The Erosion of Prime:

Systemic Data Obfuscation and Structural Risk in Carvana P-Series Auto ABS

Formal Complaint regarding Carvana Auto Receivables Trust (CVNA)
Regulatory Compliance and Risk Disclosure

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1 Executive Summary

This submission provides evidence that the issuer of the Carvana P-Series Asset-Backed Securities (ABS) is utilizing a "Prime" designation to market a portfolio that exhibits risk characteristics typically associated with subprime lending. Through quantitative analysis of Regulation AB II loan-level data, we identify a persistent pattern of **Data Integrity Failures**, **Collateral Deterioration**, and **Trigger Avoidance**.

Central to this complaint is the revelation that the issuer maintains a 100% "No-Doc" (Verification Code 3) profile across the pool, while simultaneously utilizing 73-month term extensions to mask a burgeoning collateral crisis where 36.1% of the loans are now "underwater." This confluence of unverified income and negative equity creates a systemic "Tail Risk" that remains inadequately disclosed to the investment community.

2 Systemic Failure of Income Verification (Code 3)

The foundational metric for any Prime ABS is the Payment-to-Income (PTI) ratio. In the P-Series, the issuer reports an attractive average PTI of **7.2%**. However, the reliability of this figure is limited by the underlying data quality.

- **Stated Income vs. Verified Reality:** 100% of the loans in the pool utilize **Income Verification Code 3 (Stated, Not Verified)**.
- **Understatement of Default Probability:** By failing to verify income, the issuer effectively bypasses the primary guardrail against loans lacking income verification. If actual borrower income is lower than stated, the true PTI is significantly higher, rendering the "Prime" affordability narrative materially misleading.

3 Predictive Failure and Model Decoupling

Regression analysis of the Credit Score vs. Interest Rate relationship reveals a fundamental breakdown in the issuer's risk-based pricing model.

Table 1: Regression Analysis: Evidence of Pricing Decoupling

Trust	Slope	Intercept	R^2	Correlation
2021-P1	-0.000363	0.3391	0.5387	-0.7339
2022-P1	-0.000361	0.3309	0.6073	-0.7793
2024-P4	-0.000275	0.3272	**0.2480**	-0.4980
2025-P4	-0.000363	0.3706	0.4640	-0.6812

Statistical Analysis: A Prime pool should maintain high predictability ($R^2 > 0.50$). The crash to **0.2480** in 2024-P4 indicates that "Hidden Variables"—unrelated to borrower creditworthiness—are driving the pricing. While the issuer may cite Fed rate hikes as the cause, the data suggests the Fed hikes coincided with **Risk Layering** (extending terms to 73 months to maintain loan volume).

4 The Collateral Crisis (LTV and Negative Equity)

The issuer has leveraged extended loan terms to manage monthly affordability at the direct expense of the underlying collateral security.

- **The Underwater Threshold:** The percentage of loans with a Loan-to-Value (LTV) ratio > 100% exploded from **0.9% to 36.1%** in 18 months.

