



## Presale:

## Carvana Auto Receivables Trust 2021-P4

#### December 15, 2021

## **Preliminary Ratings**

Class(ii)	Preliminary rating	Туре	Interest rate	Preliminary amount (mil. \$)(i)	Expected legal final maturity date
A-1	A-1+ (sf)	Senior	Fixed	146.60	Jan. 10, 2023
A-2	AAA (sf)	Senior	Fixed	341.60	April 10, 2025
A-3	AAA (sf)	Senior	Fixed	341.60	Jan. 11, 2027
A-4	AAA (sf)	Senior	Fixed	143.43	Dec. 10, 2027
В	AA (sf)	Subordinate	Fixed	33.24	Feb. 10, 2028
С	A (sf)	Subordinate	Fixed	31.12	Feb. 10, 2028
D	BBB (sf)	Subordinate	Fixed	17.41	Sept. 11, 2028
N(iii)	BB+ (sf)	N/A	Fixed	40.00	Sept. 11, 2028

Note: This presale report is based on information as of Dec. 15, 2021. 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 actual size of these tranches will be determined on the pricing date. (ii)The transaction will issue class XS notes, which are unrated and may be retained or sold in one or more private placements. (iii)The class N notes will be paid to the extent funds are available after the overcollateralization target is achieved. Additionally, the class N notes will not provide any enhancement to the senior classes. N/A--Not available.

#### **Profile**

Expected closing date	Dec. 29, 2021.
Collateral	Prime auto loan receivables.
Originator, seller, administrator, and sponsor	Carvana LLC.
Depositor	Carvana Receivables Depositor LLC.
Issuer	Carvana Auto Receivables Trust 2021-P4.
Servicer	Bridgecrest Credit Co. LLC.
Backup servicer	Vervent Inc.
Grantor trust	Carvana Auto Receivables Grantor Trust 2021-P4.
Collateral custodian and indenture trustee	Computershare Trust Company N.A. (BBB/Negative/).
Owner trustee and grantor trust trustee	BNY Mellon Trust of Delaware.
Lead underwriter	Citigroup Global Markets Inc.

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## **Credit Enhancement Summary**

	CRVNA 2021-P4	CRVNA 2021-P3	CRVNA 2021-P2	CRVNA 2021-P1	CRVNA 2020-P1	CRVNA 2019-4(i)	CRVNA 2019-3(i)	CRVNA 2019-2(i)	CRVNA 2019-1(i)
Preliminary ratir	ng								
Class A	AAA (sf)	NR	NR	NR	NR				
Class B	AA (sf)	NR	NR	NR	NR				
Class C	A (sf)	NR	NR	NR	NR				
Class D	BBB (sf)	NR	NR	NR	NR				
Class E	N/A	N/A	N/A	N/A	N/A	NR	NR	NR	NR
Class N	BB+ (sf)	BB+ (sf)	BB (sf)	BB (sf)	NR	NR	NR	NR	NR
Subordination (%	6 of the initia	l receivable	es)(ii)						
Class A	7.75	7.65	9.20	8.92	9.40	45.15	44.65	45.05	45.60
Class B	4.60	4.40	5.90	5.54	6.10	28.80	29.00	29.80	30.95
Class C	1.65	1.45	2.15	1.69	1.85	19.65	19.35	19.65	21.15
Class D	0.00	0.00	0.00	0.00	0.00	8.50	7.75	8.20	8.00
Class E	N/A	N/A	N/A	N/A	N/A	0.00	0.00	0.00	0.00
Class N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Overcollateraliza	ation (% of th	e initial rec	eivables)						
Initial	0.00	0.00	0.00	0.00	0.00	2.45	2.80	2.75	3.20
Target(iii)	0.35	0.35	1.40	1.10	1.50	5.20	5.50	5.50	5.65
Floor	0.35	0.35	1.40	1.10	1.50	5.20	5.50	5.50	5.65
Reserve fund (%	of the initial	receivables	s)						
Initial	0.50	0.50	0.50	0.50	0.50	1.25	1.25	1.25	1.25
Target	0.50	0.50	0.50	0.50	0.50	1.25	1.25	1.25	1.25
Floor	0.50	0.50	0.50	0.50	0.50	1.25	1.25	1.25	1.25
Total initial hard	credit enhar	cement (%	of the initi	al receivab	.es)				
Class A	8.25	8.15	9.70	9.42	9.90	48.85	48.70	49.05	50.05
Class B	5.10	4.90	6.40	6.04	6.60	32.50	33.05	33.80	35.40
Class C	2.15	1.95	2.65	2.19	2.35	23.35	23.40	23.65	25.60
Class D	0.50	0.50	0.50	0.50	0.50	12.20	11.80	12.20	12.45
Class E	N/A	N/A	N/A	N/A	N/A	3.70	4.05	4.00	4.45
Class N(iv)	0.05	0.05	0.05	0.05	0.05	N/A	N/A	N/A	N/A
Excess spread per year (%) (estimated)	5.33	5.38	5.94	6.38	6.52	15.36	15.21	14.18	13.96

(i)Not rated by S&P Global Ratings. (ii)Principal will be paid sequentially on the preliminary rated notes. (iii)The overcollateralization target is a percentage of the initial receivables balance. (iv)Class N enhancement will consist of a class N reserve account that will be 0.05% of the initial pool balance and will be available solely to pay class N interest and principal. CRVNA--Carvana Auto Receivables Trust. N/A--Not applicable. NR--Not rated.

