**Fraud Monitoring Plan for LexisNexis Fraud Intelligence**

**1. Objective**

This plan outlines the performance monitoring framework for **LexisNexis Fraud Intelligence (LNFI)**, used for evaluating fraud risk during onboarding. It defines the metrics, trends, and thresholds needed to assess the model’s effectiveness and stability based on score outcomes, risk tiers, operational actions, and fraud outcomes.

**2. Background**

LexisNexis Fraud Intelligence (LNFI) generates a **fraud risk score**, typically on a scale of **0 to 999**, where a **higher score indicates greater fraud risk**. This score is used by banks to:

* Directly inform decisions (Approve / Refer / Decline),
* Classify applicants into **internal risk tiers** (e.g., Low / Medium / High),
* Support identity fraud detection and compliance with onboarding risk controls.

LNFI plays a key role in filtering out synthetic identities, manipulated identities, and repeat fraud attempts at the point of account opening. Given its criticality, a structured approach is needed to monitor the model’s accuracy, score distribution, fraud capture, and population stability.

**3. Monitoring Areas**

| Monitoring Area | Objective |
| --- | --- |
| Score Distribution | Detect shifts in fraud score patterns over time. |
| Risk Tier Trends | Monitor movement across internal risk bands (High/Medium/Low). |
| Decision Outcome Trends | Track model recommendation outcomes (Approve/Refer/Decline). |
| Override Trends | Evaluate overrides on Refer or Decline outcomes. |
| Fraud Capture / Miss Rate | Assess how well high-risk scores and tiers correlate with fraud cases. |
| False Decline Rate | Identify good customers flagged by the model but later approved. |
| PSI – Score Bands / Tiers | Detect shifts in scoring distribution (score or tier). |

**4. Data Requirements**

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| --- | --- | --- | --- |
| Field Name | Business Explanation | Metrics Supported | Business Relevance |
| Application ID (Hashed) | Unique record identifier used to link results, decisions, and outcomes. | All metrics | Ensures continuity across decision, override, and fraud records. |
| Application Date | Timestamp of onboarding attempt. | Trend analysis, Monthly Metrics, PSI | Enables period-based tracking, trend analysis, and data stability comparisons. |
| LNFI Score (0–999) | Raw fraud risk score assigned by the model. | Score Band Distribution, Average Score, Score-Based PSI | Central signal of fraud risk; used to derive decisions and perform score drift checks. |
| LNFI Risk Tier | Derived classification from LNFI score (e.g., Low, Medium, High). | Tier Distribution, Tier-Based PSI | Supports easier monitoring, reporting, and tier-level performance breakdown. |
| Model Recommendation Outcome | LNFI's suggested decision: Approve / Refer / Decline. | Outcome Trend, Override Rate | Key to evaluating model influence on onboarding decision-making. |
| Final Bank Decision | Final action taken by the bank — Approved or Rejected. | False Declines, Override Rate, Approval After Override | Validates override logic and operational reliance on the model. |
| Override Indicator | Flag to denote if the model’s recommendation was manually changed. | Override Count, Override Rate | Measures human intervention, providing insight into confidence in the model. |
| Fraud Flag (Post-Onboarding) | Indicator of fraud discovered after onboarding (e.g., within 30/60/90 days). | Fraud Capture, Fraud Miss Rate | Allows validation of model effectiveness and feedback loop for future improvement. |

**Key Metrics**

| Metric Name | Formula / Definition | Business Significance |
| --- | --- | --- |
| Total Applications | Count of all onboarding attempts processed through LNFI. | Establishes the volume base for analysis and ensures proper scaling of other metrics. |
| Average LNFI Score | Mean of all LNFI fraud scores for a given month. | Tracks population-level risk movement and input quality over time. |
| Score Band Distribution | % of applications falling within defined score bands (e.g., 0–399, 400–599, etc.). | Detects shifts in risk distribution that could signal model drift or profile change. |
| Tier Distribution | % of applicants mapped to High, Medium, or Low risk based on score thresholds. | Simplifies monitoring and links score to operational risk stratification. |
| Model Recommendation Rate | % Approve / Refer / Decline from model output. | Helps monitor if model behavior is shifting over time, leading to operational load/fallout. |
| Override Count | Count of applications where the bank overrode the model’s Refer/Decline outcome. | Helps assess trust in model and balance between automation and manual decisioning. |
| Override Rate | Override Count / Total Refer + Decline | High rates may signal misalignment between model output and business expectations. |
| Approved After Override | Count of overridden applications that were ultimately approved. | Evaluates override quality and operational benefit. |
| Approval After Override % | Approved Overrides / Total Overrides | A high number may suggest the model is overly conservative and needs calibration. |
| Fraud Cases Identified | Number of applications flagged as fraud post-onboarding. | Provides ground truth for measuring detection effectiveness. |
| Fraud Caught via Refer/Decline | Fraud cases that were flagged at onboarding by the model. | Indicates model success in detecting risky applicants early. |
| Fraud Capture Rate | Fraud Caught / Total Fraud Cases | Primary performance metric; assesses detection effectiveness of the model. |
| Fraud Miss Rate | Fraud cases that received “Approve” or scored in low-risk range. | Helps identify model blind spots and underperformance in certain score bands. |
| False Decline Count | Legitimate customers flagged as risky but later approved. | Measures customer impact and operational friction due to over-flagging. |
| False Decline Rate | False Decline Count / Total Applications | Should ideally be under 3%; critical for customer experience and channel drop-off rates. |
| PSI – Score Band | Σ[(Mon% - Base%) × ln(Mon% / Base%)] across score bands. | Detects scoring population shift; early warning for drift or upstream input changes. |
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**6. Sample Monitoring Table**





**7. Governance and Reporting**

* **Frequency**: Monthly operational review, quarterly model performance reporting.
* **Owners**: Fraud Strategy, Model Risk Validation, Operations Analytics
* **Trigger Points**:
  + PSI > 0.10 for two consecutive periods
  + Override Rate consistently >30%
  + Fraud Capture Rate < 70%
* **Review Forum**: Monthly Model Monitoring Committee or Fraud Governance Council