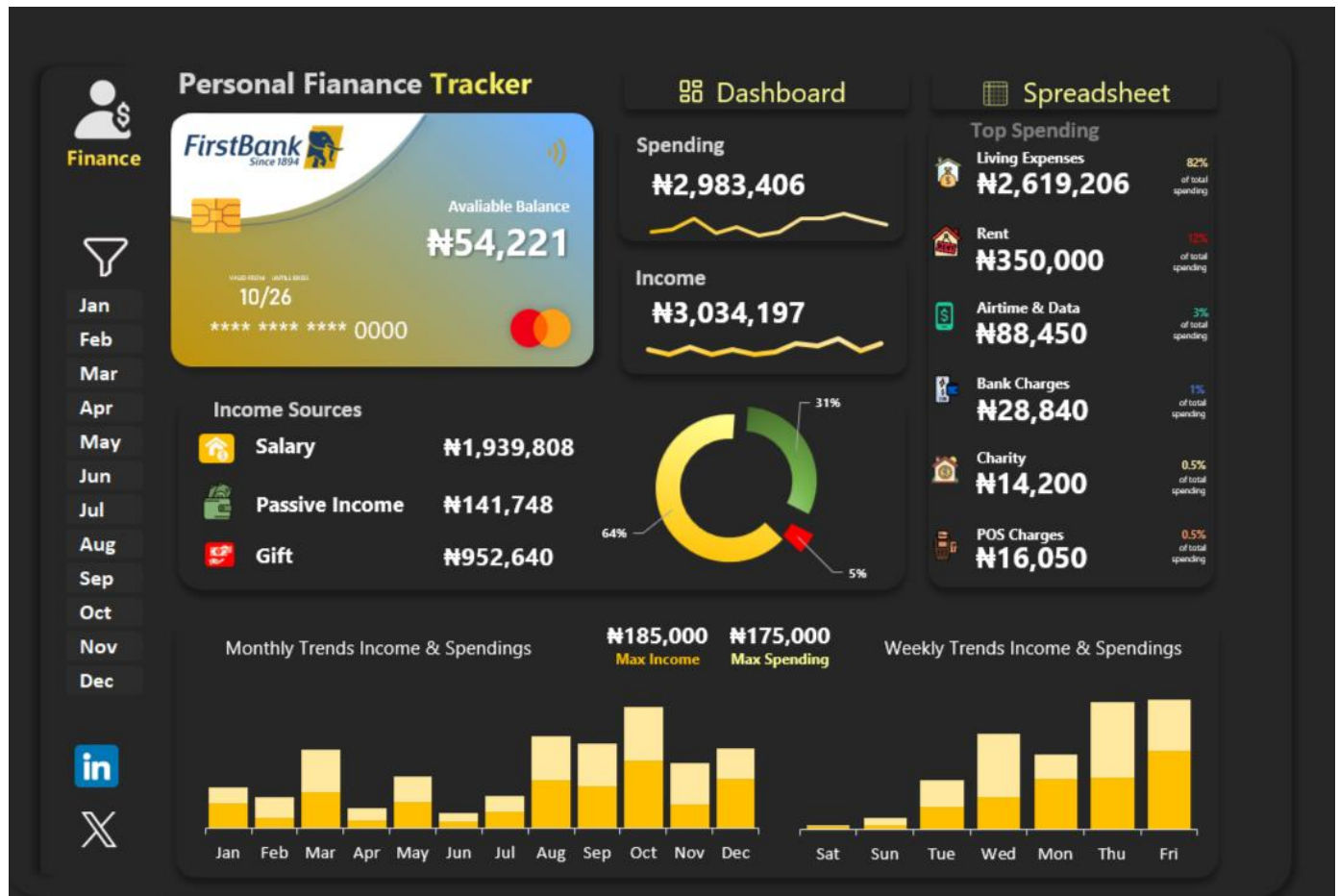


# Title

## Tracking the Money: A Personal Finance Dashboard Using Real Bank Statement Data

### Abstract Summary



This project explores personal financial behavior through a dashboard built with one year of real FirstBank Nigeria statement data. Using Excel and Power Query, the dashboard identifies income sources, expense patterns, leakages, and recurring charges. It helps visualize the financial reality of a typical Nigerian salary earner highlighting how income is spent, what drains money most, and where behavior change might improve financial health.