#### Rationale

The preliminary ratings assigned to Carvana Auto Receivables Trust 2021-P4's (CRVNA 2021-P4) series 2021-P4 asset-backed notes reflect our view of the following:

- The availability of approximately 14.50%, 11.80%, 9.31%, 6.19% and 5.64% credit support for the class A (collectively, class A-1, A-2, A-3, and A-4), B, C, D, and N notes, respectively, based on stressed break-even cash flow scenarios (including excess spread). These credit support levels provide approximately 5.00x, 4.00x, 3.00x, 2.00x, and 1.73x coverage of our expected net loss range of 2.50%-3.00% for the class A, B, C, D, and N notes, respectively (see the Cash Flow Modeling Assumptions And Results section below for more information).
- The timely interest and principal payments by the legal final maturity dates made under stressed cash flow modeling scenarios that we deem appropriate for the assigned preliminary ratings.
- The expectation that under a moderate ('BBB') stress scenario (2.00x our expected loss level), all else being equal, our ratings will be within the credit stability limits specified by section A.4 of the Appendix contained in S&P Global Rating Definitions (see "S&P Global Ratings Definitions," published Nov. 10, 2021).
- The collateral characteristics of the prime pool being securitized, including a weighted average nonzero FICO score of approximately 704 and a minimum nonzero FICO score of 582.
- The loss performance of Carvana LLC's (Carvana) origination static pools and managed portfolio, its deal-level collateral characteristics, and a comparison with its prime auto finance company peers.
- The transaction's credit enhancement in the form of subordinated notes; a nonamortizing reserve account; overcollateralization, which builds to a target level of 0.35% of the initial receivables balance; and excess spread (see the Credit Enhancement Summary table above).
- The transaction's sequential-pay structure, which builds credit enhancement (on a percentage-of-receivables basis) as the pool amortizes.
- The transaction's payment and legal structures.

## Environmental, Social, And Governance (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, social credit factors as average, and governance credit factors as below average (see "ESG Industry Report Card: Auto Asset-Backed Securities," published March 31, 2021).

In our view, the transaction's exposure to ESG credit factors are 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 (ICE), 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.

## Changes From CRVNA 2021-P3

The structural changes from the CRVNA 2021-P3 transaction include the following:

- The subordination available to the class A notes increased by 10 basis points (bps) to 7.75% from 7.65%.
- The subordination available to each of the class B and C notes increased by 20 bps to 4.60% and 1.65%, from 4.40% and 1.45%, respectively.
- The total initial hard credit enhancement for the class A, B, and C notes increased to 8.25%, 5.10%, and 2.15%, from 8.15%, 4.90%, and 1.95%, respectively.

The collateral changes from the CRVNA 2021-P3 transaction include the following:

- The weighted average loan-to-value (LTV) ratio decreased to 92.13% from 93.70%.
- The weighted average Deal Score increased slightly to 74.78 from 74.58.
- The weighted average down payment increased to 17.92% from 14.54%.
- The percentage of loans that have not made a payment increased slightly to 30.59% from 30.38%.
- The percentage of loans with an original term greater than 60 months decreased slightly to 94.43% from 94.79%.

We view the collateral characteristics of series 2021-P4 to be comparable to those of the CRVNA 2021-P3 deal. The average loan balance and weighted average mileage are higher, although the weighted average down payment is higher, while the weighted average LTV and the percentage of loans with terms greater than 60-months are smaller (see the Pool Analysis section for collateral pool comparison).

We maintained our expected cumulative net loss (ECNL) for CRVNA 2021-P4 at 2.50%-3.00% (see the S&P Global Ratings' Expected Loss section for more information).

## **Key Ratings Considerations**

CRVNA 2021-P4 is Carvana's ninth auto loan ABS transaction rated by S&P Global Ratings and the fifth prime-only (i.e., loans with a Deal Score of 50 or above) securitization. The securities are collateralized by a pool of prime retail automobile installment sales contracts secured by used automobiles.

Based on our review of Carvana's operations and performance history, we considered the following transaction strengths:

- Stable top-line management in place since 2015 and an experienced CEO in the auto space.
- Strong relationships with Drivetime Automotive Group Inc. (DriveTime) and Ally Financial (Ally). In addition to servicing, Carvana leverages DriveTime's infrastructure and real estate for four of Carvana's 13 inspection and reconditioning centers (IRCs). The company purchases 100% of its vehicles without any assistance from DriveTime. Ally has been a flow partner since 2016 and has provided a floorplan facility since 2012.
- An experienced servicer, Bridgecrest Credit Co. LLC (Bridgecrest), which has over 25 years of

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experience in servicing auto loans.

- Strong liquidity, including a \$2.25 billion floorplan facility, a \$4.00 billion flow program with Ally, and three short-term credit revolving facilities with bank lenders totaling \$1.95 billion.

  Additionally, Carvana has successfully priced 13 ABS transactions.
- Multiple proprietary risk scoring models, which the company has enhanced over the years (see Originations and Underwriting section below).
- The company's underwriting platform is efficient and customizable. Customers can choose from a myriad of financing options and complete the process of purchasing, financing, and scheduling delivery or pickup of a vehicle online in as little as 10 minutes. Additionally, the company has a verification process that checks income, employment, and several other factors on 100% of the loans booked.
- Vervent Inc. (Vervent), an experienced auto loan servicer, is the warm backup servicer.

