Presale:

Carvana Auto Receivables Trust 2023-P2

May 18, 2023

PRIMARY CREDIT ANALYST

Travis Erb

Englewood

+ 1 (303) 721 4829

travis.erb
@spglobal.com

SECONDARY CONTACT

Sanjay Narine, CFA

Toronto

+ 1 (416) 507 2548

sanjay.narine
@spglobal.com

Preliminary ratings

Class(i)	Preliminary rating	Type	Interest rate(ii)	Amount (mil. $)(ii)	Legal final maturity date
A-1	A-1+ (sf)	Senior	Fixed	47.00	June 10, 2024
A-2	AAA (sf)	Senior	Fixed	126.33	Aug. 10, 2026
A-3	AAA (sf)	Senior	Fixed	126.32	April 10, 2028
A-4	AAA (sf)	Senior	Fixed	78.86	March 12, 2029
B	AA (sf)	Subordinate	Fixed	14.03	May 10, 2029
C	A (sf)	Subordinate	Fixed	11.56	July 10, 2029
D	BBB (sf)	Subordinate	Fixed	8.67	June 10, 2030
N(iii)	BB+ (sf)	N/A	Fixed	11.00	June 10, 2030

Note: This presale report is based on information as of May 18, 2023. The ratings shown are preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings. (i)The transaction will issue class XS notes, which are unrated and may be retained or sold in one or more private placements. (ii)The actual interest rate and amount for each class will be determined on the pricing date. (iii)The class N notes will be paid to the extent funds are available after the overcollateralization target is achieved, and they will not provide any enhancement to the senior classes. N/A--Not available.

Profile

Collateral	Prime auto loan receivables.
Originator, seller, administrator, and sponsor	Carvana LLC, indirectly owned by Carvana Co. (CC/Negative/--).
Depositor	Carvana Receivables Depositor LLC.
Issuer	Carvana Auto Receivables Trust 2023-P2.
Servicer	Bridgecrest Credit Co. LLC.
Backup servicer	Vervent Inc.
Grantor trust	Carvana Auto Receivables Grantor Trust 2023-P2.
Collateral custodian and indenture trustee	Computershare Trust Co. N.A. (BBB/Stable/--).
Owner trustee and grantor trust trustee	BNY Mellon Trust of Delaware.
Bank account provider	Wells Fargo Bank N.A. (A+/Stable/A-1).

Rationale

The preliminary ratings assigned to Carvana Auto Receivables Trust 2023-P2's (CRVNA 2023-P2) automobile asset-backed notes reflect:

- The availability of 15.14%, 12.31%, 9.82%, 6.27%, and 6.80% credit support (hard credit enhancement [HCE] and haircut to excess spread) for the class A (class A-1, A-2, A-3, and A-4), B, C, D, and N notes, respectively, based on stressed cash flow scenarios. These credit support levels provide over 5.00x, 4.00x, 3.00x, 2.00x, and 1.73x coverage of our expected cumulative net loss (ECNL) of 2.75% for the class A, B, C, D, and N notes, respectively (see the Credit Enhancement And Collateral and the Cash Flow Modeling Assumptions And Results sections below).
- The expectation that under a moderate ('BBB') stress scenario (2.00x our expected loss level), all else being equal, our preliminary 'AAA (sf)', 'AA (sf)', 'A (sf)', 'BBB (sf)', and 'BB+ (sf)' ratings on the class A, B, C, D, and N notes, respectively, are within our credit stability limits (see the Cash Flow Modeling Assumptions And Results section below).
- The timely interest and principal payments by the designated legal final maturity dates under our stressed cash flow modeling scenarios, which we believe are appropriate for the assigned preliminary ratings.
- The collateral characteristics of the series' prime automobile loans, our view of the credit risk of the collateral, and our updated macroeconomic forecast and forward-looking view of the auto finance sector (see the Credit Enhancement And Collateral and the Macroeconomic And Auto Finance Sector Outlook sections below).
- The series' bank accounts at Wells Fargo Bank N.A. (Wells Fargo), which do not constrain the preliminary ratings.
- Our operational risk assessment of Bridgecrest Credit Co. LLC (Bridgecrest) as servicer, as well as the backup servicing agreement with Vervent Inc. (Vervent).
- Our assessment of the transaction's potential exposure to environmental, social, and governance (ESG) credit factors that are in line with our sector benchmark.
- The transaction's payment and legal structures.

Our ECNL for CRVNA 2023-P2 is 2.75%, which is unchanged from CRVNA 2023-P1. It reflects:

- Our view that the CRVNA 2023-P2 collateral characteristics are comparable to those of CRVNA 2023-P1.
- CRVNA's outstanding series, which continue to perform in line with or better than our initial expectations.
- Our forward-looking view of the economy and auto finance sector, including our outlook for a shallow recession later this year.

Key Ratings Considerations

Our ratings reflect the following considerations:

Asset isolation

In rating this transaction, S&P Global Ratings will review the legal matters it believes are relevant to its analysis, as outlined in its criteria (see, "U.S. Structured Finance Asset Isolation And Special-Purpose Entity Criteria," published May 15, 2019). Specifically, in addition to certain other opinions, we request opinions of counsel that address risks related to insolvency in order to determine (A) that the transfer of receivables from Carvana LLC (Carvana) to Carvana Receivables Depositor LLC constitute a true sale of the assets as opposed to a secured loan and that (i) the receivables would not be the property of the Carvana bankruptcy estate under Title 11 Section 541 of the U.S. Bankruptcy Code and (ii) Section 362(a) of the Bankruptcy Code would not operate to stay payments by the servicer of collections on the receivables in accordance with the transaction's agreements; and (B) whether a court exercising bankruptcy jurisdiction would order substantive consolidation of the assets and liabilities of Carvana, and those of Carvana Receivables Depositor LLC, Carvana Auto Receivables Trust 2023-P2, or Carvana Auto Receivables Grantor Trust 2023-P2. In reliance on these opinions, S&P Global Ratings bases its ratings of this transaction on the creditworthiness of the isolated assets, without regard to the current or future creditworthiness of the original owner of the assets, Carvana, indirectly owned by Carvana Co. (CC/Negative/--).

Servicer

Bridgecrest is the servicer of the receivables securing the notes of CRVNA 2023-P2. Bridgecrest has over 30 years of experience in servicing auto loans. The company is responsible for all aspects of onboarding, servicing, and collections, including coordinating repossession and remarketing of the vehicles. Bridgecrest's onboarding includes a welcome call and introductory letter and/or email to obligors, with its own letter brands and instructions regarding payments. All future contact with the obligor is through Bridgecrest. This significantly reduces the risk of delayed payments, as well as reduces the risk of increased delinquencies and losses in the event of a Carvana bankruptcy. Commingling risk is reduced by the requirement that all collections are deposited to the series' collections account within two business days of collection. In addition, Vervent, who has been in business for over 30 years and has extensive experience in servicing auto loans, will serve as the back-up servicer. Vervent has mapped the data fields for Bridgecrest's servicing system and receives a monthly data tape, which we believe will facilitate a smooth servicing transfer in the event of a servicer termination event.

Collateral custodian

Computershare Trust Co. N.A. is the custodian of the receivables' contract files, including authoritative copy or records of the electronic contract, with direct responsibility for the administration under the transaction documents. This separation ensures continuity of servicing of the receivables, without regard to the current or future creditworthiness of the original owner of the assets, Carvana. The transaction documents contain representations that if the title is not perfected and if the breach is deemed to materially and adversely affect the noteholders, the contract will be repurchased by the originator. Discussions with the third-party servicer, Bridgecrest, regarding the outstanding rated series, indicate that these instances are de minimis. Additionally, the servicer can, where required, pursue title perfection. Our understanding is that obligors' contractual obligations under the loans should not be impacted by titling.

Underwriting

The collateral characteristics of this series relative to those of a rated series (see table 2) are not materially different. Additionally, the performance of those outstanding series, albeit early and incorporating the uplift from the COVID-19 pandemic-related support programs, are in-line with or better than our initial loss expectations. The Ally Financial Inc. (Ally) flow arrangement, in place since 2016, imposes Ally's underwriting review and due diligence--as if Ally is underwriting the loans--which can reduce deterioration of credit quality in the underwriting process. Our ECNL takes into consideration underwriting, performance, and our forward-looking view of the economy.

