

## Fraud Transaction Insights for Bank XYZ

### Data Overview

I analyzed fraud transactions across all branches for 2023, focusing on key metrics: transaction amounts, fraudulent amounts, recovery rates, and suspicious transaction reports sent to the Financial Intelligence Centre (FIC). This data provides actionable insights for enhancing fraud detection and recovery strategies.

### Key Insights

#### 1. High-Risk Branches:

- Branches like **Koforidua** and **Ho** recorded the highest fraudulent amounts, indicating the need for focused fraud prevention measures.

#### 2. Fraud Type Analysis:

- Almost 50% of flagged cases stemmed from Unauthorized and Phishing, requiring targeted strategies to address these vulnerabilities.

#### 3. Recovery Effectiveness:

- While the overall fraud recovery rate is **55%**, branches like **Kumasi and Cape Coast** demonstrated exemplary recovery performance, providing a model for other locations.

#### 4. Suspicious Transaction Reports:

- Branches with higher suspicious transaction reports, such as **Accra** and **Ho**, highlight potential hotspots for fraudulent activities.

### Dashboard Highlights

#### 1. Fraud Transaction by Branch (Bar Chart):

- Displays total transactions, fraudulent amounts, and recovered amounts for each branch. Hovering over a branch provides detailed insights.

#### 2. Fraud Type Analysis (Horizontal Bar Chart):

- Breaks down fraud types, pinpointing the most prevalent risks for strategic resource allocation.

#### 3. Fraud Recovery Trends (Line Chart):

- Tracks monthly recovery performance, identifying periods of strong or weak recovery efforts.

#### 4. **Suspicious Transaction Reports (Map):**

- Shows report volumes per branch, emphasizing fraud hotspots.

### **Call to Action**

#### 1. **Fraud Prevention:**

- Strengthen monitoring and fraud awareness campaigns at high-risk branches like **Koforidua** and **Ho**.
- Focus on mitigating prevalent fraud types like **Unauthorized access Fraud**.

#### 2. **Enhance Recovery:**

- Replicate successful recovery strategies from branches like **Kumasi**.

#### 3. **Dynamic Monitoring:**

- Leverage real-time tracking to adapt fraud strategies proactively.

### **Techniques Used to Optimize the Dashboard:**

#### 1. **Data-Ink Ratio:**

- Removed redundant labels and gridlines, highlighting essential data like fraudulent amounts and recovery rates.

#### 2. **Gestalt Principles:**

- **Proximity:** Grouped related visualizations (e.g., fraud recovery trends and fraud type analysis) for intuitive navigation.
- **Color Coding:** Used contrasting colors (red for fraudulent amounts, green for recovered amounts) for immediate recognition of problem areas.

#### 3. **Interactivity:**

- Added hover-over tooltips for the **Fraud Transaction by Branch** chart, enabling users to view branch-specific metrics dynamically.

#### 4. **Visualization Design:**

- **Dual Axis Bar Chart:** Combines fraudulent amounts, and recovered amounts to present an integrated view.

- **Pie Chart:** Clearly shows the proportional distribution of fraud types for focused decision-making.

This dashboard supports data-driven decisions to minimize fraud, recover losses, and safeguard Bank XYZ's operations. Thank you.

Url: [Fraud Trend Analysis- Bank XYZ | Tableau Public](#)