We also considered the following weaknesses and mitigating factors:

- With the exception of second-quarter 2021, the company has not been profitable since inception. The lack of profitability is due mostly to the company's focus on growth and expansion into new markets. In 2020, Carvana added 120 new markets, and opened four additional IRCs and four new vending machine sites. By third-quarter 2021, the company added 42 new markets and its 13th IRC, bringing its population coverage to approximately 81%.
- Year-over-year, revenue grew by 125%, and the number of retail units sold increased by 73%, while the gross profit per unit increased by \$616 to \$4,672. Carvana reported its first profitable quarter in second-quarter 2021, with approximately \$45 million in net income. However, expansion costs contributed to a third-quarter net loss of \$68 million.
- The North Carolina Division of Motor Vehicles (NCDMV) suspended the dealer license of the company's Raleigh location for six months (until late January 2022) because of complaints related to selling vehicles with out-of-state temporary tags, while failing to carry out state-required inspections and deliver titles to the NCDMV in a timely manner. The company is able to operate out of its three other North Carolina locations, minimizing the impact in that state.
- The company has a limited performance history. Although the company started in 2012, performance data are thin until 2016, effectively providing approximately five years of meaningful data.
- Carvana has been growing aggressively since its inception. The company's aggregate managed portfolio increased by 79% to \$8.6 billion as of September 2021 from \$4.8 billion a year earlier, highlighted by the growth in its prime portfolio of 109% to \$4.9 billion as of September 2021 from \$2.3 billion a year earlier. Despite this growth, and the company's credit tightening in the first quarter of 2020 in response to the COVID-19 pandemic, have since relaxed and collateral characteristics for the aggregate portfolio have been relatively stable.

#### Carvana

Carvana 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 75%–80% 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 and has continued to hone them. The company has been rapidly growing since its inception and continues to expand its market penetration. As of Sept. 30, 2021, Carvana is operating in 308 markets, compared with 266 markets at the end of 2020. As of Sept. 30, 2021, Carvana has purchased, reconditioned, sold, and delivered over 899,000 vehicles, generating more than \$21.9 billion in revenue.

## 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 approximately 10,000 combinations of down payment, annual percentage rate (APR), 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, wherein a higher score indicates a lower risk of default. This score incorporates the CarvanaScore (its first-generation scorecard), as well as specific attributes of a loan. The CRVNA 2021-P4 transaction consists of loans with a Deal Score of 50 or above, which Carvana considers to be prime originations.

#### Servicing

Bridgecrest, an affiliate of DriveTime, is the servicer of all Carvana loans with centralized servicing and collections in Mesa, Ariz., and Dallas, Texas. Bridgecrest has over 25 years of experience in servicing auto loans, primarily servicing DriveTime and Carvana loans, with a current portfolio of over \$11 billion.

Bridgecrest has a team dedicated to servicing only Carvana loans. Bridgecrest is responsible for all aspects of servicing and collections, including coordinating repossession and remarketing of the cars, and it uses a similar approach to the one for DriveTime loans.

Vervent is the warm backup servicer for Carvana loans. Vervent has been in business for over 30 years and has extensive experience in servicing auto loans. The backup servicing arrangement has been in place for two years, and Vervent would be able to take over the servicing of the Carvana portfolio with 30 days' notice.

## **Transaction And Legal Overview**

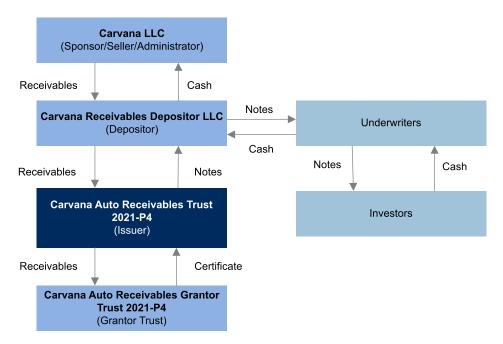
CRVNA 2021-P4 is Carvana's fifth prime securitization rated by S&P Global Ratings. It has 12 outstanding securitizations: four prime/nonprime (as defined by Carvana's Deal Score breakout) blended securitizations (series 2019-1, 2019-2, 2019-3, and 2019-4); four prime securitizations (series 2020-P1, 2021-P1, 2021-P2, and 2021-P3); and four nonprime securitizations (series

2020-NP1, 2021-N1, 2021-N2, and 2021-N3).

The transaction is structured as a true sale of the receivables from Carvana LLC 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 2021-P4, 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 2021-P4, 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 a 5.00% risk retention portion of each class of notes (see chart 1).

Chart 1

#### **Transaction Structure**



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#### **Transaction Structure**

The CRVNA 2021-P4 transaction will employ a sequential principal payment structure among the class A, B, C, and D notes. The sequential-pay mechanism builds credit enhancement, on a percentage basis, for the preliminary rated notes as the pool amortizes. Additionally, Carvana will issue class XS notes, which are unrated and may be retained or sold in one or more private placements. The class XS note will receive payments based on the difference between the servicing strip amount (1.00% times the pool balance on the first day of the collection period times

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1/12) and the servicing fee (0.60% times the pool balance on the first day of the collection period times 1/12), known as the excess servicing strip amount.

The transaction's structure incorporates a 0.50% nondeclining reserve account and no initial overcollateralization, which will build to a target of 0.35% of the initial pool balance. We expect the pool to generate excess spread of approximately 5.33% per year (using a 1.03% estimate per year for servicing and backup servicing fees).

#### Class N notes

The \$40.00 million class N notes will be 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 its own reserve account—the class N reserve account—which will be 0.05% of the initial pool balance. The class N reserve account will be funded by an initial deposit from the depositor and will be used solely to pay the class N notes, to the extent there are no available funds to pay interest and principal on the class.