Carvana

Other than second-quarter 2021, Carvana has not been profitable. The lack of profitability has historically resulted from the company's focus on growth. For first-quarter 2023, the company reported a net loss of $288 million, down from a $506 million net loss in Q1 2022. Carvana's liquidity includes a $2.2 billion floorplan facility, a $4.0 billion flow program with Ally, and four short-term credit revolving facilities with bank lenders totaling about $2.0 billion.

On March 22, 2023, Carvana announced that it commenced offers to exchange its outstanding existing notes for up to an aggregate principal amount of $1.0 billion of senior secured second-lien notes due 2028. Per our corporate analysis, we lowered our issuer credit rating on Carvana to 'CC' from 'CCC+' (see "Carvana Co. Downgraded to 'CC' On Proposed Distressed Debt Exchange; Outlook Negative," published March 23, 2023). Overall, however, our ratings for the current transaction are based on, among other factors, the creditworthiness of the isolated assets, without regard to the current or future creditworthiness of the original owner of the assets, Carvana.

ESG Factors

Our rating analysis considers a transaction's potential exposure to ESG credit factors. For the auto ABS sector, we view the exposure to environmental credit factors as above average, to social credit factors as average, and to governance credit factors as below average (see "ESG Industry Report Card: Auto Asset-Backed Securities," published March 31, 2021).

The transaction's exposure to ESG credit factors is in line with our sector benchmark. Environmental credit factors are generally viewed as above average, given that the collateral pool primarily comprises vehicles with internal combustion engines (ICEs), which emit pollutants that contribute to climate transition risks. While the adoption of electric vehicles and future regulation could in time lower ICE vehicle values, we believe that our current approach to evaluating recovery and residual values adequately account for vehicle values over the transaction's relatively short, expected life. As a result, we have not separately identified this as a material ESG credit factor in our analysis.

Credit Enhancement And Collateral

Structural changes from CRVNA 2023-P1

- Similar to CRVNA 2022-P3, class N notes will be issued for this series. No class N notes were issued for CRVNA 2023-P1.
- Total initial HCE decreased for the class A, B, and C notes, to 8.80%, 5.40%, and 2.60%, respectively, from 9.30%, 6.25%, 3.00% (see table 1). Total initial HCE is unchanged for the class D notes at 0.50%.
- Subordination decreased for the class A, B, and C notes to 8.30%, 4.90%, and 2.10% respectively, from 8.80%, 5.75%, and 2.50%.

- Target overcollateralization decreased to 0.35% from 1.35% of the current collateral balance. Initial overcollateralization was unchanged at 0.00%.
- Pre-pricing excess spread is estimated at 6.12%, up from 4.68% post-pricing.

The decrease in hard credit enhancement reflects the increase in expected excess spread for the transaction. Our stressed cash flow analysis accounts for these changes. Specifically, we adjusted the speed of our loss curves, which accounts for the substantial decrease in the target overcollateralization, historical static pool origination data from Carvana for their prime loans, and the longer-term loans that Carvana recently began to securitize. Our results indicate that each of CRVNA 2023-P2's classes is enhanced to the degree consistent with the assigned preliminary ratings (see the Cash Flow Modeling Assumptions And Results section below).

Table 1

Credit enhancement summary (%)

	CRVNA				
	2023-P2	**2023-P1**	**2022-P3**	**2022-P2**	**2022-P1**
Subordination(i)					
Class A	8.30	8.80	9.15	9.00	8.55
Class B	4.90	5.75	6.05	5.95	5.50
Class C	2.10	2.50	2.95	3.05	2.40
Class D	0.00	0.00	0.00	0.00	0.00
Class N	0.00	N/A	0.00	0.00	0.00
Overcollateralization(i)					
Initial	0.00	0.00	0.00	0.00	0.70
Target	0.35	1.35	1.35	1.35	1.70
Floor	0.35	1.35	1.35	1.35	1.70
Reserve fund (i)					
Initial	0.50	0.50	0.50	0.65	0.60
Target	0.50	0.50	0.50	0.65	0.60
Floor	0.50	0.50	0.50	0.65	0.60
Total initial hard credit enhancement (i)					
Class A	8.80	9.30	9.65	9.65	9.85
Class B	5.40	6.25	6.55	6.60	6.80
Class C	2.60	3.00	3.45	3.70	3.70
Class D	0.50	0.50	0.50	0.65	1.30
Class N(ii)	0.30	N/A	0.30	0.30	0.30
Estimated excess spread per year(iii)	6.12	4.68	4.39	3.62	3.27

Note: Class A represents classes A-1, A-2, A-3, and A-4, collectively. (i)Percentage of the initial collateral pool balance. (ii)For CRVNA 2023-P2 and the other CRNVA prime deals where the class N was issued, the class N enhancement accounts for the class N reserve account which is 0.30% of the initial pool balance and is available solely to pay class N interest and principal. (iii)Pre-pricing for series 2023-P2 and post-pricing for all other series. CRVNA--Carvana Auto Receivables Trust. N/A--Not applicable.

Collateral changes

The significant collateral changes for CRVNA 2023-P2's final pool (as of May 10, 2023) from CRVNA 2023-P1's final pool include:

- The weighted average FICO decreased to 704 from 705, and the weighted average deal score was unchanged at 72.
- The percentage of loans that have not made a payment decreased to 32.94% from 44.27%.
- The percentage of loans with an original term of 73-78 months increased to 32.56% from 30.94%; those with 76-78 month loans decreased to 1.58% from 2.62%.
- The weighted average payment-to-income (PTI) ratio increased to 8.17% from 7.91%.

We believe the CRVNA 2023-P2 collateral pool is comparable to that of CRVNA 2023-P1 (see table 2). We have factored this into our expected loss for CRVNA 2023-P2 (see the S&P Global Ratings' Expected Loss section below).

Table 2

Collateral comparison(i)

	CRVNA				
	2023-P2	**2023-P1**	**2022-P3**	**2022-P2**	**2022-P1**
Collateral cutoff date	May 10, 2023	Feb. 6, 2023	Aug. 20, 2022	May 8, 2022	March 13, 2022
Pool size (mil. $)	412.77	363.25	364.00	605.00	1,039.52
No. of loans	17,881	15,559	15,329	25,052	41,229
Avg. principal balance ($)	23,084	23,346	23,746	24,150	25,213
WA APR (%)	12.74	11.83	10.27	9.09	7.62
WA LTV ratio (%)	93.92	93.65	93.64	91.04	91.30
WA down payment (%)	16.69	15.97	16.81	19.62	18.86
WA original term (mos.)	71.90	71.55	71.17	70.76	70.81
WA remaining term (mos.)	69.79	70.40	70.54	70.03	69.52
WA seasoning (mos.)	2.11	1.15	0.63	0.73	1.29
Loans with original terms of 61-72 months (%)	63.15	63.46	73.93	84.98	82.72
Loans with original terms of 73-75 months (%)	30.98	28.32	12.15	9.89	11.95
Loans with original terms of 76-78 months (%)	1.58	2.62	8.60	0.80	N/A
WA deal score	72.39	72.32	72.43	73.11	74.03
Non-zero WA original FICO score	704	705	704	704	704
Loans with no FICO score (%)	0.52	0.41	0.54	0.50	0.33
Top five state concentrations (%)					
	TX=10.61	TX: 12.84	TX=11.07	TX=9.47	TX=9.66
	CA=8.94	FL: 8.08	CA=8.55	CA=9.25	CA=9.46
	FL=7.24	CA: 7.16	FL=6.04	FL=6.96	FL=7.46

Table 2

Collateral comparison(i) (cont.)

	CRVNA				
	2023-P2	2023-P1	2022-P3	2022-P2	2022-P1
	GA=5.87	GA: 6.13	GA=5.54	AZ=5.70	GA=6.39
	AZ=5.55	PA: 4.76	AZ=5.30	GA=5.53	AZ=5.10
Originator's credit grades--deal score					
50-59	24.14	22.83	22.89	21.35	20.11
60-79	42.63	44.81	44.19	43.92	41.88
80-100	33.23	32.36	32.92	34.74	38.01
S&P Global Ratings' original ECNL (%)	2.75	2.75	2.50-3.00	2.50-3.00	2.50-3.00

(i)All percentages are of the initial gross receivables balance. CRVNA--Carvana Auto Receivables Trust. WA--Weighted average. APR--Annual percentage rate. LTV--Loan-to-value. ECNL--Expected cumulative net loss. N/A--Not applicable.