## Introduction

### Background

I've always wanted to make sense of my bank statement to go beyond balance checks and start seeing patterns in how I earn and spend. When I discovered a similar project hosted by Evergreen Digital Tech on YouTube, it gave me the push I needed. Inspired by Freedom Oboh's dashboard design, I decided to create my own using my 2024 FirstBank statement.

### Problem Statement

Many salary earners in Nigeria struggle to understand where their money goes each month due to the unstructured nature of bank statements. Without clear categorization or visualization, it's difficult to spot leakages, monitor income consistency, or track financial health. This project

addresses that gap by turning raw transaction data into a structured, interactive dashboard for personal finance clarity.

## Objectives

- Track monthly income and expenses
- Identify recurring charges and spending leakages
- Classify income streams and expense types
- Visualize trends in spending over time
- Evaluate financial behavior and habits for improvement

## Data Description

### Data Sources

- FirstBank Nigeria full-year statement (2024)
- 1,088 transactions including 10 reversed

### Data Collection

### Data Characteristics

**Original Columns:** Transaction date, Description, Debit, Credit, balance

**Calculated Columns:**

#### 1. Sub Category

- Purpose: Initial classification of transactions
- Built using nested if statements and text-based logic in Power Query
- Priority logic:
  - Credit + "rev" in description → "reversed transaction"
  - Credit + keywords ("salary", "abumet", etc.) → "salary"
  - Credit + "telus" → "Telus Payment"
  - Debit + "POS" → "POS transaction"
  - Debit + keywords related to giving → "giving"
  - Debit + transaction fee terms → "bank charges"
  - Debit + number patterns (e.g. 23480) → "airtime"
  - Debit + keywords like "fbnmobile", "ussd" → "bank app", "ussd transaction"
  - Others → "unclassified expenses" or null

#### 2. POS Charge

- Logic: Any POS transaction with a charge of ~~₦100–₦200~~ was marked
- Helps separate service fees from the transaction amount

### 3. **Category**

- Purpose: Broader classification
- Logic:
  - Sub Category "salary" → "Salary"
  - Sub Category "Telus Payment" → "Passive income"
  - Sub Category "POS transaction" → "Living expenses"
  - Sub Category "bank charges" → "Bank charge"
  - Special condition: If Debit > ₦100,000 and "okafor" in description → "Rent"

### 4. **Category Type**

- Classifies each row as "Income" or "Expense"
- Based on whether value is in Credit or Debit column

### 5. **Month and Weekday**

- Extracted using:
  - Date.MonthName([Date])
  - Date.DayOfWeekName([Date])

### 6. **Net Amount**

- Calculated as: Credit - Debit for each transaction

## Methodology

### Data Cleaning Steps

- Reversed transactions were removed to avoid double-counting income or expense
- Sub Category and Category fields created using custom logic in Power Query
- Decimal check (RoundDown([Debit]) <> [Debit]) helped isolate charges
- In cases where classification was unclear, transactions were grouped as either income or living expense based on the Debit/Credit status

## Analysis

### Key Insights

- **Expenses outpaced income in 7 of 12 months** – a red flag for sustainability
- **Living expenses = 82%** of total spending — showing how salaries mostly cover basic survival
- **Rent alone = 12%** of all spending — recurring and heavy
- **Airtime/Data = 334 transactions**, but only 3% of total expenses — high frequency, low cost
- **POS withdrawal charges** accounted for 0.5% — small in unit size but stacks up

- **Bank charges = ₦28,000** — a significant chunk lost to service fees

## **Behavioral Takeaways**

- Most spending goes to living essentials, but many charges are avoidable
- Switching to cashless channels or ATM withdrawals may reduce POS fees
- Some passive income (e.g. Telus) supports the budget, but savings can be improved

## **Conclusion**

This project revealed the value of transforming raw bank statement data into structured financial insights. It helped clarify income sources, spending patterns, and where adjustments are needed. For anyone earning in Nigeria, a personal finance tracker can be a powerful tool to reclaim control and build better money habits.