## **Payment Structure**

## **Payment distributions**

The class A, B, C, D, and N note issuance amounts will total \$1.055 billion, and the notes will pay fixed interest rates. Interest and principal are scheduled to be paid to the preliminary rated notes on the 10th day of each month or the next business day, beginning Jan. 10, 2022. 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 1. 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 1

#### **Payment Waterfall**

Priority	Payment
1	The servicing strip amount 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.
2	Pro rata to the backup servicer, if it has replaced Bridgecrest 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, and provided that those fees and expenses do not exceed \$125,000 in aggregate in any calendar year to the indenture trustee and collateral custodian, \$75,000 in aggregate in any calendar year to the owner trustee and grantor trust trustee combined, and \$9,000 in any calendar year to the independent accountant, and the asset representation reviewer fees, expenses, and indemnities owed, not to exceed \$175,000 per year, rating agency surveillance fees, and \$24,000 in any calendar year for financial printer fees.
3	To the backup servicer, the backup servicing fee.
4	To the class A notes, the aggregate class A interest distributable amount for such 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 such distribution date.

Table 1

#### Payment Waterfall (cont.)

Priority	Payment
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 such 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 such 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	The payment of principal on the notes (other than the outstanding amount with respect to the class XS and class N notes), the noteholders' regular principal distributable amount (to build overcollateralization to its target amount).
14	To the class N notes, the aggregate class N interest distributable amount for such 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 the payment of the class N note principal distribution amount.
17	Pro rata to the backup servicer, indenture trustee, collateral custodian, administrator, owner trustee, and grantor trust trustee: 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.

On each payment date, principal distributions will be made in the following priority:

- To the class A-1 notes until they are paid in full;
- Then to the class A-2 notes until they are paid in full;
- Then to the class A-3 notes until they are paid in full;
- Then to the class A-4 notes until they are paid in full;
- Then to the class B notes until they are paid in full;
- Then to the class C notes until they are paid in full;
- Then to the class D notes until they are paid in full; and
- The amount deposited into the note distribution account pursuant to clause 16, will be applied to the class N notes until they are paid in full.

The above payment priorities can change if certain events of default occur and continue, including:

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

In the event of default, distributions will be made from available funds according to the payment priority outlined in table 2.

Table 2

#### **Payment Waterfall**

Priority	Payment
1	The servicing strip amount 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 such 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 such 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 such 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 such 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 such distribution date.
14	Principal to the extent necessary to reduce the class N note balance to zero.
15	All remaining amounts to the certificateholders.

#### Surveillance Performance

Carvana has 12 outstanding securitizations, eight of which were rated by S&P Global Ratings (see table 3). Series 2019-1, 2019-2, 2019-3, and 2019-4, which were not rated by S&P Global Ratings, are a mix of prime and nonprime collateral, while series 2020-P1, 2021-P1, 2021-P2, and 2021-P3 consist only of prime collateral. Carvana also has four transactions consisting of nonprime collateral not listed in table 3 below.

The most seasoned deal, CRVNA 2019-1, is currently at a 4.57% cumulative net loss (CNL) rate at month 31, with a pool factor of 34.51%. Using a straight-line projection, CNL expectation for CRVNA 2019-1 is approximately 6.90%. Although still early, cumulative recoveries for the more-seasoned outstanding transactions are trending at around 43%-48%.

Table 3

#### **Distribution As Of November 2021**

		Pool						Initial
Series	Month	factor (%)	Current CNL (%)	Current CRR (%)	30-plus-day delinq. (%)	Extension rate (%)	Straight-line projection (%)	expected CNL (%)
2019-1(i)	31	32.39	4.57	47.50	11.49	0.91	6.77	N/A
2019-2(i)	28	37.38	4.22	47.87	11.85	1.00	6.73	N/A
2019-3(i)	25	41.74	3.55	46.07	10.53	0.90	6.10	N/A

Table 3

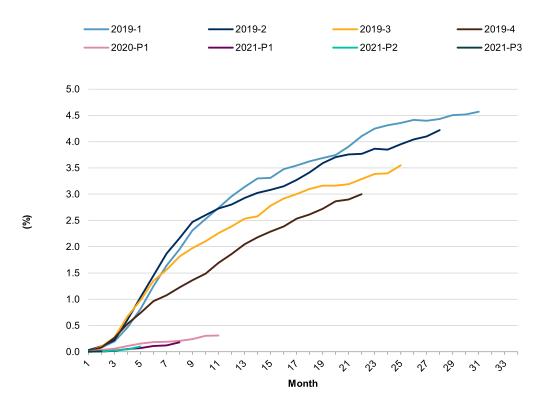
Distribution As Of November 2021 (cont.)

Series	Month	Pool factor (%)	Current CNL (%)	Current CRR (%)	30-plus-day delinq. (%)	Extension rate (%)	Straight-line projection (%)	Initial expected CNL (%)
2019-4(i)	22	47.43	3.00	43.90	9.10	0.91	5.70	N/A
2020-P1	11	67.44	0.31	35.97	0.95	0.14	N/A	3.50-4.00
2021-P1	8	75.29	0.18	24.28	0.60	0.11	N/A	3.35-3.85
2021-P2	5	84.11	0.10	16.07	0.52	0.05	N/A	3.35-3.85
2021-P3	2	94.98	0.01	28.13	0.17	0.01	N/A	2.50-3.00

(i)Not rated by S&P Global Ratings. CNL--Cumulative net loss. CRR--Cumulative recovery rate. Delinq.--Delinquency. N/A--Not applicable.