Macroeconomic And Auto Finance Sector Outlook

In our view, changes in the unemployment rate are a key determinant of charge-offs in the auto finance industry. We have also observed that recovery values tend to weaken during recessionary periods.

In our analysis, we considered the economic data and forecasts outlined in table 3, and their baseline effect on collateral credit quality in determining our base-case expected loss level.

As the Federal Reserve's (Fed) aggressive tightening of interest rates increases borrowing costs, we expect the economy to fall into a shallow recession later this year. We are forecasting slightly negative growth in the second and third quarters of this year with GDP averaging 0.7% growth for the year (see "Economic Outlook U.S. Q2 2023: Still Resilient, downside Risks Rise"). With economic pressures worsening due to higher borrowing costs, businesses will need to trim payrolls in interest rate-sensitive sectors. The recent banking sector disturbance may also lead to credit tightening and a softer jobs market. We expect the unemployment rate to rise and peak at 5.4% in early 2025 and then decline in late 2025.

Inflation remains a concern because it is eroding wage gains and the savings cushion that was built during the pandemic, particularly for those with lower incomes and smaller cushions.

Table 3

U.S. economic factors

	Actual	Forecast			
	2022	2023	2024	2025	2026
Real GDP (% year-over-year growth)	2.1	0.7	1.2	1.8	2.0
Unemployment rate (% annual average)	3.7	4.1	5.0	5.1	4.6
Consumer Price Index (CPI) (% annual average)	8.0	4.2	2.4	1.6	1.5

GDP--Gross domestic product. Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, and S&P Global Ratings Economics forecasts.

In the auto market, as new vehicle supply imbalances continue to ease and borrowing rates continue to rise, we would expect used vehicle values to normalize to historical levels.

S&P Global Ratings' Expected Loss: 2.75%

We determined our expected loss for CRVNA 2023-P2 by analyzing:

- The series collateral characteristics relative to those of outstanding series (see table 2) and to a peer (see table 4);
- The managed portfolio's performance and origination static pool data and their relative performances (see table 5, and charts 2 and 3); and
- The outstanding series' performance (see table 6 and charts 4-6).

We placed more emphasis on origination static pool analysis when determining the expected loss for this series. We complemented this analysis with our forward-looking view of the economy and the auto finance sector (see the Macroeconomic And Auto Finance Sector Outlook section above).

Overall, we expect CRVNA 2023-P2 to experience lifetime CNLs of 2.75%, unchanged from CRVNA 2023-P1.

Peer analysis

We also compared CRVNA 2023-P2 with CarMax Auto Owner Trust (CARMX) (see table 4 and chart 1), which is the closest peer. In our view, CRVNA 2023-P2 collateral characteristics are weaker than CarMax's most recent securitization (series 2023-2), because CARMX 2023-2 has a higher weighted average FICO, a significantly higher amount of seasoning, and a lower percentage of longer-term loans. Because CarMax's securitizations are made up of shorter-term loans, in our view, their loss curves may be more front-loaded compared to Carvana's prime securitizations' loss curves. Carvana does not have any paid-off prime securitizations at this time.

Table 4

Carvana collateral comparison with peers(i)

	Series	
	CRVNA 2023-P2	**CarMax 2023-2**
Collateral cutoff date	May 10, 2023	March 31, 2023
Pool size (mil. $)	412.77	1,530.61
No. of loans	17,881	79,331
Avg. principal balance ($)	23,084	19,294
WA APR (%)	12.74	9.57
WA original term (mos.)	71.90	65.88
WA remaining term (mos.)	69.79	58.76
WA seasoning (mos.)	2.11	7.12
Loans with original terms of 61-72 months (%)	63.15	62.18
Loans with original terms of 73-78 months (%)	32.56	N/A
Non-zero WA original FICO score	704	716

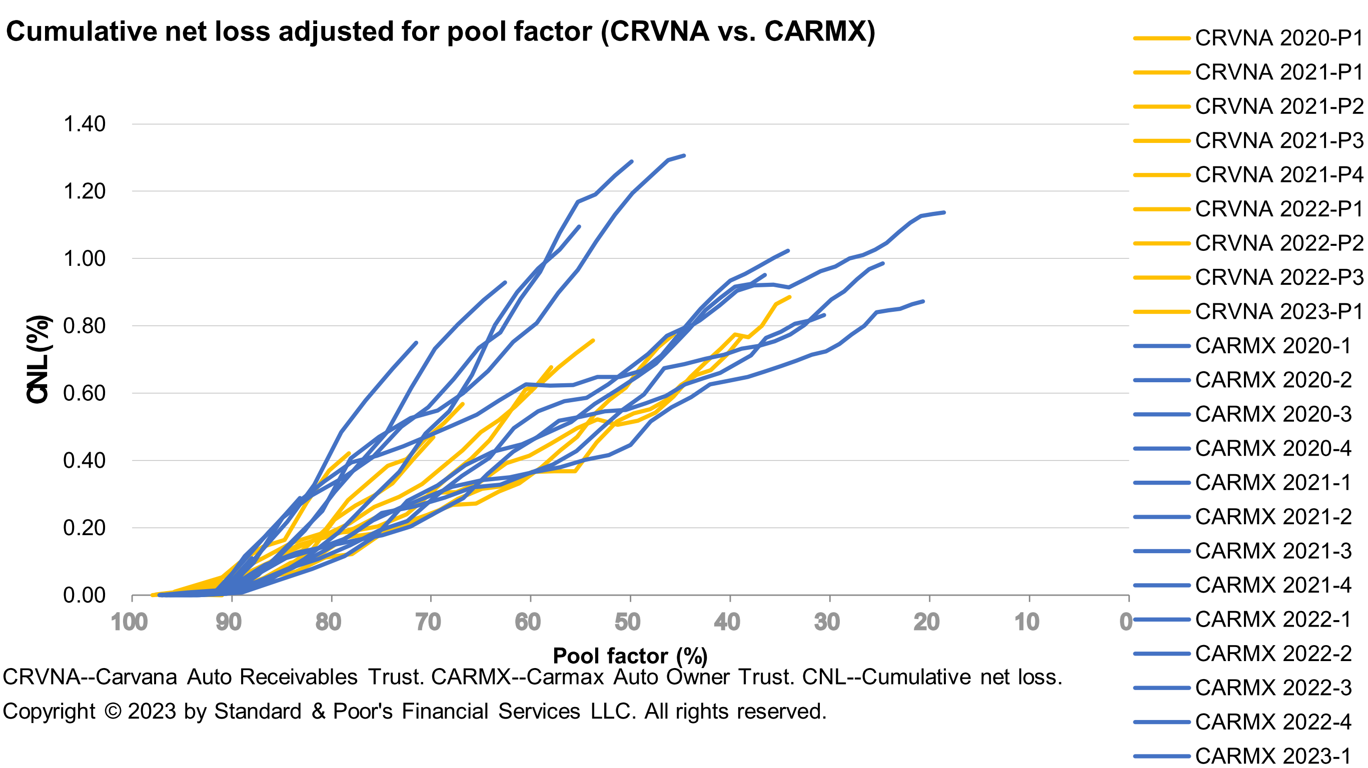
Table 4

Carvana collateral comparison with peers(i) (cont.)

	Series	
	CRVNA 2023-P2	CarMax 2023-2
FICO score distribution (%)		
801+	11.58	18.19
701-800	35.72	37.17
601-700	48.03	36.92
Less than 601(ii)	4.67	7.71
Top five state concentrations (%)		
	TX=10.61	CA=16.48
	CA=8.94	TX=11.94
	FL=7.24	FL=8.16
	GA=5.87	GA=6.49
	AZ=5.55	TN=5.32
S&P Global Ratings' ECNL (%)	2.75	2.30

(i)All percentages are of the initial gross receivables balance. (ii) Includes loans without a FICO Score. CRVNA--Carvana Auto Receivables Trust. CarMax--CarMax Auto Owner Trust. WA--Weighted average. APR--Annual percentage rate. LTV--Loan-to-value. ECNL--Expected cumulative net loss. N/A--Not applicable.

