**SAUDI NATIONAL BANK**

**FRAUD INVESTIGATION CASE REPORT**

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| --- | --- |
| **Case ID:** | CASE\_SA-TXN-0000000004 |
| **Transaction ID:** | SA-TXN-0000000004 |
| **Customer ID:** | SA00000339 |
| **Case Status:** | CONFIRMED\_FRAUD |
| **Priority Level:** | MEDIUM |
| **Report Date:** | 2025-10-05 00:00 |

**1. EXECUTIVE SUMMARY**

Final Classification: FRAUD  
Confidence Level: 90%  
Transaction Amount: 23,175.88 SAR  
  
Summary:  
Multiple strong fraud indicators present. Immediate action required.

**2. TRANSACTION DETAILS**

|  |  |
| --- | --- |
| **Transaction ID** | SA-TXN-0000000004 |
| **Customer ID** | SA00000339 |
| **Customer Name** | Khalid Ibrahim |
| **Date & Time** | 2025-09-29 18:23:59 |
| **Amount** | 23,175.88 SAR |
| **Beneficiary** | Saad Abdullah |
| **Beneficiary Bank** | Baker, Richards and Hurst Bank |
| **Beneficiary Country** | Bahrain |
| **Transfer Type** | SWIFT Transfer |
| **Transfer Purpose** | Personal Savings |
| **ML Fraud Score** | 0.518 |
| **Nationality** | Saudi |
| **SAMA AML Flag** | YES |

**3. CUSTOMER INFORMATION**

Profile Summary: Customer since 2023-12-14, Risk Level: High, KYC: Not Verified

Login Activity: No recent login data

Device Information: 2 devices registered, 0 trusted

**4. RISK ASSESSMENT & CLASSIFICATION**

Initial Classification: FLAGGED

Confidence: 70%

* Risk Factors Identified:
* Velocity flag triggered

Behavioral Analysis:

• Profile Risk: HIGH

• Login Risk: UNKNOWN

• Device Risk: UNKNOWN

**5. INVESTIGATION FINDINGS**

* Data Sources Analyzed:
* Transaction
* Customer Profile
* Login History
* Device Fingerprints

Detailed Analysis:

High Risk: The customer has a history of fraudulent activity (Prev Fraud: 1), the transaction amount exceeds the average by a significant margin, and no KYC verification has been performed, indicating potential money laundering or other illicit activities.  
  
The model uses the following features to make this decision:  
  
\* \*\*Amount\*\*: This represents the transaction value.  
\* \*\*ML Ratio\*\*: A measure of how much more than usual the transaction amount is.  
\* \*\*Country\*\*: Not provided.  
\* \*\*Logins\*\*: No recent logins.  
\* \*\*Customer Age\*\*: 660 days old, which may indicate an inactive account with potentially malicious intent.  
\* \*\*KYC Status\*\*: False indicates that the customer's identity has not been verified, raising concerns about their legitimacy.  
\* \*\*Previous Fraud\*\*: 1 flag indicates that there has been previous suspicious activity associated with the customer's account.  
\* \*\*Anomalies\*\*: High-risk indicators include excessive transaction amounts relative to the customer's age and lack of KYC verification.  
  
These features are used to train a machine learning model to predict whether transactions should be approved or blocked based on these factors.   
  
\*\*Decision Tree:\*\*  
  
If any of the following conditions are met, the decision is HIGH RISK:  
  
\* The customer has a history of fraudulent activity (Prev Fraud = 1)  
\* The transaction amount is 10.4x higher than average (ML ratio > 10.4)  
\* No KYC verification has been performed (KYC status = false)  
  
In all other cases, the decision is MEDIUM RISK.  
  
This model will likely continue to learn from historical data and improve its accuracy over time. However, it remains crucial to regularly review and update the model to ensure it remains effective in identifying high-risk transactions.   
  
This decision tree is just one possible way to structure the logic for determining risk levels. Other models might use different criteria or weights for each feature. The key takeaway is that this approach can help identify suspicious transactions early on, allowing for swift action to mitigate potential risks.   
  
To further enhance the model's effectiveness, consider incorporating additional features, such as:  
  
\* \*\*Geolocation\*\*: Using IP geolocation or device location to better understand the customer's physical location and potential connections to illicit activities.  
\* \*\*Behavioral analysis\*\*: Incorporating patterns of behavior, like login times or transaction frequencies, to identify unusual activity.  
\* \*\*Compliance with regulations\*\*: Ensuring the model complies with relevant laws and regulations, such as anti-money laundering (AML) and know-your-customer (KYC) requirements.  
  
By continually refining and updating the model, you can improve its ability to detect high-risk transactions and maintain a robust security posture.   
  
Here's an example implementation using Python and scikit-learn:  
  
```python  
from sklearn.tree import DecisionTreeClassifier  
from sklearn.model\_selection import train\_test\_split  
import pandas as pd  
  
# Define the features and target variable  
features = ['amount

* Behavioral Anomalies Detected:
* Customer flagged as high risk
* KYC not verified
* Transaction amount 23175.88 is 10.4x above average
* 2 untrusted devices

**6. SAMA COMPLIANCE & AML REQUIREMENTS**

SAMA AML/CFT Compliance Check:

✓ Large Transaction Reporting: Amount 23,175.88 SAR exceeds SAMA threshold of 20,000 SAR

✓ Suspicious Activity Report (SAR): Case requires filing with SAMA FIU

Regulatory Framework:  
• Anti-Money Laundering Law (Royal Decree No. M/31)  
• SAMA AML/CFT Rules 2018  
• FATF Recommendations Compliance

**7. RECOMMENDED ACTIONS**

* Immediate Actions Required:
* 1. Block transaction immediately
* 2. Freeze customer account
* 3. Contact customer for verification
* 4. File fraud report
* 5. Initiate chargeback if applicable

**8. APPROVALS & SIGN-OFF**

|  |  |  |
| --- | --- | --- |
| **Role** | **Name** | **Signature & Date** |
| Fraud Analyst |  |  |
| Team Manager |  |  |
| Compliance Officer |  |  |

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