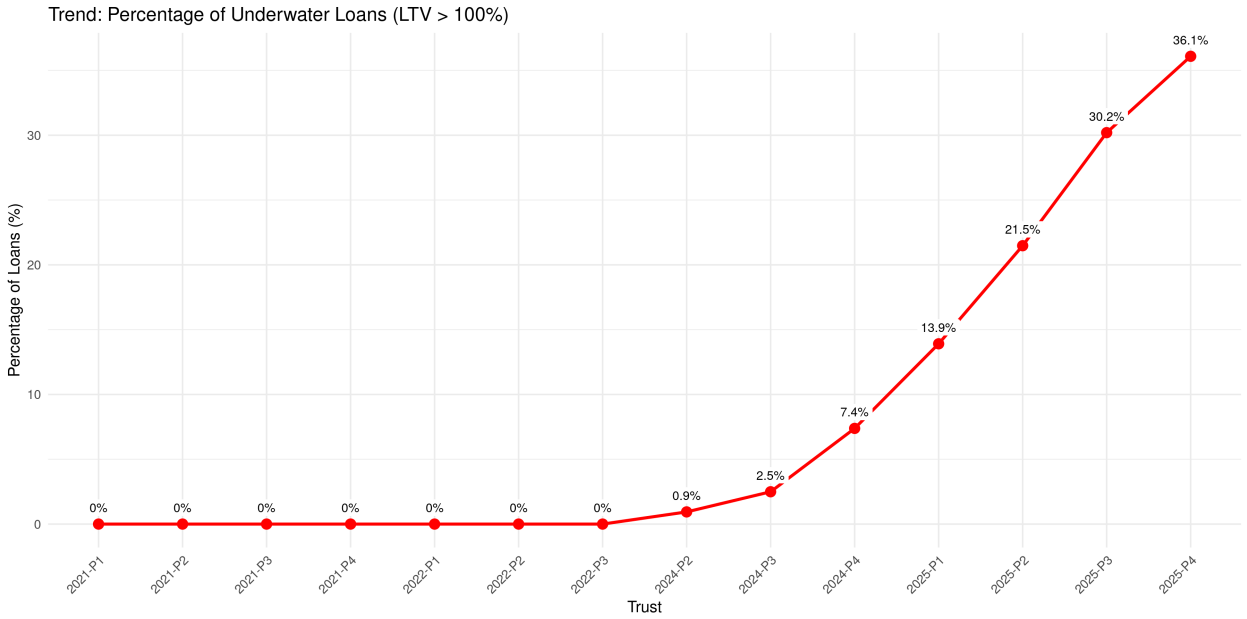

Figure 1: Trend: Percentage of Underwater Loans (LTV > 100%)

- **Structural Default Trap:** With an average term of **73 months**, the principal pay-down is too slow to outpace vehicle depreciation. This shift results in a collateral deficiency where the outstanding loan balance exceeds the asset value, significantly increasing the Loss Given Default (LGD).

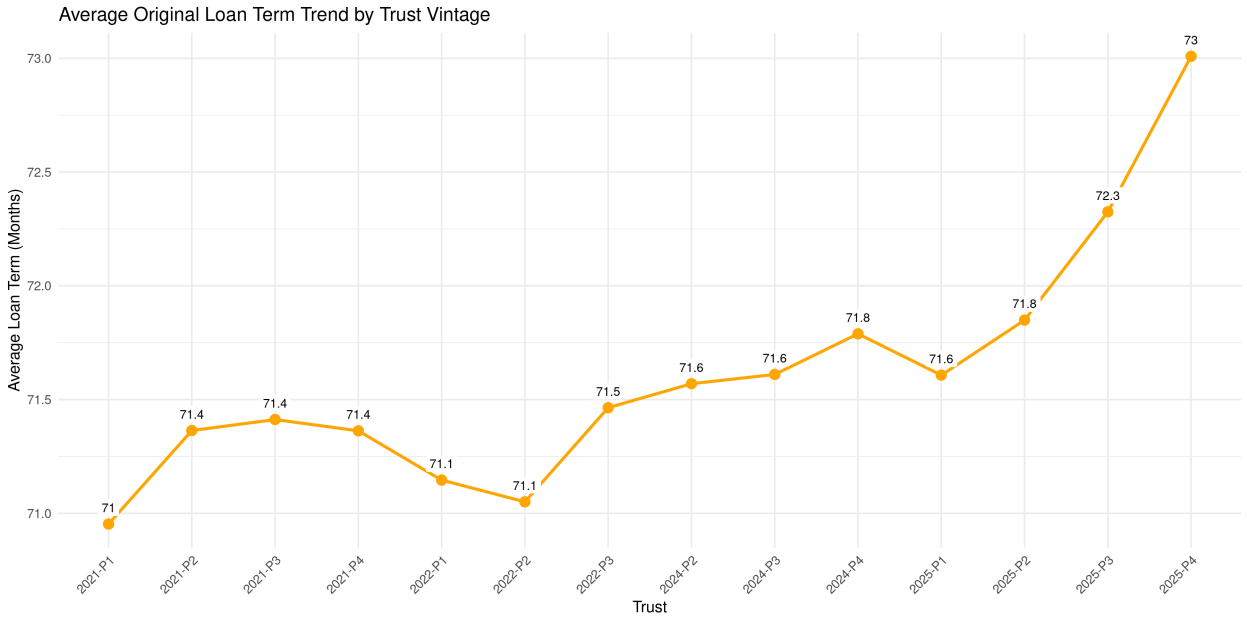

Figure 2: Trend: Average Original Loan Term (Months)

Current Structure Analysis (2025-P4): The distribution of Loan-to-Value (LTV) ratios for the most recent vintage, 2025-P4, illustrates a structural shift towards negative equity at origination. A significant portion of the pool is "underwater" (LTV > 100%) from day one, indicating that the loan amounts exceed the value of the collateral. This structure relies heavily on borrower repayment continuity rather than asset recovery value.