Chart 1



CRVNA--Carvana Auto Receivables Trust. CARMX--Carmax Auto Owner Trust. CNL--Cumulative net loss.

Managed portfolio

As of March 31, 2023, Carvana's prime portfolio comprised contracts totaling approximately $7.59 billion, a year-over-year increase of 19.41% (see table 5). Total 31-plus-day delinquencies increased to 1.81% as of March 31, 2023, from 0.90% as of Mar. 31, 2022. As of Dec. 31, 2022, total 31-plus-day delinquencies came in at 1.83%, up from 0.92% in 2021. Annualized net charge-offs as of March 31, 2023, were 0.70%, up from 0.39% as of March 31, 2022. Net charge-offs as of Dec. 31, 2022, were 0.56%, up from 0.30% in 2021. The managed portfolio performance is attributable to a normalization, given the expiration of federal stimulus programs, weaker recovery rates, and competitive conditions in auto sector, as well as recent economic headwinds including inflation.

Table 5

Prime Managed Portfolio Data

	As of March 31		As of Dec. 31				
	2023	2022	2022	2021	2020	2019	2018
Principal outstanding at end of period (mil. $)	7,592.40	6,358.42	7,446.00	5,690.53	2,719.22	1,532.86	731.52
Average month-end principal amount (mil. $)	7,545.20	6,115.24	6,851.67	4,200.05	2,094.89	1,144.66	516.05
Net charge-offs (mil. $)(i)	13.13	6.00	38.49	12.45	11.77	9.15	3.48
Net charge-offs (% average month-end principal)	0.70(ii)	0.39(ii)	0.56	0.30	0.56	0.80	0.67
Delinquencies (%)							
31-60 days	1.25	0.63	1.30	0.64	0.67	0.97	0.85
61-90 days	0.43	0.21	0.42	0.22	0.23	0.29	0.24
91-plus days	0.13	0.06	0.11	0.06	0.06	0.11	0.12
Total	1.81	0.90	1.83	0.92	0.96	1.37	1.21

(i)Does not include all repossession-related expenses. (ii)Annualized.

Origination static pool analysis

To derive our base-case expected losses for CRVNA 2023-P2, we analyzed Carvana's static pool quarterly originations data from 2014 to 2022 by gross loss and net loss on the aggregate portfolio, and by deal score and FICO score. We developed a variety of loss timing curves based on different quarterly vintages to estimate potential losses on outstanding vintages.

We then calculated weighted average projected loss proxies by weighting each outstanding vintage month's projected loss by the origination dollar volume for the respective vintage. Then we computed a weighted average projected loss for the pool by weighting the loss proxies by the respective percentage of the current pool balance.

Chart 2

Origination cumulative net loss performance | deal score of 50+ | 2016-2018

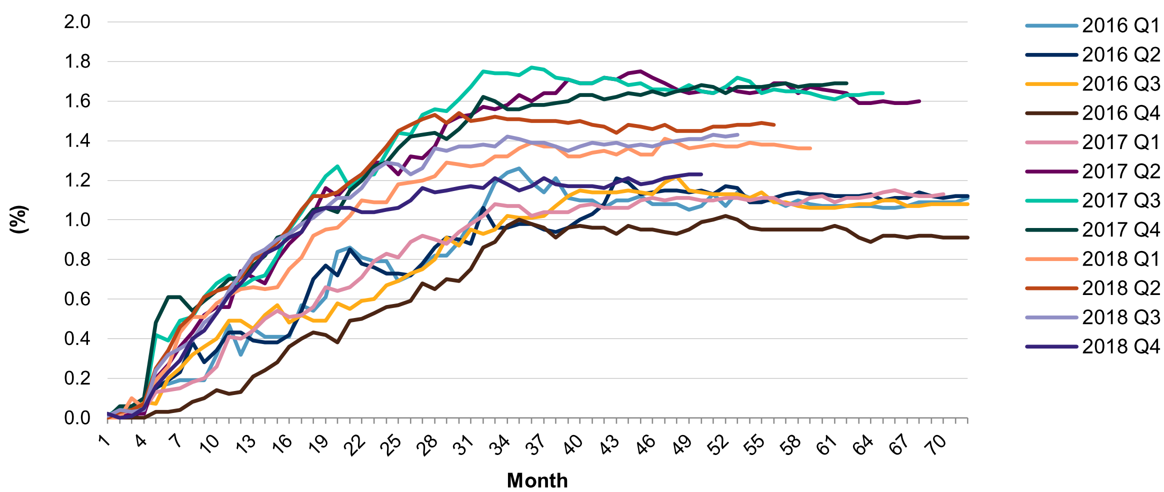
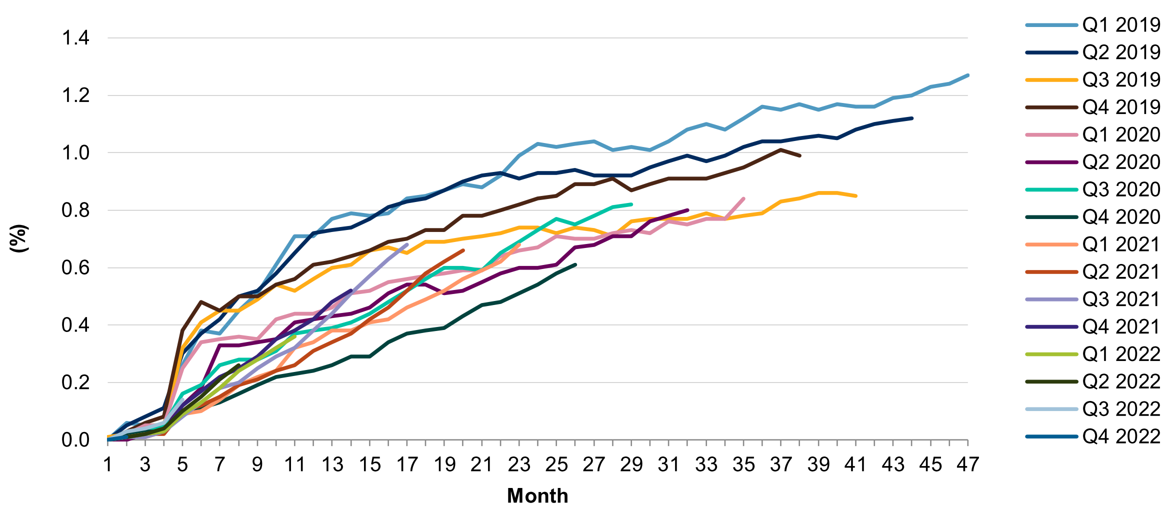


Chart 3

Origination cumulative net loss performance | deal score of 50+ | 2019-2022



Carvana transaction performance

S&P Global Ratings has outstanding ratings on nine Carvana prime securitizations. The prime series are currently performing in line with or better than our initial expectations (see table 6 and charts 4-6). CRVNA 2022-P3's early loss performance is trending worse than prior series. We have accounted for in our expected CNL for this series.

Table 6

CRVNA prime collateral performance and CNL expectations(i)

Series	Month	Pool factor (%)	Current CNL (%)	Current CRR (%)	60-plus-day delinq. (%)	Extension rate (%)	Initial expected CNL (%)	Revised expected CNL (%)(ii)
2020-P1	29	34.06	0.89	43.79	0.92	0.31	3.50-4.00	2.00-2.50
2021-P1	26	38.85	0.77	45.66	0.87	0.22	3.35-3.85	N/A
2021-P2	23	45.67	0.78	42.79	0.96	0.29	3.35-3.85	N/A
2021-P3	20	53.77	0.76	40.57	0.91	0.38	2.50-3.00	N/A
2021-P4	17	57.97	0.68	34.88	0.77	0.38	2.50-3.00	N/A
2022-P1	14	66.85	0.57	36.00	0.58	0.30	2.50-3.00	N/A
2022-P2	12	69.78	0.47	30.97	0.54	0.25	2.50-3.00	N/A
2022-P3	8	78.25	0.42	28.94	0.38	0.23	2.50-3.00	N/A
2023-P1	3	90.98	0.01	42.52	0.17	0.02	2.75	N/A

(i)Distribution as of May 2023. (ii)We revised our loss expectation on 2020-P1 in February 2022. CNL--Cumulative net loss. CRR--Cumulative recovery rate. Delinq.--Delinquency. N/A--Not applicable.

