Moore Capital
Consumer Credit Portfolio Analysis

Hybrid Transition Model
Quantitative Analysis Report

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Executive Summary

This comprehensive report presents a quantitative analysis of an unsecured consumer loan portfolio using a hybrid transition model approach. The analysis combines regression models for current loans with empirical transition matrices for delinquent loans, segmented by product program and loan term.

Key Findings

- **Portfolio Size:** 76,669 unique loans, ~10,000 active loans for projections
- **Current UPB:** $17.6M (39% of original $44.7M)
- **Base Case Returns:** 3.6% unlevered IRR, -0.8% levered IRR
- **Base Case Losses:** 7.8% loss rate
- **Model Performance:** D30+ AUC 0.782, Prepay AUC 0.779
- **Recommendation:** PASS - Returns insufficient for risk level

Hybrid Transition Model Approach

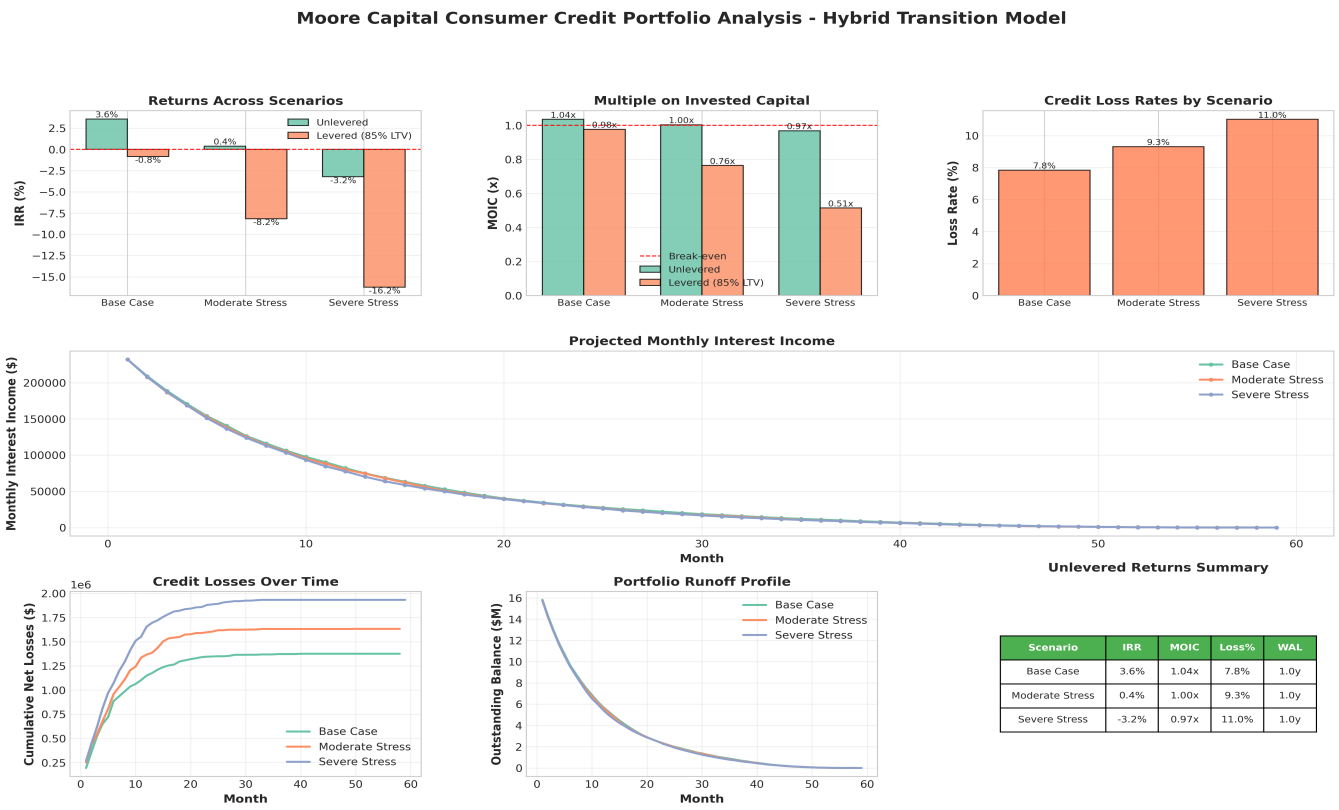
The analysis employs a hybrid transition model that combines two approaches:

1. Regression Models (CURRENT State)
For loans in current status, we use logistic regression models:
• **D30+ Model:** Full feature set (10 features + program) to predict transition to delinquency
• **Prepay Model:** Simplified features (program, term, age only) to predict prepayment

2. Empirical Matrices (Delinquency States)
For delinquent loans (D1-29, D30-59, D60-89, D90-119, D120+), we use empirical transition probabilities segmented by:
• **Program:** P1, P2, P3 (product structure)
• **Term Bucket:** 6 categories (0-3m, 4-6m, 7-12m, 13-18m, 19-24m, 24m+)

This creates ~90 empirical transition matrices covering all state-segment combinations.