Chart 2a

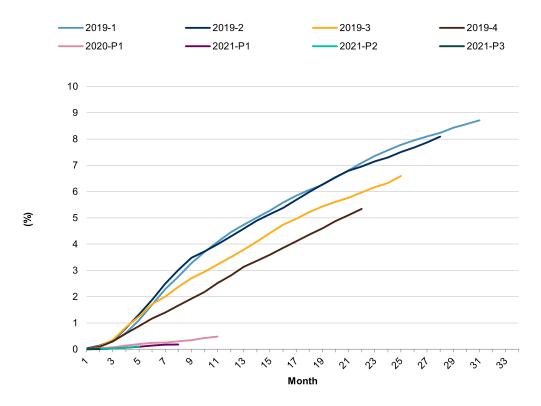
Securitization Cumulative Net Losses



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#### Chart 2b

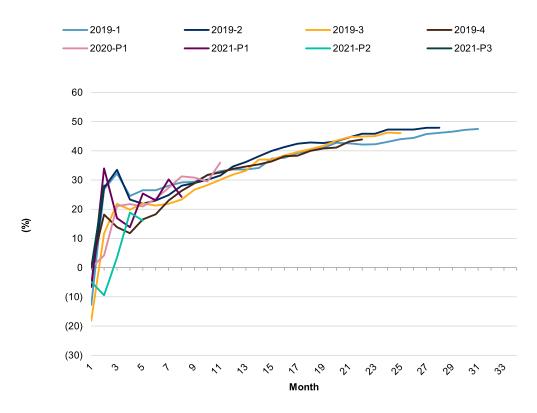
## **Securitization Cumulative Gross Losses**



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Chart 3

## **Securitization Cumulative Recovery Rates**



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## **Managed Portfolio Performance**

As of Sept. 30, 2021, Carvana's prime (Deal Score of 50 or above) portfolio more than doubled to approximately \$4.9 billion year-over-year (see table below). Total 31-plus-day delinquencies were 0.68% as of Sept. 30, 2021, compared with 0.83% for the similar period a year earlier. Net charge-offs as a percentage of the average principal as of Sept. 30, 2021, were 0.26% (annualized)--a decrease from 0.61% (annualized) for the same period in 2020. The improved delinquency and loss performance is likely a result of federal aid to consumers, elevated use of extension rates (since abated), and strong used vehicle values.

Prime Managed Portfolio Data

Table 4

	As of S	ept. 30	As of Dec. 31					
	2021	2020	2020	2019	2018	2017	2016	2015
Principal outstanding at end of period (mil. \$)	4,883.04	2,332.04	2,719.22	1,532.86	731.52	320.91	138.299	45.45
Average month-end principal amount (mil. \$)	3,786.21	1,928.26	2,094.89	1,144.66	516.05	233.21	89.03	28.59

Table 4

#### Prime Managed Portfolio Data (cont.)

	As of S	ept. 30	As of Dec. 31					
	2021	2020	2020	2019	2018	2017	2016	2015
Net charge-offs (mil. \$)(i)	7,410.48	8,875.66	11.77	9.15	3.48	1.09	0.47	0.56
Net charge-offs as a % average month end principal(ii)	0.26%	0.61%	0.56	0.80	0.67	0.46	0.53	0.19
Delinquencies (%)								
31-60 days	0.47	0.59	0.67	0.97	0.85	0.56	0.27	0.49
61-90 days	0.17	0.19	0.23	0.29	0.24	0.25	0.15	0.10
91-plus days	0.04	0.04	0.06	0.11	0.12	0.08	0.01	0.00
Total delinquencies	0.68	0.83	0.96	1.37	1.21	0.89	0.43	0.59

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

## **Pool Analysis**

As of the Dec. 12, 2021, cutoff date, the series 2021-P4 final pool comprised approximately \$1.055 billion in all used auto loans directly originated by Carvana (see table 5). This is the fifth pool securitized by Carvana that only consists of loans with a Deal Score of 50 or higher. Carvana considers Deal Scores of 50 or higher to be prime borrowers. The pool has a non-zero weighted average FICO score of 704, a weighted average Deal Score of approximately 75, and a weighted average LTV of 92.13%. Loans with an original term greater than 60 months represent approximately 94.43% of the pool, with loans having original terms of greater than 72 months representing approximately 12.83% of the pool. Given the low amount of seasoning, about 30.59% of the pool has not yet made a payment. Approximately 0.01% of the pool has ever been granted an extension.

Table 5

## CRVNA Collateral Comparison(i)

				Ser	ies				
	2021-P4	2021-P3	2021-P2	2021-P1	2020-P1	2019-4(ii)	2019-3(ii)	2019-2(ii)	2019-1(ii)
Collateral cutoff date	Dec. 12, 2021	Sept. 12, 2021	June 3, 2021	Feb. 27, 2021	Nov. 18, 2020	Dec. 23, 2019	Sept. 24, 2019	June 24, 2019	March 24, 2019
Pool size (mil. \$)	1,055.00	1,035.00	775.00	415.00	405.00	520.00	600.00	470.00	350.00
No. of loans	44,569	44,046	35,797	21,606	20,351	28,475	31,486	26,037	19,466
Avg. principal balance (\$)	23,671	23,498	21,650	19,208	19,901	18,262	19,056	18,051	17,980
Weighted avg. APR (%)	8.07	7.47	7.97	8.19	8.20	13.59	13.49	13.85	13.48
Weighted avg. LTV (%)	92.13	93.70	92.40	95.45	93.88	98.83	97.14	95.74	98.29
Weighted avg. down payment (%)	17.92	14.54	16.70	12.86	16.11	N/A	N/A	N/A	N/A

CRVNA Collateral Comparison(i) (cont.)