On Feb. 4, 2022, we raised our ratings on three classes and affirmed our ratings on three classes from CRVNA 2020-P1, reflecting the transaction's collateral performance to date and our expectations regarding future collateral performance, as well as the transaction's structure and its credit enhancement levels (see "Carvana Auto Receivables Trust 2020-P1 Ratings Raised On Three Classes; Three Affirmed").

Chart 4

Securitization cumulative net losses

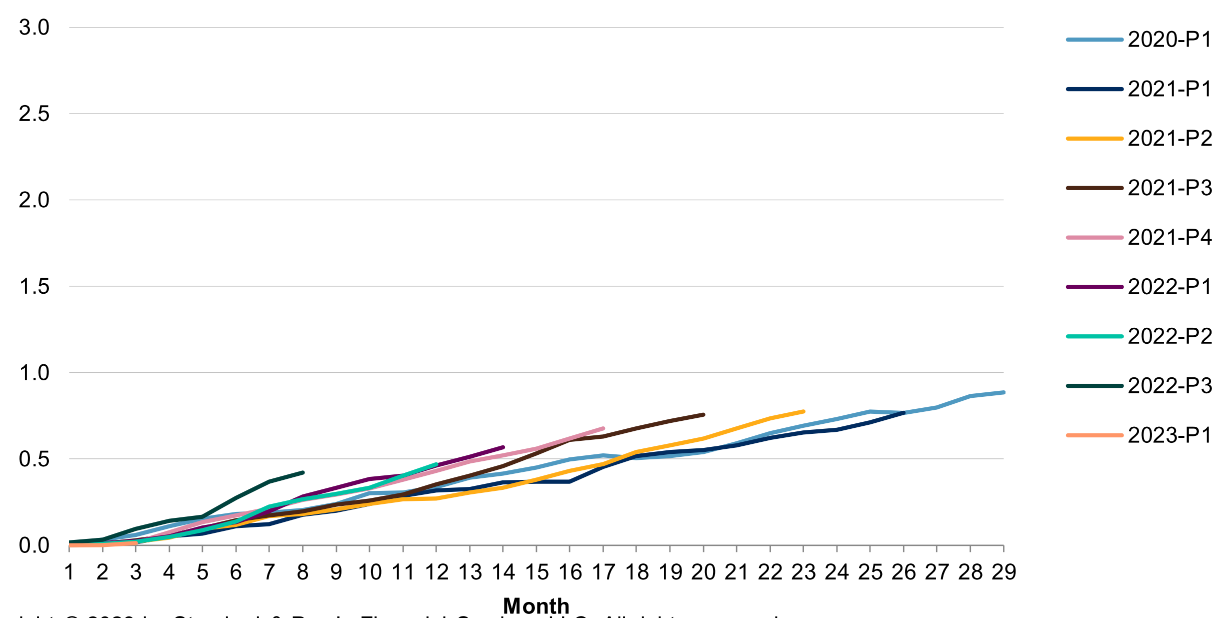


Chart 5

Securitization cumulative gross losses

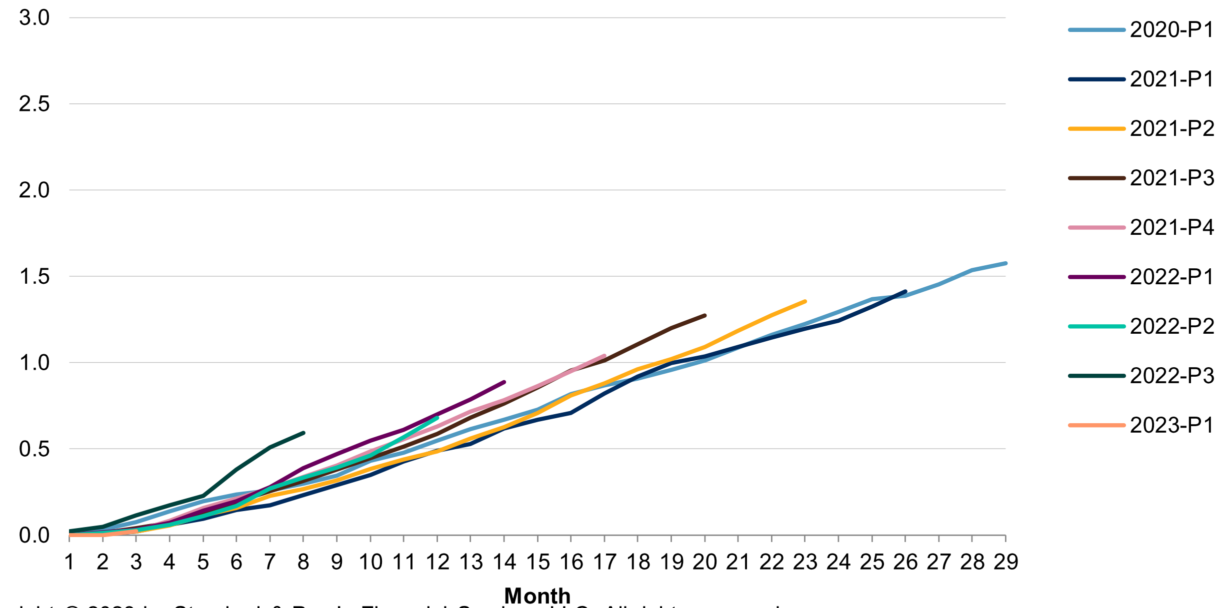
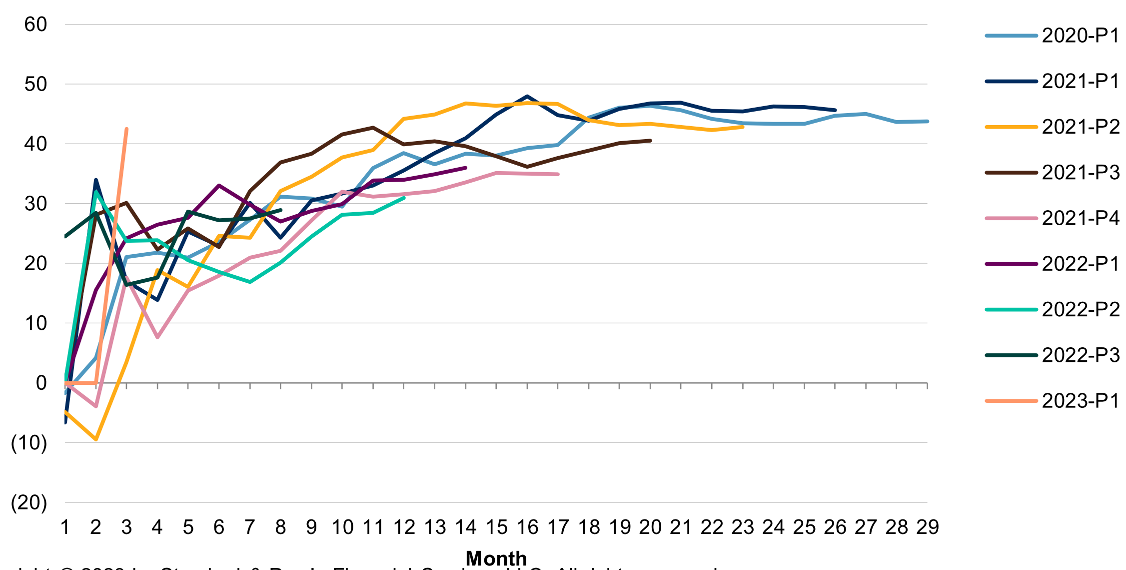