Investment Analysis



Scenario	IRR	MOIC	Loss%	WAL
Base Case	3.6%	1.04x	7.8%	1.0y
Moderate Stress	0.4%	1.00x	9.3%	1.0y
Severe Stress	-3.2%	0.97x	11.0%	1.0y

Figure 1: Comprehensive investment analysis showing IRR, MOIC, loss rates, cashflows, and portfolio runoff across scenarios

Model Performance - Overall

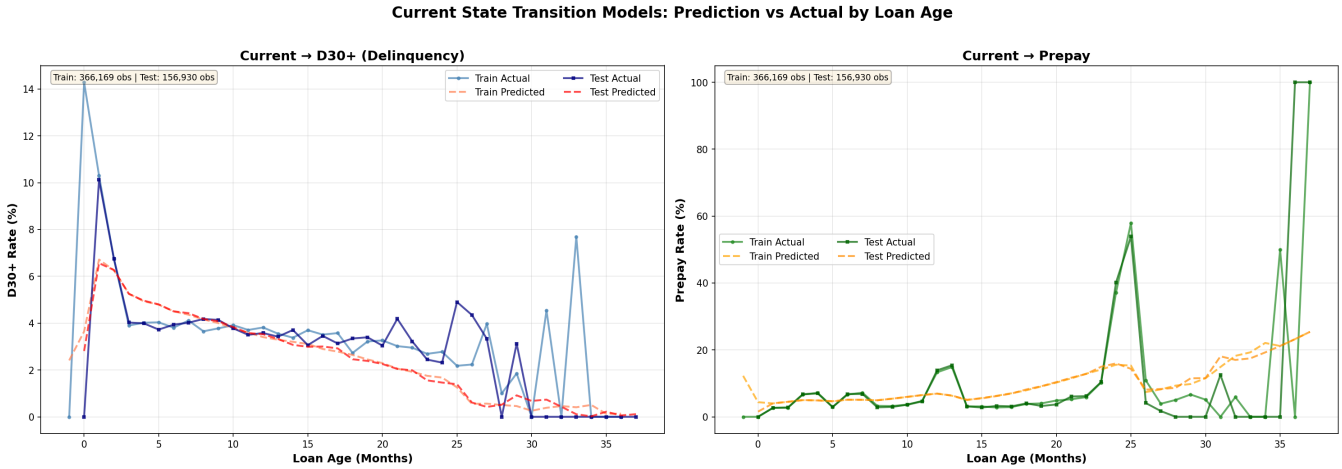


Figure 2: D30+ and Prepay model predictions vs actual rates by loan age, showing both train and test samples