Table 5

				Se	ries				
	2021-P4	2021-P3	2021-P2	2021-P1	2020-P1	2019-4(ii)	2019-3(ii)	2019-2(ii)	2019-1(ii)
Weighted avg. original term (mos.)	70.82	70.90	70.63	69.73	69.64	70.12	70.17	69.90	69.96
Weighted avg. remaining term (mos.)	69.57	69.66	69.40	68.50	68.45	68.63	68.70	68.05	68.41
Weighted avg. seasoning (mos.)	1.25	1.25	1.23	1.23	1.19	1.49	1.48	1.85	1.55
Total % with original terms of 61-72 months	81.60	81.55	82.46	83.30	83.51	88.62	88.50	89.07	89.43
Total % with original terms of 73-75 months	12.83	13.24	11.61	8.66	8.26	5.77	6.01	4.81	4.99
Weighted avg. Deal Score	74.78	74.58	74.74	74.66	77.81	48.52	47.00	47.31	47.09
Non-zero weighted avg. original FICO score	704	705	706	707	710	634	635	636	636
% with no FICO score	0.53	0.52	0.68	0.62	0.48	3.07	3.29	3.17	2.80
Top five state	concentratio	ons (%)							
	TX: 9.18%	TX: 10.08	CA: 9.07	CA: 10.27	CA: 10.97	TX: 11.43	TX:12.39	TX: 12.14	TX: 13.68
	CA: 8.67%	CA: 7.63	TX: 8.97	TX: 7.94	TX: 7.92	CA: 7.75	GA: 9.38	GA: 10.39	GA: 12.15
	FL: 7.04%	FL: 7.11	FL: 7.08	GA: 7.16	GA: 5.73	GA: 7.46	CA: 6.92	FL: 6.52	FL: 6.75
	GA: 5.99%	GA: 6.79	GA: 6.36	FL: 7.12	AZ: 5.52	FL: 6.41	FL: 6.15	CA: 5.90	CA: 5.99
	AZ: 5.18%	AZ: 5.36	AZ: 5.98	AZ: 5.69	PA: 5.51	PA: 5.86	PA: 5.62	PA: 5.79	NC: 5.47
Originator's cı	redit grades	– Deal Score							
0-19	0.00	0.00	0.00	0.00	0.00	19.33	21.28	21.41	19.85
20-39	0.00	0.00	0.00	0.00	0.00	20.81	21.43	25.40	25.56
40-59(iii)	18.03	18.39	19.02	18.55	11.16	24.07	24.48	17.05	20.05
60-79	42.17	42.43	40.56	41.94	40.37	17.85	15.45	15.21	16.94
80-100	39.79	39.18	40.42	39.51	48.47	17.93	17.37	20.93	17.60

Table 5

#### CRVNA Collateral Comparison(i) (cont.)

	Series								
	2021-P4	2021-P3	2021-P2	2021-P1	2020-P1	2019-4(ii)	2019-3(ii)	2019-2(ii)	2019-1(ii)
S&P Global Ratings' expected CNL (%)	2.50-3.00	2.50-3.00	3.35-3.85	3.35-3.85	3.50-4.00	N/A	N/A	N/A	N/A

(i)All percentages are of the initial gross receivables balance. (ii)Not rated by S&P Global Ratings. (iii)For the 2020 and 2021 series the Deal Score range is 50-59. CRVNA--Carvana Auto Receivables Trust. APR--Annual percentage rate. LTV--Loan-to-value. CNL--Cumulative net loss. N/A--Not applicable.

Additionally, we compared this pool with peers in the prime space (see table 6). CarMax Auto Owner Trust (CarMax) is the closest peer comparison, characterized by directly originating nearly all used vehicles. In our view, this pool is slightly weaker than the most recently proposed CarMax securitization, which has more seasoning and a lower percentage of longer-term loans (including no loans with original terms greater than 72 months), although CRVNA 2021-P4 has a lower percentage of loans with a FICO score less than 600 or no score.

Table 6

Carvana Collateral Comparison With Peers(i)

	oci ico		
_	CRVNA 2021-P4	CarMax2021-4   upsize pool	
Collateral cutoff date	Dec. 12, 2021	Aug. 31, 2021	
Pool size (mil. \$)	1,055.00	1,403.51	
No. of loans	44,569	66,752	
Avg. principal balance (\$)	23,671	21,026	
Weighted avg. APR (%)	8.07	8.32	
Weighted avg. LTV (%)	92.13	89.06	
Weighted avg. original term (mos.)	70.82	66.52	
Weighted avg. remaining term (mos.)	69.57	63.79	
Weighted avg. seasoning (mos.)	1.25	2.73	
Total % with original terms of 61-72 months	81.60	65.64	
Total % with original terms of 73-75 months	12.83	N/A	
Non-zero weighted avg. original FICO score	704	704	
FICO score distribution			
No score (%)	0.53	1.50	
Less than 601 (%)	4.79	10.46	
601-700 (%)	47.17	39.56	
701-800 (%)	36.36	33.93	
801+ (%)	11.16	14.54	
Top five state concentrations (%)			
	TX: 9.18	CA: 18.27	
	CA: 8.67	TX: 11.05	
	CA: 8.67	TX: 1	

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Series

Table 6

#### Carvana Collateral Comparison With Peers(i) (cont.)

	Series		
	CRVNA 2021-P4 CarMax2021-4   upsize poo		
	FL: 7.04	FL: 8.40	
	GA: 5.99	GA: 7.46	
	AZ: 5.18	VA: 5.87	
S&P Global Ratings' expected CNL (%)	2.50-3.00	2.15-2.25	

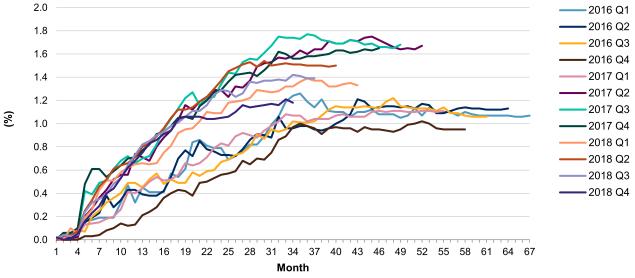
(i)All percentages are of the initial gross receivables balance. CRVNA--Carvana Auto Receivables Trust. CarMax--CarMax auto Owner Trust. APR--Annual percentage rate. LTV--Loan-to-value. CNL--Cumulative net loss. N/A--Not applicable.