Chart 6

Securitization cumulative recovery rates



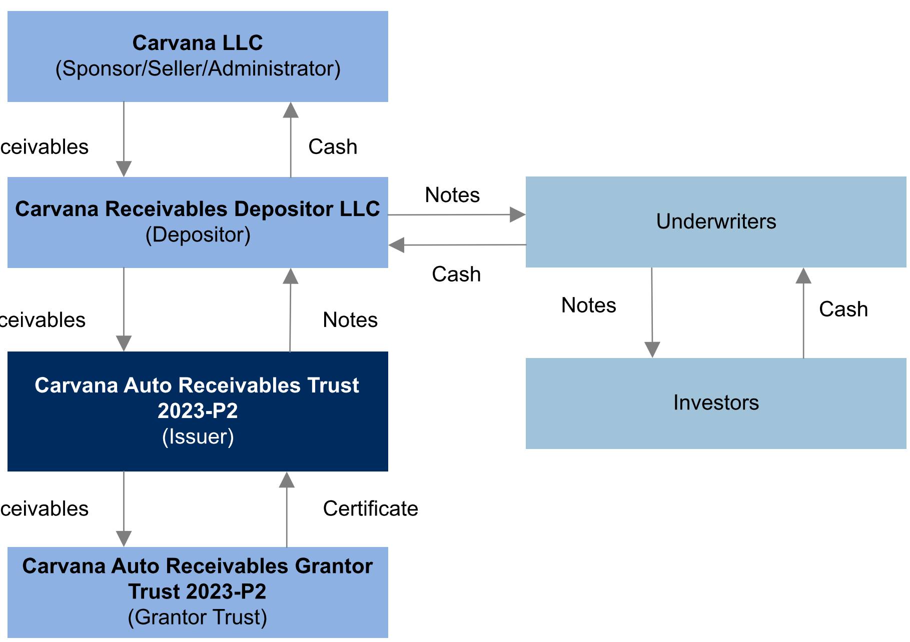
Legal Overview And Transaction Structure

Legal overview

In rating this transaction, S&P Global Ratings will review the legal matters it believes are relevant to its analysis, as outlined in its criteria.

CRVNA 2023-P2 is structured as a true sale of the receivables from Carvana to Carvana Receivables Depositor LLC, a Delaware limited liability company, which is a wholly owned subsidiary of the sponsor. The depositor will transfer the receivables to the issuing trust, CRVNA 2023-P2, in return for the notes and a certificate evidencing an undivided beneficial ownership in the issuing trust. The issuing trust will transfer its rights in the receivables to the grantor trust, Carvana Auto Receivables Grantor Trust 2023-P2, in return for a certificate of undivided beneficial ownership in the grantor trust. The grantor trust will pledge its rights in the receivables in favor of the indenture trustee for the noteholders' benefit. The depositor will sell the offered notes to the underwriters minus 5.00% of each class of notes, which will be retained by Carvana to satisfy its credit risk retention obligations, as sponsor.

Transaction Structure



Transaction structure

CRVNA 2023-P2 incorporates the following structural features:

- A senior-subordinated sequential-pay structure in which the senior-most notes outstanding are paid first;

- Initial overcollateralization that starts at 0.00% and builds to a target of 0.35% of the initial pool balance by using excess spread available after covering net losses, subject to a floor of 0.35% of the initial collateral pool balance;
- A nonamortizing reserve account amount that will equal 0.50% of the cutoff date pool balance as of the closing date; and
- Excess spread of approximately 6.12% (pre-pricing) per year.

Class XS notes

The class XS notes are structured to receive payments based on the excess servicing strip amount--the difference between the servicing strip amount (1.00% times the pool balance on the first day of the collection period times 1/12) and the servicing fee (0.58% times the pool balance on the first day of the collection period times 1/12).

Class N notes

The class N notes is structured to receive interest and principal payments from available funds remaining after paying senior fees, interest, and principal to maintain the overcollateralization for the class A through D notes. The class N notes will have their own reserve account, which will be 0.30% of the initial pool balance and will be funded by an initial deposit from the depositor. The reserve will be used solely to pay the class N notes--to the extent there are no available funds to pay interest and, in the case of the class N notes' final scheduled distribution date, principal on the class.

Payment Priority

Payment distributions before an event of default

On each payment date, before an acceleration of the notes, distributions will be made from available funds according to the payment priority outlined in table 7. In addition, the funds in the reserve account will be available to cover fees, expenses, and interest shortfalls and pay parity principal and principal due on the notes' final maturity date.

Table 7

Payment waterfall

Priority	Payment
1	The servicing strip amount (1.00% times the beginning pool balance times 1/12) for the related collection period will be used to pay the servicing fee, and any excess servicing strip amount will be distributed to the class XS notes.

Table 7

Payment waterfall (cont.)

Priority	Payment
2	Pro rata to the backup servicer, if it has replaced Bridgecrest Credit Co. LLC as servicer, any unpaid indemnity amounts and unpaid transition expenses capped at $150,000 for the calendar year; and to the indenture trustee, owner trustee, grantor trust trustee, administrator, collateral custodian, and independent accountant, any accrued and unpaid fees, expenses, and indemnities then due to each entity, provided that, in aggregate in any calendar year, those fees and expenses do not exceed $125,000 to the indenture trustee and collateral custodian, $75,000 combined to the owner trustee and grantor trust trustee, and $9,000 to the independent accountant and that, in any calendar year, and rating agency surveillance fees, paid pro rata, not to exceed $27,750 in the aggregate.
3	To the backup servicer, the backup servicing fee.
4	To the class A notes, the aggregate class A interest distributable amount for that distribution date.
5	The first-priority principal payment (if the class A notes' aggregate note principal balance is greater than the aggregate principal balance).
6	To the class B notes, the aggregate class B interest distributable amount for that distribution date.
7	The second-priority principal payment (if the class A and B notes' aggregate note principal balance is greater than the aggregate principal balance after making any first-priority principal payments).
8	To the class C notes, the aggregate class C interest distributable amount for that distribution date.
9	The third-priority principal payment (if the class A, B, and C notes' aggregate principal balance is greater than the aggregate principal balance after making any first- and second-priority principal payments).
10	To the class D notes, the aggregate class D interest distributable amount for that distribution date.
11	The fourth-priority principal payment (if the class A, B, C, and D notes' aggregate principal balance is greater than the aggregate principal balance after making any first-, second-, and third-priority principal payments).
12	To the reserve account, the amount necessary to fund the reserve account up to the reserve account required amount.
13	To the note distribution account, the noteholders' regular principal distributable amount for that distribution date to pay principal on the notes (other than the class N and XS notes).
14	To the class N notes, the aggregate class N interest distributable amount for that distribution date.
15	To the class N reserve account, the amount necessary to fund the class N reserve account up to the class N reserve account's required amount.
16	To pay the class N note principal distribution amount until it is paid in full.
17	Pro rata to the backup servicer, indenture trustee, collateral custodian, administrator, owner trustee, grantor trust trustee, rating agencies, and the independent accountant, any fees and expenses and indemnities then due and payable to each party that exceed the cap or annual limitation specified in item 2 above.
18	All remaining amounts, to the certificateholders.

Class A--Collectively, class A-1, A-2, A-3, and A-4.

On each payment date, principal distributions will be made sequentially to the class A-1, A-2, A-3, A-4, B, C, and D notes until each class is paid in full, and then the amount deposited into the note distribution account according to item 16 in table 1 above will be applied to the class N notes until they are paid in full.

Events of default

The payment priorities outlined in table 7 can change if certain events of default occur and continue, including:

- A failure to pay interest on the controlling class;
- A failure to pay principal at final maturity (other than the class XS notes);
- The issuer's involuntary and voluntary bankruptcy; and
- A material breach of a covenant, agreement, representation, or warranty.

The senior-most outstanding class of notes is the controlling class. The class N and XS notes will never be the controlling class, as per the transaction documents.

Payment distributions after an event of default

If an event of default occurs, distributions will be made from available funds according to the payment priority outlined in table 8.

Table 8

Payment waterfall after an event of default

Priority	Payment
1	The servicing strip amount (1.00% times the beginning pool balance times 1/12) for the related collection period will be used to pay the servicing fee, and any excess servicing strip amount will be distributed to the class XS note.
2	Pro rata, to the backup servicer, indenture trustee, owner trustee, collateral custodian, administrator, and grantor trust trustee, any amount due to each entity, disregarding any caps or annual limitations.
3	To the backup servicer, the backup servicing fee.
4	To the class A notes, the aggregate class A interest distributable amount for that distribution date.
5	Principal to the extent necessary to reduce the class A-1 note balance to zero.
6	Pro rata, principal to the extent necessary to reduce the class A-2, A-3, and A-4 note balance to zero.
7	To the class B notes, the aggregate class B interest distributable amount for that distribution date.
8	Principal to the extent necessary to reduce the class B note balance to zero.
9	To the class C notes, the aggregate class C interest distributable amount for that distribution date.
10	Principal to the extent necessary to reduce the class C note balance to zero.
11	To the class D notes, the aggregate class D interest distributable amount for that distribution date.
12	Principal to the extent necessary to reduce the class D note balance to zero.
13	To the class N notes, the aggregate class N interest distributable amount for that distribution date.
14	Principal to the extent necessary to reduce the class N note balance to zero.
15	All remaining amounts to the certificateholders.

