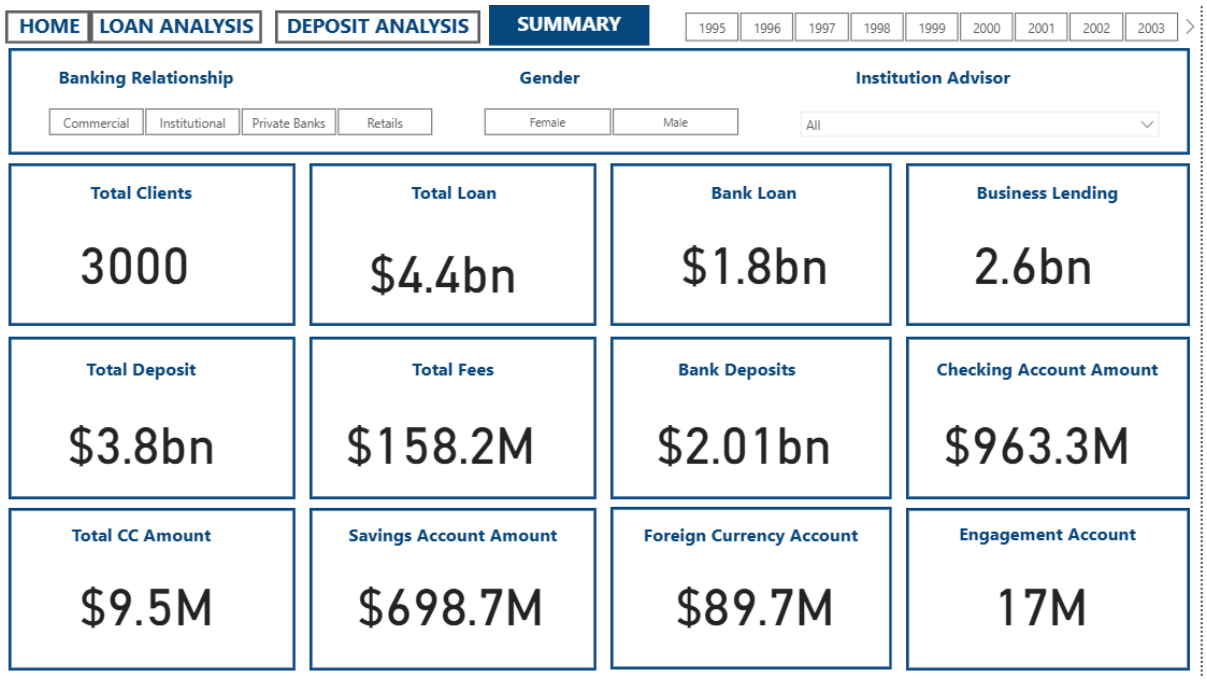
### Key Insight Summary

- Deposit concentration rests on high-income and Private Bank relationships.
- Geographic exposure leans European, requiring diversification for risk dispersion.
- Occupational skew suggests deposits are sourced from skilled professionals rather than mass-market customers.
- Savings and checking growth potential exists through targeted retail acquisition.

### Analytical Implication

Revenue resilience depends on retaining high-income and private clients while expanding lower-band and regional segments to balance deposit volatility and market exposure.

## Summary Dashboard



## Conclusion –

Empowered by the latest data visualization techniques, Power BI dashboards are among the most effective resources for use in the banking sector. As outlined in this write-up, a banking operations dashboard in Power BI can be developed with key banking related metrics and KPIs.

## Future Work –

With these dashboards banks can easily know what is the total loan amount and all other things of a particular investor.

It also helps which type of banks have more number of clients as we can see private banks have more number of clients so it can help other banks build their strategies to increase clients.

It also provides insights about which nationality has the highest bank loans.

It gives information about various types of amounts involved in different types of accounts by investors.