## S&P Global Ratings' Expected Loss: 2.50%-3.00%

To derive the expected losses for the series 2021-P4 pool, we relied mostly on the origination static pool data that Carvana provided. Given Carvana's short origination history of approximately eight years and the small size of its quarterly originations in 2012 through 2014, we reviewed a variety of loss timing curves to estimate potential losses on outstanding vintages. Current cumulative net loss performance appears to be around 1.00%-1.75% (see charts 4a and 4b).

Charts 4a

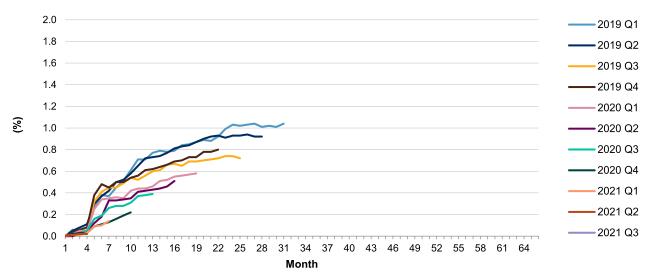
## Origination Cumulative Net Loss Performance | Deal Score of 50+ | 2016-2018



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Charts 4b

#### Origination Cumulative Net Loss Performance | Deal Score of 50+ | 2019-2021



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We analyzed origination static pool data on a net and gross loss basis broken out by Deal Score, FICO, and in aggregate. We projected losses on first-quarter 2017 through second-quarter 2020 outstanding vintages using an extrapolated Carvana curve based on nearly paid-off vintages, a comparable issuer loss curve, and a straight-line approach. These approaches yielded projected CNLs ranging from 1.40% to 4.00%.

Additionally, we reviewed the outstanding series and their forecasted CNLs, and we examined the current performance on the series 2019-1 through 2019-4 blended deals and the series 2020-P1 prime deal. Using a straight-line approach, losses for the blended deals, which have at least 12 months of performance, are currently projecting in the range of 5.75%-7.00%. Given that the blended deals include a substantial portion of loans with a Deal Score of less than 50, we would expect better performance from each of the prime series.

We also compared series 2021-4's pool characteristics with those of peers to determine its relative strengths and weaknesses. In our view, this pool is slightly weaker than recent CarMax securitizations, which have more seasoning and fewer longer-term loans (see Peer Comparison section for more detail).

Based on our analysis of the static pool data, securitization performance, and collateral comparisons, and our forward-looking view of the economy, we expect CRVNA 2021-P4 to experience CNLs of 2.50%-3.00%.

## **Cash Flow Modeling Assumptions And Results**

We modeled the series 2021-P4 transaction to simulate stress scenarios that we believe are appropriate for the assigned preliminary ratings (see table 7). The break-even results show that, after haircutting excess spread by 10.00%, each class is enhanced to the degree necessary to

withstand a stressed net loss level that is consistent with our assigned preliminary ratings.

Cash Flow Assumptions/Results

Table 7

	Class					
	A	В	С	D	N	
Preliminary rating	AAA (sf)	AA (sf)	A (sf)	BBB (sf)	BB+ (sf)	
ABS voluntary prepayments (%)	1.70	1.65	1.60	1.50	1.50	
Recoveries (%)	45	45	45	45	45	
Recovery lag (mos.)	4	4	4	4	4	
Servicing fee (%)(i)	1.03	1.03	1.03	1.03	1.03	
CNL timing (mos.)	12/24/36/48	12/24/36/48	12/24/36/48	12/24/36/48	12/24/36/48	
Front-loaded loss curve	,					
CNL timing input (%)	40/70/90/100	40/70/90/100	40/70/90/100	40/70/90/100	45/80/100	
CNL timing actual (%)	39/70/90/100	39/70/90/100	39/70/90/100	39/70/90/100	44/80/100	
Approximate CNL break-even level (%)(ii)	14.50	11.80	9.32	8.23	5.64	
Back-loaded loss curve						
CNL timing input (%)	35/55/75/90/100	35/55/75/90/100	35/55/75/90/100	35/55/75/90/100	N/A	
CNL timing actual (%)	35/56/77/92/100	34/54/74/90/100	34/54/74/90/100	34/54/74/90/100	N/A	
Approximate CNL break-even level (%)(ii)	14.67	11.94	9.31	6.19	N/A	

(i)Assumes a 1.03% rate for base servicing fee and the backup servicing fee. (ii)The maximum CNLs on the pool that the transaction can withstand without a payment default on the relevant classes of notes given 100% credit to excess spread. Our stressed cashflows assume a 10.00% haircut to excess spread. ABS--Absolute prepayment speed. CNL--Cumulative net loss.

Given the significant concentration in longer-term contracts and relatively little seasoning, we placed greater emphasis on the stressed cash flows with the back-loaded loss curve to stress the transaction's later stages. Results for both loss curve scenarios are consistent with the preliminary ratings assigned.

Additionally, for the class N notes, we ran a more heavily front-loaded curve and a higher level of prepayments in order 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.

## Scenario Analysis

In addition to running break-even cash flows, we conducted a sensitivity analysis to see what impact it would have on our ratings under a moderate ('BBB') stress scenario, all else being equal (see table 8). The multiple coverage levels reflect the transaction's remaining credit support, including excess spread, over the remaining losses.