Class A--Collectively, class A-1, A-2, A-3, and A-4.

Cash Flow Modeling Assumptions And Results

In our cash flow analysis, we assess the availability of asset cash flows to meet the transaction's promised obligations under a variety of stress assumptions, while considering the transaction structure and available credit support. We also use our cash flow analysis in other aspects of our ratings analysis, including the testing of credit stability (sensitivity analysis) and legal final analysis.

Break-even analysis

For the CRVNA 2023-P2 transaction structure, we applied the assumptions outlined in table 9 in our cash flow analysis to simulate stress scenarios that we believe are appropriate for the assigned preliminary ratings. To assign a rating to a class, we consider the class's lower breakeven levels (the maximum net losses the class can withstand without defaulting) and generally expect it to be equal to or greater than the rating stressed scenario breakeven requirement.

For CRVNA 2023-P2, in view of the decrease in hard credit enhancement and particularly the substantial decrease in the overcollateralization floor, which mitigates against back-end loss exposure for the subordinated classes, and after considering Carvana's static pool loss data and their relatively high percentage of longer-term loans (greater than 72 months) that they recently began to include in their securitizations, we modified our loss timing curves. Based on the above factors and Carvana's prime origination static pool loss data, we revised our front-loaded and back-loaded loss curves to 35/65/85/100 and 25/55/75/90/100, respectively, from 40/70/90/100 and 35/55/75/90/10 in CRVNA 2023-P1.

For the class N notes, we updated our loss curve to 40/40/20, from 45/35/20 and maintained our ABS assumption of 1.60%. The front-loaded loss curve and higher prepayment speed assumptions for the class N notes stresses excess spread and delays the build in the overcollateralization amount. As a result, the class N notes rely on the class N reserve account to pay interest for a longer period.

Based on our stressed cash flows, the breakeven net loss results show that the class A, B, C, D, and N notes are credit-enhanced to the degree appropriate for the assigned preliminary ratings (see table 10).

For the class N notes, we also ran a more heavily front-loaded curve and a higher level of prepayments to further stress excess spread and delay the build in the overcollateralization amount. As a result, the class N notes relied on the class N reserve account to pay interest for a longer period of time.

Table 9

Breakeven cash flow assumptions

Voluntary ABS (%)	1.50
Servicing fee (%)	1.00
Recovery rate (%)	45.00
Charge-off and recovery lag (mos.)	4
CNL timing mos. (12/24/36/48)(%)	
Front-loaded loss curve	35/65/85/100
Back-loaded loss curve	25/55/75/90/100
Class N	
Voluntary ABS (%)	1.60
Loss timing curve	40/80/100

ABS--Absolute prepayment speed. Mos.--Months.

Table 10

Breakeven cash flow results

	Class				
	A	B	C	D	N
Preliminary rating	AAA (sf)	AA (sf)	A (sf)	BBB (sf)	BB+ (sf)
CNL timing mos. (12/24/36/48)(%)					
Front-loaded loss curve	34/64/84/100	34/64/84/100	34/64/84/100	34/64/84/100	39/80/100
Back-loaded loss curve	25/55/75/90/100	25/55/75/90/100	25/55/75/90/100	25/55/75/90/100	N/A
Approximate break-even CNL levels (%)(i)					
Required	13.75	11.00	8.25	5.50	4.77
Available: front-loaded loss curve	15.14	12.31	9.97	8.35	6.80
Available: back-loaded loss curve	15.36	12.45	9.82	6.27	N/A

(i)The maximum CNLs, with 90.00% credit to any excess spread, the transaction can withstand without triggering a payment default on the relevant class of notes. CNL--Cumulative net loss.

Sensitivity analysis

In addition to running breakeven cash flows, we undertook sensitivity analysis using the assumptions outlined in table 9, including front-loaded and back-loaded loss curves of 35/65/85/100 and 25/55/75/90/100, respectively, a voluntary ABS assumption of 1.50%, and a recovery rate assumption of 45%. We believe that under a moderate ('BBB') stress scenario (2.00x of 2.75% expected loss level) and with 90.00% credit to any excess spread, all else being equal, our preliminary ratings will be within the credit stability limits specified by section A.4 of the Appendix of "S&P Global Ratings Definitions," published Nov. 10, 2021 (see table 11).

Table 11

Maximum projected deterioration under moderate stress conditions

Horizon	AAA	AA	A	BBB	BB
One-year	AA	A	BB	B	CCC
Three-year	BBB	BB	B	CCC	D

Chart 8

2.00x cumulative net loss - coverage multiples (front-loaded loss curve)

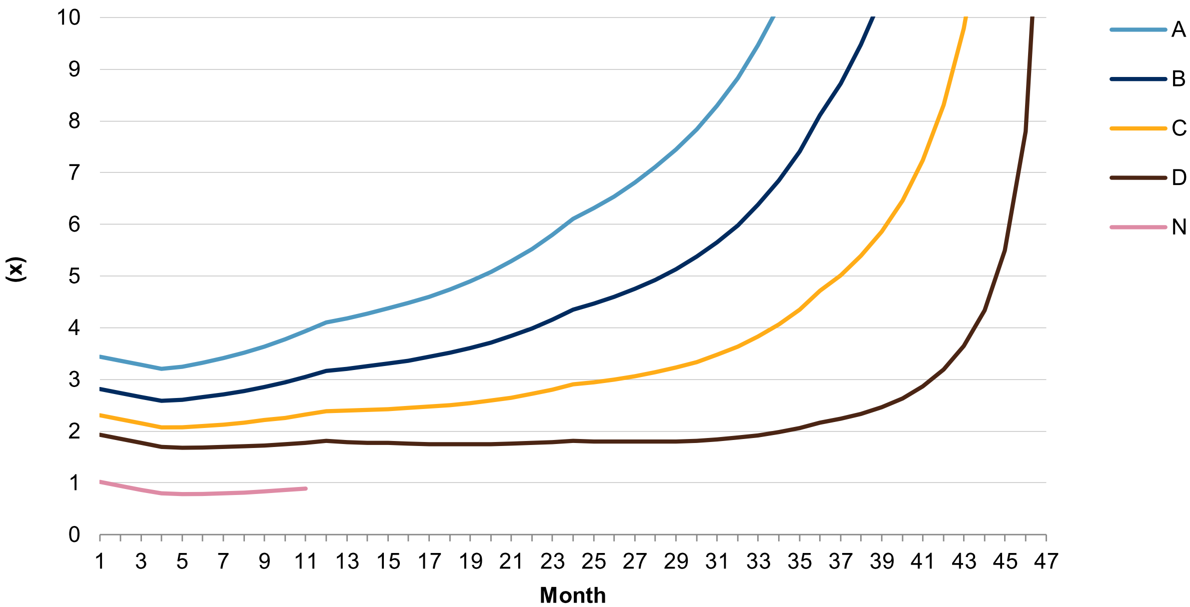
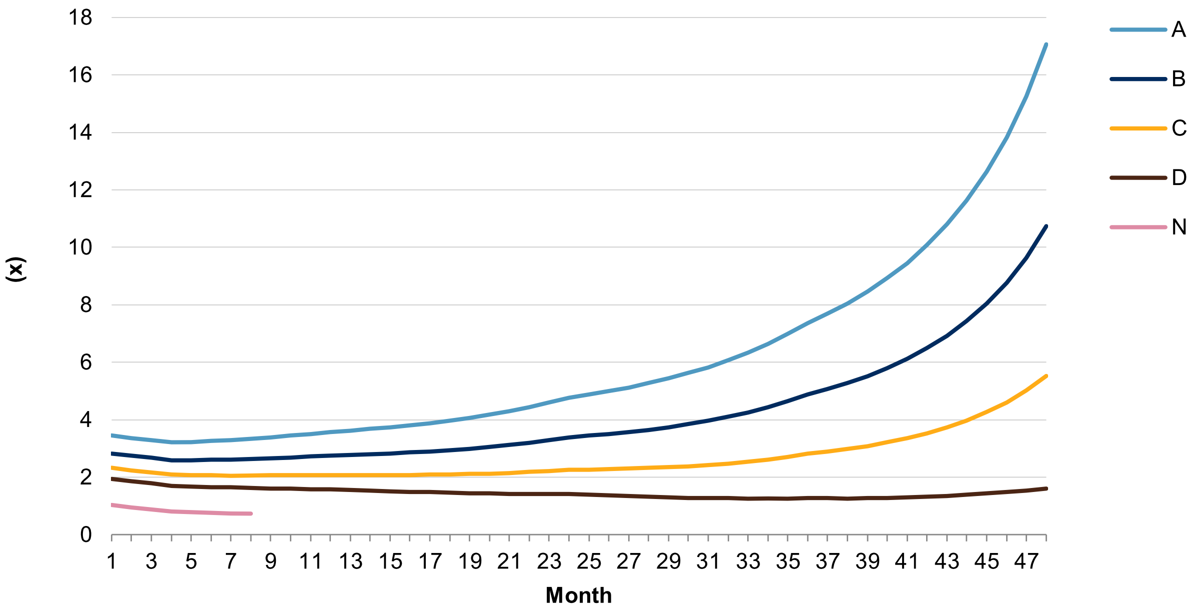