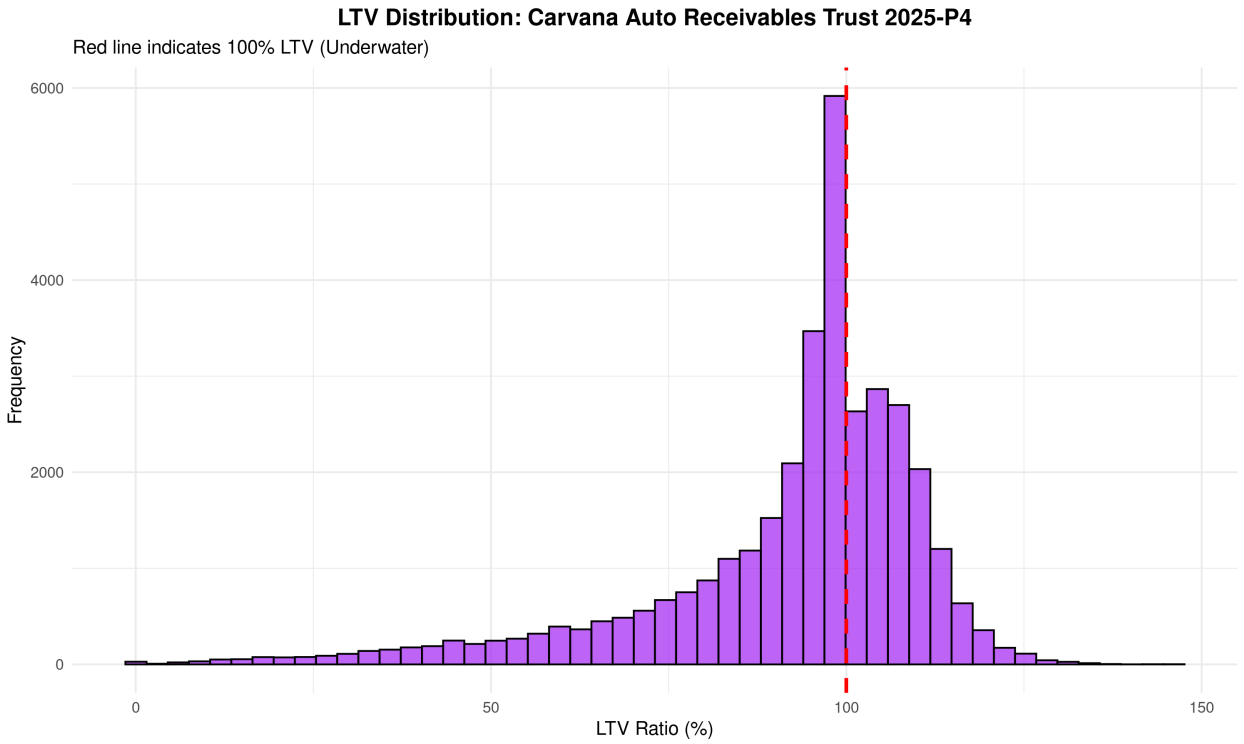

Figure 3: LTV Distribution for 2025-P4: Structural Negative Equity

5 Strategic Suppression of Contractual Triggers

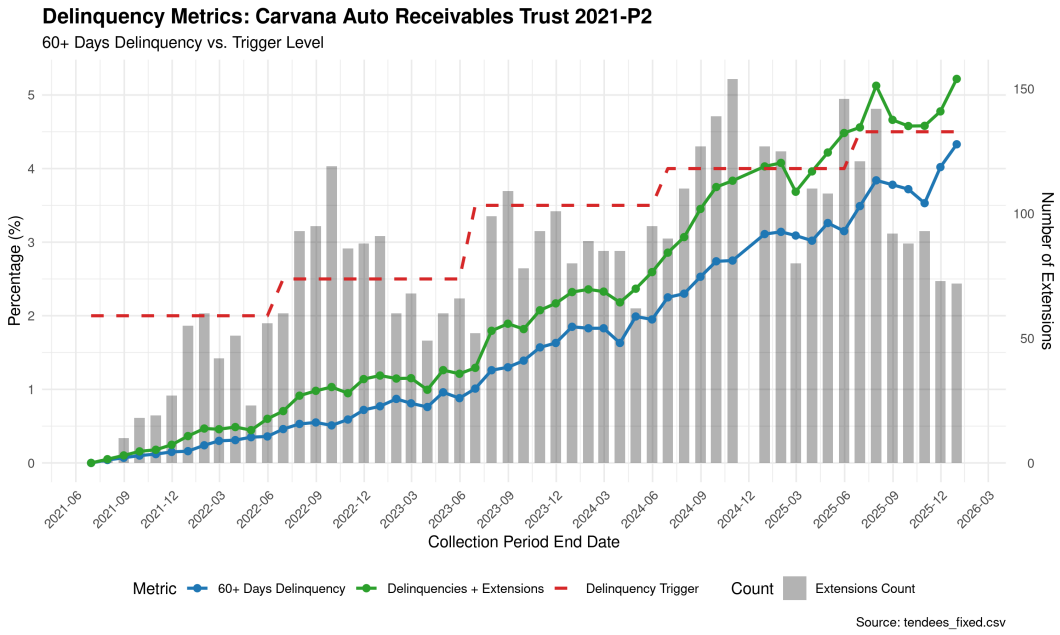

Figure 4: Delinquency vs. Extensions: 60+ Day Delinquency Breach Analysis

Significant evidence of potential risk masking is found in the correlation between delinquency triggers and aggressive loan extensions.

The Deferral Mechanism: The issuer utilizes aggressive loan extensions to artificially maintain the 60+ Day Delinquency rate below the 4.5% threshold.

Forensic Analysis: As of late 2025, the reported delinquency rate was **4.3%**, yet the **Adjusted Delinquency Rate (inclusive of deferrals)** stood at **5.2%**. This constitutes a **De Facto Breach** of the contractual Delinquency Trigger.

The "Clustering" Evidence: High-resolution analysis of the 2021-P2 trust reveals a high-frequency clustering of extensions (grey bars) occurring immediately prior to the delinquency line (green) approaching the 4.5% red trigger line.

This pattern indicates that extensions are being deployed as a tactical response to avoid "Early Amortization" events. By masking the true loss severity, the issuer is withholding the mandatory "protective diversions" of cash flow required by the Trust Indenture, thereby prioritizing issuer liquidity over bondholder security. The behaviors documented in the 2021-P2 trust are not isolated anomalies. Cross-trust analysis of the P-Series[1] reveals a consistent operational strategy: when organic delinquency levels approach contractual triggers, extension volume increases proportionately to maintain technical compliance while masking economic failure.

6 Conclusion and SEC Action Requested

The Carvana P-Series exhibits a structural risk profile that is no longer consistent with a "Prime" classification. The combination of **Zero-Doc Lending**, **36% Negative Equity**, and **Active Trigger Avoidance** constitutes a failure of disclosure under Regulation AB II.

We respectfully request:

