

Risk Management & Monitoring Framework (V3.0 - Post-Deployment)

This framework defines how to monitor the new **Strategic Filtering** approach and the required checkpoints for early intervention, ensuring the V3.0 model's performance sustains profitability.

1. Key Performance Indicators (KPIs)

Track monthly/weekly to evaluate portfolio performance and the health of the filtering strategy.

Metric	Frequency	Benchmark	Purpose
Net Present Value (NPV) Trend	Quarterly	Must trend toward \$0+	Ensures long-term investment viability is achieved post-filtering.
Effective Portfolio Yield	Monthly	Must exceed Default Rate \times LGD	Confirms risk-based pricing adequately absorbs expected losses (especially for Segment 2).
Segment 0 Rejection Rate	Weekly	Stable around 40%	Tracks the volume lost due to the hard cut-off. Major shifts suggest application behavior change.
Segment 0 Default Rate	Monthly	Stable near 86.1%	Tracks the performance of the rejected segment (via test samples) to validate filter necessity.

2. Early Warning Indicators (EWIs)

These indicators reveal drift in assumptions or adverse market shifts that could impact the profitable Segment 1 or the priced Segment 2.

Indicator	Signal	Action Trigger	Action
Segment 1 Default Creep	Segment 1 defaults exceed 38%	for two months	Strategy Review: Investigate why the core profitable segment is deteriorating.
Segment 2 Default Creep	Segment 2 defaults exceed 68%	for two months	Filter Tightening: Review Segment 2 criteria; apply restrictive limits/tighter cut-offs.
Traditional Driver Shift	Mean of Max Days in Arrears or Utilization shifts	> 1.5 SD (30-day window)	Model Review: Investigate market drift or changes in borrower reporting/behavior.
Filter Over-Rejection	Rejection Rate rises > 5%	above 40% (e.g., 45%+)	Business Review: Investigate why too many applicants are suddenly falling into Segment 0.

3. Model Governance & Maintenance (Post V3.0 Success)

The V3.0 Logistic Regression model (AUC 0.8820) has already met and exceeded the original performance targets. The focus now shifts to stability and governance.

- **Model Status:** V3.0 Logistic Regression is the live Champion Model.
- **Drift Monitoring:** Continuous monitoring of feature importance and AUC to detect performance degradation over time.

- **Retention Strategy:** Focus development resources on building a dedicated **Retention Score** for Segment 1 to maximize lifetime value now that losses are contained.