Chart 9

2.00x cumulative net loss - coverage multiples (back-loaded loss curve)



Money market tranche sizing

The proposed money market tranche (class A-1) has a legal final maturity date of June 10, 2024. To test whether the money market tranche can be repaid by its legal final maturity date, we ran cash flows using assumptions to delay the principal collections. We assumed zero defaults and zero prepayments for our cash flow analysis, and we checked that approximately 12 months of principal collections would be sufficient to pay off the money market tranche.

Legal final maturity

To test the legal final maturity dates set for classes A through C, we determined the date when the respective notes would be fully amortized in a zero-loss zero-prepayment scenario, and then added three months to the result. For the longest-dated security (classes D and N), we added six months to the tenor of the longest-dated receivable in the pool accommodate extensions on the receivables. Further, in the break-even scenario for each respective rating level, we confirmed that the credit enhancement was sufficient to both cover losses and repay the related notes in full by the legal final maturity date.

Counterparty And Operational Risks

Bank account provider

On or before the closing date, the CRVNA 2023-P2 bank accounts will be established with the bank account provider, Wells Fargo Bank N.A. The bank account provider is consistent with our counterparty criteria for a 'AAA' supported transaction (see "Counterparty Risk Framework: Methodology And Assumptions," published March 8, 2019).

Servicers

Bridgecrest, an affiliate of DriveTime, is the servicer of all Carvana loans with centralized servicing and collections in Mesa, Ariz., and Dallas. Bridgecrest has over 30 years of experience in servicing auto loans and a current portfolio of $16 billion. Bridgecrest has a team dedicated to servicing only Carvana loans. The company is responsible for all aspects of on-barding, servicing and collections, including coordinating repossession and remarketing of the vehicles--similar to its approach for DriveTime loans. Bridgecrest's on-boarding includes a welcome call, and an introductory letter and/or email with its letter brands, and instructions regarding payment. As a third-party servicer, all contact with the obligor after loan inception is through Bridgecrest, which significantly reduces the risks of delayed payments, increase in delinquencies and losses in the event of the originator bankruptcy.

Bridgecrest is not rated by S&P Global Ratings, and commingling risk is addressed by the requirement that all collections are deposited to the series collections account within two business days of collection. Our operational risk assessment of Bridgecrest as servicer does not constrain the ratings (see "Global Framework For Assessing Operational Risk In Structured Finance Transactions," published Oct. 9, 2014).

Vervent is the series back-up servicer. Vervent has been in business for over 30 years and has extensive experience in servicing auto loans. Vervent has been the backup servicer for Carvana transactions for over two years and new backup servicing agreements are created for each issuing trust. Vervent is expected to transition to servicing with 30 days' notice. In the event that servicing duties were to be transferred from Bridgecrest to Vervent, we believe that the transition may be smoother given that Vervent receives monthly data files from Bridgecrest to reconcile related activities.

Regulatory

Carvana and the key transaction parties could be subject to various regulatory investigation and or legal proceedings that may arise in their ordinary course of business. We will assess any such events and outcomes as they become available to us to determine any impact on our counterparty and operational risk assessments.

Carvana

Carvana, indirectly owned by Carvana Co. (CC/Negative/--), is a used-vehicle retailer that sells 100% online with direct delivery to customers or for pickup at one of its vending machines. On Carvana's website, customers can purchase used vehicles, arrange financing, purchase service plans, and sell cars to Carvana (as a trade-in or independently). Carvana owns and manages its inventory and distribution network. The company sources its inventory from auction channels or directly from customers and reconditions them internally for sale. While its primary business is selling cars, Carvana also offers financing to its customers (they finance approximately 70.00%-80.00% of all sales). As such, Carvana is a direct lender that originates prime, nonprime, and subprime auto loans.

The company was initially formed as a subsidiary of DriveTime in 2012 and became public in 2017. The founder and CEO, Ernie Garcia III, is the son of the CEO and founder of DriveTime. As a result, Carvana developed its processes, policies, and procedures using those of DriveTime as a starting point. The company has been rapidly growing since its inception, and it continues to expand its market penetration. As of Dec. 31, 2022, Carvana increased its operations to 316 markets from 311 markets a year earlier. In first-quarter 2023, the company added an additional 79,240 units sold.

Originations and underwriting

Originations and underwriting are all centralized at Carvana's headquarters in Tempe, Ariz., and all applications are processed online through Carvana's website. Through the website, customers have access to thousands of combinations of down payment, annual percentage rate, term, and monthly payments that are calculated for a specific vehicle.

Carvana has multiple proprietary risk scoring models, which it uses to predict performance of Carvana loans. Carvana's deal score is calculated after loan origination and is used for portfolio monitoring purposes. The deal score produces a score ranging from 0 to 100, where a higher score indicates a lower risk of default. This score incorporates the CarvanaScore (its first-generation scorecard) and specific attributes of a loan. Carvana considers a deal score of 50 or above to be prime originations.

Carvana offers ancillary products to customers through DriveTime. Carvana itself does not provide any vehicle service contracts and/or warranty products to the customer that are included in the loan balance. We believe this reduces the risk of non-payment by customers in the event of a Carvana bankruptcy because there are no contractual service/product obligations that Carvana is required to provide to the customer.

Related Criteria

- Criteria | Structured Finance | ABS: Global Auto ABS Methodology And Assumptions , March 31, 2022
- General Criteria: Environmental, Social, And Governance Principles In Credit Ratings , Oct. 10, 2021
- Criteria | Structured Finance | General: Global Framework For Payment Structure And Cash Flow Analysis Of Structured Finance Securities , Dec. 22, 2020
- Criteria | Structured Finance | Legal: U.S. Structured Finance Asset Isolation And Special-Purpose Entity Criteria , May 15, 2019
- Criteria | Structured Finance | General: Counterparty Risk Framework: Methodology And Assumptions , March 8, 2019
- Criteria | Structured Finance | General: Incorporating Sovereign Risk In Rating Structured Finance Securities: Methodology And Assumptions , Jan. 30, 2019
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings , April 7, 2017
- Criteria | Structured Finance | General: Global Framework For Assessing Operational Risk In

Structured Finance Transactions , Oct. 9, 2014

- General Criteria: Global Investment Criteria For Temporary Investments In Transaction Accounts , May 31, 2012
- General Criteria: Principles Of Credit Ratings , Feb. 16, 2011
- Criteria | Structured Finance | General: Methodology For Servicer Risk Assessment , May 28, 2009

Related Research

- U.S. Auto Loan ABS Tracker: February 2023 Performance, April 11, 2023
- Credit Conditions North America Q2 2023: Coalescing Stresses, March 28, 2023
- Economic Outlook U.S. Q2 2023: Still Resilient, Downside Risks Rise, March 27, 2023
- Research Update: Carvana Co. Downgraded to 'CC' On Proposed Distressed Debt Exchange; Outlook Negative, March 23, 2023
- Carvana Auto Receivables Trust 2020-P1 Ratings Raised On Three Classes; Three Affirmed, Feb. 4, 2022
- Carvana Co., May 19, 2020