Banking KPI Documentation

Banking dataset KPI specifications with DAX formulas and visualization recommendations.

Overview

This document consolidates key performance indicators (KPIs) for the Combined Banking Dataset, including descriptions, recommended visualizations, and DAX/calculated column examples.

Transaction KPIs

1. Transactions by Type

Description: Volume or proportion of transactions by type (Credit/Debit)

Recommended Visualizations:

- Pie Chart
- Stacked Column Chart

DAX/Calculated Column:
Axis: TransactionType
Values: COUNT(CombinedBankingDataset[TransactionID])

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2. Monthly Transaction Amount

Description: Total transaction value grouped by month

Recommended Visualizations:

- Line Chart
- Area Chart

DAX/Calculated Column:
Monthly Transaction Amount = CALCULATE(
SUM(CombinedBankingDataset[Amount]),
ALLEXCEPT(CombinedBankingDataset, CombinedBankingDataset[TransactionDate].
[Month])
)

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3. Top N Customers by Transaction Value

Description: Customers with the highest transaction values

Recommended Visualizations:

- Top N Bar Chart

DAX/Calculated Column:
Axis: Customer Name or ID
Values: Total by Customer = CALCULATE(
SUM(CombinedBankingDataset[Amount]),
ALLEXCEPT(CombinedBankingDataset, CombinedBankingDataset[CustomerID])
)

Note: Use Top N filter on the visualization

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4. Transaction Volume Trend

Description: Trend of transactions over time (monthly)

Recommended Visualizations:

- Line Chart
- Area Chart

DAX/Calculated Column:
Transactions by Month = CALCULATE(
COUNT(CombinedBankingDataset[TransactionID]),
ALLEXCEPT(CombinedBankingDataset, CombinedBankingDataset[TransactionDate].
[Month])
)

Account KPIs

5. Average Account Balance

Description: Mean balance per account

Recommended Visualizations:

- Column Chart
- Gauge Chart

DAX/Calculated Column:
Average Balance = AVERAGE(CombinedBankingDataset[Balance])

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6. Total Balance by Account Type

Description: Aggregate balances per account type

Recommended Visualizations:

- Clustered Bar Chart
- Clustered Column Chart

DAX/Calculated Column:
Axis: AccountType
Values: Total Balance = SUM(CombinedBankingDataset[Balance])

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7. Accounts by Account Type

Description: Number of accounts per account type

Recommended Visualizations:

- Clustered Bar Chart
- Treemap Chart

DAX/Calculated Column:
Axis: AccountType
Values: Account Count by Type = COUNT(CombinedBankingDataset[Account_AccountID])

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8. Inactive Accounts (Last 90 Days)

Description: Accounts with no transactions within the past 90 days

Recommended Visualizations:

- Clustered Bar Chart
- Table

DAX/Calculated Column:
Inactive Accounts = CALCULATE(
DISTINCTCOUNT(CombinedBankingDataset[Account_AccountID]),
FILTER(
VALUES(CombinedBankingDataset[Account_AccountID]),
CALCULATE(MAX(CombinedBankingDataset[TransactionDate])) < TODAY()-90
)
)

Customer KPIs

9. Customer Gender Distribution

Description: Proportion of customers by gender

Recommended Visualizations:

- Donut Chart
- Stacked Column Chart

DAX/Calculated Column:
Axis: Gender
Values: Customer Count by Gender =
DISTINCTCOUNT(CombinedBankingDataset[CustomerID])

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10. Customers by Age Group

Description: Distribution of customers grouped by age brackets

Recommended Visualizations:

- Column Chart
- Histogram Chart

DAX/Calculated Column:

```
Customer Age = DATEDIFF(
CombinedBankingDataset[DateOfBirth],
TODAY(),
YEAR
)

Customer Age Group = SWITCH(
TRUE(),
[Customer Age] <= 25, "≤25",
[Customer Age] <= 35, "26-35",
[Customer Age] <= 50, "36-50",
"51+"
)
```

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11. Customer Location Distribution

Description: Customer distribution across geographic locations

Recommended Visualizations:

- Filled Map
- Column Chart

DAX/Calculated Column:
Axis: City or Region or Address
Values: DISTINCTCOUNT(CombinedBankingDataset[CustomerID])

Summary

KPI Category	Count	Primary Metrics
Transaction KPIs	4	Volume, Amount, Trends, Top Customers
Account KPIs	4	Balance, Type Distribution, Inactive Accounts
Customer KPIs	3	Gender, Age, Location
Total KPIs	**11**	**Comprehensive Banking Analytics**

Data Model Notes

- **Dataset:** CombinedBankingDataset
- **Key Tables:** Customer, Account, Transaction
- **Key Columns:** CustomerID, Account_AccountID, TransactionID, TransactionDate, Amount, Balance, AccountType, Gender, DateOfBirth
- **Filter Context:** Use ALLEXCEPT for month/customer-level aggregations
- **Date Calculations:** DATEDIFF for age calculations, TODAY() for current date comparisons

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Usage for Power BI / Data Visualization

1. Import the CombinedBankingDataset into Power BI
2. Create calculated columns for Age and Age Group using the provided DAX
3. Create measures for aggregations (Monthly Amount, Average Balance, etc.)
4. Build visualizations using recommended chart types
5. Apply filters as needed (e.g., Top N for customers, date range for trends)

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