1. A formal investigation into the validity of "Code 3" income entries.
2. An audit of the "Extension" policy to determine if deferrals are being used to circumvent contractual performance triggers.
3. A mandatory restatement of risk-weighting to account for the 73-month term extension's impact on collateral recovery values.

7 Apendix

[1] Additional graphs are amended to the filed complaint

7.1 Data Sources

- All data used in this report was sourced from 10-D and ABS-EE filings EDGAR. All statistics, figures, and tables were generated by analyzing data submitted by Carvana to the SEC.
- An LLM was used to parse delinquency and extension data from over 400 10-D filings. The raw data created by the LLM was manually audited for accuracy and modified in a few places where the LLM misread the tables in the filings. Both the raw data and modified data files are included with this submission. the Github repository.
- All scipts used to pull data from EDGAR, to process the data, and to generate the figures and tables in this report are included in the submission.

7.2 Data Hygiene

The quantitative findings in this report are derived from a granular analysis of Reg AB II loan-level data. To ensure the statistical relevance of risk metrics, the following data hygiene protocol was implemented in R:

- **Active Receivables Isolation:** The dataset was filtered to exclude liquidated and paid-off loans. Specifically, any record where the `reportingPeriodBeginningLoanBalanceAmount` was less than or equal to $0.01 was removed.
- **Rationale for Filtering:** This exclusion is necessary to prevent "Survival Bias" from diluting point-in-time risk assessments. Including zero-balance loans would artificially lower the **Weighted Average LTV** and **Delinquency Percentages**, as these loans no longer contribute to the pool's exposure to loss.
- **Statistical Integrity:** By restricting the scope to active receivables, the resulting R^2 values and PTI trends reflect the **live economic reality** of the portfolio's current interest-bearing assets.