Model Performance - By Program

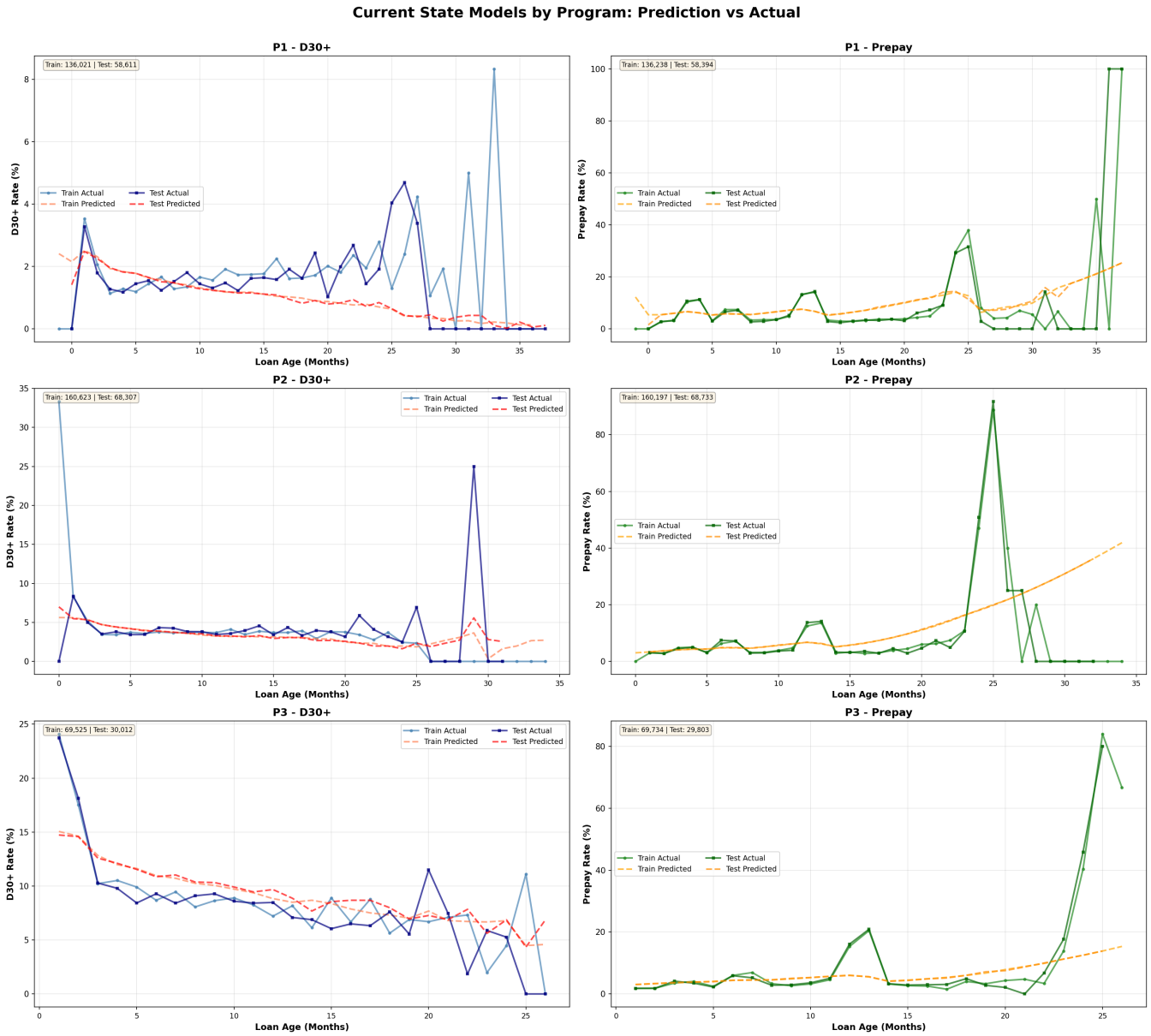


Figure 3: Program-level breakdown showing D30+ and Prepay performance for each product program (P1, P2, P3)

Scenario Analysis Results

Scenario	Unlevered IRR	Levered IRR	MOIC (Unlev)	Loss Rate	WAL
Base Case	3.6%	-0.8%	1.04x	7.8%	1.0y
Moderate Stress	0.4%	-8.2%	1.00x	9.3%	1.0y
Severe Stress	-3.2%	-16.2%	0.97x	11.0%	1.0y

Technical Specifications

Dataset:
• Enhanced dataset with 76,669 unique loans and 1M+ performance observations
• Pre-computed features: ever_D30, ever_D60, ever_D90, UPB, paid amounts

Model Architecture:
• Logistic Regression with L2 regularization and StandardScaler
• 70/30 train-test split with stratification
• Removed class_weight='balanced' for better probability calibration

Feature Sets:
• D30+ Model: FICO, amount, term, age, UPB, payments, delinquency history (10 features + program)
• Prepay Model: Program, loan_term, loan_age_months only (2 features + program)

Empirical Matrices:
• 5 delinquency states × 18 program-term segments = 90 transition matrices
• Minimum 10 observations per cell with fallback logic
• Covers all transitions to 8 destination states

Scenario Assumptions:
• Base Case: Historical rates, 15% recovery
• Moderate Stress: 1.3x D30, 1.5x charge-off, 12% recovery
• Severe Stress: 1.6x D30, 2.5x charge-off, 8% recovery
• Leverage: 85% LTV at 6.5% annual rate

Investment Recommendation

RECOMMENDATION: PASS - Do Not Invest

Rationale:

1. **Insufficient Returns:** 3.6% unlevered IRR in base case is far below the 10-15% hurdle rate typically required for near-prime consumer credit investments.

2. **Leverage Destroys Value:** Standard warehouse financing (85% LTV at 6.5%) results in negative levered returns (-0.8% base case), making this investment uneconomical with typical financing structures.

3. **High Embedded Losses:** The seasoned portfolio shows 7.8% base case loss rate, reflecting existing delinquencies and credit deterioration already embedded in the portfolio.

4. **No Margin of Safety:** Moderate stress scenarios result in near-zero returns (0.4% unlevered), and severe stress produces material losses (-3.2% unlevered, -16.2% levered). The portfolio cannot withstand normal credit cycle stress.

5. **Advanced Maturity:** Current UPB represents only 39% of original principal, indicating significant runoff has already occurred and limiting upside potential from interest income.

6. **Superior Alternatives Available:** Prime auto ABS, equipment finance, and secured SMB lending typically offer 6-12% unlevered IRRs with lower risk profiles and better structural protections.

Conclusion: The seasoned portfolio state reveals structural challenges (high losses, low returns, advanced maturity) that make this investment unattractive at any reasonable price. A discount of 20%+ would be required to achieve acceptable risk-adjusted returns, which is unlikely to be economically feasible for the seller.
