

DAX Measures Used in U.S. Financial Dashboard

This document contains all the DAX measures created and used to answer analytical questions in the project.

Age Grouping (Segmentation)

Purpose: Categorize customers based on age into demographic groups.

```
Age Group =  
    SWITCH(  
        TRUE(),  
        df[Age] >= 14 && df[Age] < 19, "Teen",  
        df[Age] >= 19 && df[Age] < 25, "Young Adult",  
        df[Age] >= 25 && df[Age] < 35, "Old Adult",  
        df[Age] >= 35 && df[Age] < 45, "Old1",  
        df[Age] >= 45, "Old2"  
    )
```

Average Number of Credit Inquiries

```
AverageCreditInquiries =  
    AVERAGEX(  
        FILTER(  
            df,  
            NOT(ISERROR(VALUE(df[Num Credit Inquiries]))))  
        ),  
        VALUE(df[Num Credit Inquiries])  
    )
```

LTV Score Calculation

```
LTV Score =  
  VAR avg_annual_income = AVERAGE(df[Annual Income])  
  VAR avg_delay_payment = AVERAGE(df[Delay from due date])  
  VAR avg_amount_invested = AVERAGE(df[Amount invested monthly])  
  VAR avg_monthly_balance = AVERAGE(df[Monthly Balance])  
  VAR credit_score =  
    CALCULATE(  
      AVERAGEX(  
        VALUES(df[CreditAbove StandardMix]),  
        SWITCH(  
          TRUE(),  
          df[CreditAbove StandardMix] = "Good", 3,  
          df[CreditAbove StandardMix] = "Above Standard", 2,  
          df[CreditAbove StandardMix] = "Standard", 1,  
          df[CreditAbove StandardMix] = "Bad", 0  
        )  
      )  
    )  
  )  
  RETURN  
    (0.3 * avg_annual_income)  
    - (0.15 * avg_delay_payment)  
    + (0.4 * credit_score)  
    + (0.075 * avg_amount_invested)  
    + (0.075 * avg_monthly_balance)
```

Promotion Assignment Based on LTV

```
Promotion =  
  SWITCH(  
    TRUE(),  
    [LTV Score] >= 80000,  
      "30% off on online purchases + home loan at 4% interest",  
    [LTV Score] > 60000 && [LTV Score] < 80000,  
      "15% off on online purchases + 10000 worth gift hampers",  
  )
```

```
[LTV Score] > 50000 && [LTV Score] < 60000,  
    "Any loan at 5% interest rate",  
    BLANK()  
)
```

Average Loans by Age Group

Purpose: Calculate the average number of loans customer hold in each age segment.

```
Average Loans by Age =  
    CALCULATE(  
        AVERAGE(df[Num Bank Accounts]),  
        ALLEXCEPT(df, df[Age Group])  
    )
```

Credit Score Distribution by Age Group

Purpose: Analyze variation in credit score across age groups.

```
Credit Score Dist =  
    CALCULATE(  
        AVERAGE(df[Credit Score]),  
        ALLEXCEPT(df, df[Age Group])  
    )
```

Payment Behaviour Count by Credit Mix

Purpose: Count occurrences of payment behaviour per credit mix category.

```
Payment Behaviour Count =  
    CALCULATE(  
        COUNT(df[Payment Behaviour]),  
        ALLEXCEPT(df, df[Credit Mix])  
    )
```

Summary of DAX Usage

- **Age Group** → demographic segmentation
- **AverageCreditInquiries** → inquiry & customer potential
- **LTV Score** → financial valuation
- **Promotion** → targeted offers
- **Average Loans by Age** → credit trend analysis
- **Credit Score Dist** → score comparison
- **Payment Behaviour Count** → risk insights

Hello World!