Table 8

#### Scenario Analysis Summary--Moderate Loss Scenario

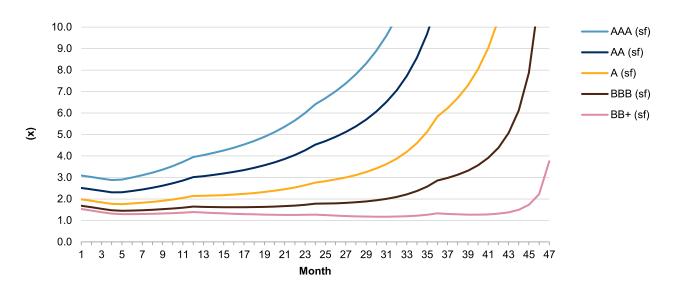
Loss level (multiple)	2.00x base case		
CNL (%)	5.50		
CNL timing (12/24/36/48) (%)(i)	40-30-20-10/35-20-20-15-10		
ABS voluntary prepayments (%)	1.50		
Recoveries (%)	45.00		
Recovery lag (mos.)	4		
Servicing and other fees (%)	1.03 assumed		

(i)For the class N notes, we used a front-loaded loss curve of 45-35-20. CNL--Cumulative net loss. ABS--Absolute prepayment speed.

Our expectation is that under a moderate ('BBB') stress scenario, all else being equal, our ratings will be within the credit stability limits specified by section A.4 of the Appendix contained in S&P Global Ratings Definitions (see "S&P Global Ratings Definitions," published Nov. 10, 2021).

Chart 5

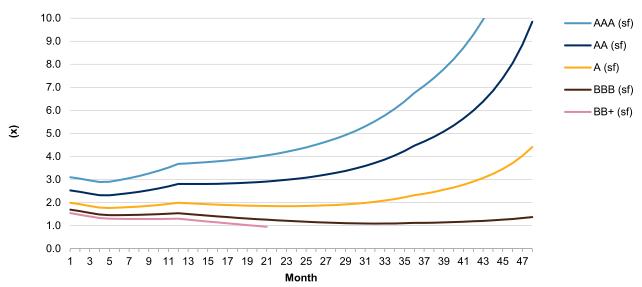
#### 2.00x Cumulative Net Loss--Coverage Multiples (Front-Loaded Loss Curve)



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Chart 6

#### 2.00x Cumulative Net Loss--Coverage Multiples (Back-Loaded Loss Curve)



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## **Money Market Tranche Sizing**

The proposed class A-1 money market tranche has a final maturity date of Jan. 10, 2023. To test whether the money market tranche can be repaid by then, we ran cash flows using assumptions to delay the principal collections. We assumed zero defaults and zero prepayments for our cash flow run, and we checked that approximately 12 months of principal collections would be sufficient to pay off the money market tranche.

## **Legal Final Maturities**

To test the legal final maturity dates, 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. To accommodate for extensions on the receivables, we verified that the legal final maturity date of the longest-dated securities (classes D and N) equaled, at minimum, the tenor of the longest receivable in the pool plus six months. Furthermore, in the break-even scenario for each respective rating level, we confirmed that there was sufficient credit enhancement to cover losses and repay the related notes in full by the respective legal final maturity dates.

## **Potential Effects Of Proposed Criteria Changes**

Our ratings are based on our applicable criteria, including "General Methodology And Assumptions For Rating U.S. Auto Loan Securitizations," published on Jan. 11, 2011. However, these criteria are currently under review (see "Request For Comment: Global Auto ABS Methodology And Assumptions," published on Nov. 30, 2021).

As highlighted in that article, we are soliciting feedback from market participants on proposed changes to our criteria. We will evaluate the market feedback, which may result in further changes to the criteria. As a result of this review, our future Auto ABS criteria may differ from our current criteria. The criteria change may affect the ratings in this transaction. Until such time that we adopt new criteria, we will continue to rate and surveil these notes using our existing criteria (see the Related Criteria list below).

#### **Related Criteria**

- 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 | ABS: General Methodology And Assumptions For Rating U.S. Auto Loan Securitizations, Jan. 11, 2011
- Criteria | Structured Finance | General: Methodology For Servicer Risk Assessment, May 28, 2009

#### Related Research

- Credit Conditions North America: As Recovery Rolls On, Inflation Risks Remain, Dec. 1, 2021
- Request For Comment: Global Auto ABS Methodology And Assumptions, Nov. 30, 2021
- Economic Outlook U.S. Q1 2022: Cruising At A Lower Altitude, Nov. 29, 2021
- Extension Rates In Public Auto Loan ABS Have Returned To Pre-Pandemic Levels, Nov. 19, 2021
- U.S. Auto Loan ABS Tracker: September 2021 Performance, Nov. 18, 2021
- Carvana Co.'s Proposed \$750 Million Senior Unsecured Notes Due 2029 Rated 'CCC+' (Recovery Rating: '4'), Aug. 12, 2021
- Carvana Co. Outlook Revised To Positive From Stable On Improved Liquidity And Margins; 'CCC+' Rating Affirmed, May 18, 2021

#### Presale: Carvana Auto Receivables Trust 2021-P4

- Carvana Co.'s Proposed \$500 Million Senior Unsecured Notes Due 2027 Rated 'CCC+' (Recovery Rating: '4'), March 25, 2021
- Carvana Co.'s Proposed \$1 Billion Senior Unsecured Notes Rated 'CCC+' (Recovery Rating '4'), Sept. 22, 2020
- Carvana Co., May 19, 2020



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