S&P Global
Ratings

Research

Presale:

PenFed Auto Receivables Owner Trust 2022-A

August 15, 2022

Preliminary Ratings

Class	Preliminary rating	Type	Interest rate	Preliminary amount (mil. $)	Legal final maturity date
A-1	A-1+ (sf)	Senior	Fixed	139.00	Sept. 15, 2023
A-2	AAA (sf)	Senior	Fixed	130.00	Dec. 16, 2024
A-3	AAA (sf)	Senior	Fixed	130.00	April 15, 2025
A-4	AAA (sf)	Senior	Fixed	52.55	Dec. 15, 2028
B	AA (sf)	Subordinate	Fixed	10.91	Dec. 15, 2028
C	A (sf)	Subordinate	Fixed	12.85	Dec. 15, 2028
D	BBB (sf)	Subordinate	Fixed	9.21	June 17, 2030

Note: This presale report is based on information as of Aug. 15, 2022. The ratings shown are preliminary. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings. Accordingly, the preliminary ratings should not be construed as evidence of final ratings. This report does not constitute a recommendation to buy, hold, or sell securities.

Profile

Expected closing date	Aug. 29, 2022.
Collateral	Prime auto loan receivables.
Issuer	PenFed Auto Receivables Owner Trust 2022-A.
Sponsor, originator, seller, servicer, and administrator	Pentagon Federal Credit Union.
Depositor	PenFed Auto Receivables Funding LLC.
Indenture trustee	U.S. Bank Trust Co. N.A. (AA-/Negative/A-1+).
Owner trustee	Wilmington Trust N.A. (A-/Negative/A-2).
Lead Underwriter	J.P. Morgan Securities LLC

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Credit Enhancement Summary (%)(i)

	PAROT 2022-A		
	Initial	Target	Floor
Class A			
Subordination	6.80	6.80	6.80
Reserve account	0.50	0.50	0.50
Overcollateralization	0.10	1.30	1.30
Total	7.40	8.60	8.60
Class B			
Subordination	4.55	4.55	4.55
Reserve account	0.50	0.50	0.50
Overcollateralization	0.10	1.30	1.30
Total	5.15	6.35	6.35
Class C			
Subordination	1.90	1.90	1.90
Reserve account	0.50	0.50	0.50
Overcollateralization	0.10	1.30	1.30
Total	2.50	3.70	3.70
Class D			
Subordination	0.00	0.00	0.00
Reserve account	0.50	0.50	0.50
Overcollateralization	0.10	1.30	1.30
Total	0.60	1.80	3.50
Estimated annual excess spread(ii)	1.61	N/A	N/A
YSOA (% of aggregate pool)	6.70	N/A	N/A
YSOA discount rate (%)	7.50	N/A	N/A
Initial aggregate receivables balance ($)	519,815,802	N/A	N/A
Initial YSOA	34,817,742	N/A	N/A
Initial adjusted receivables balance ($)	484,998,061	N/A	N/A

(i)Percentage of the initial aggregate pool balance. (ii)Estimated annual excess spread including YSOA and before note pricing. The estimates include the 1.00% servicing fee. PAROT--PenFed Auto Receivables Owner Trust. N/A--Not applicable. YSOA--Yield supplement overcollateralization amount.

Rationale

The preliminary ratings assigned to PenFed Auto Receivables Owner Trust 2022-A's (PAROT 2022-A) asset-backed notes reflect our view of:

- The availability of approximately 9.74%, 7.59%, 5.18%, and 3.67% credit support (including 90% credit to excess spread) for the class A, B, C, and D notes, respectively, based on our stressed cash flow scenarios. These credit support levels provide coverage of at least 5.0x, 4.0x, 3.0x, and 2.0x of our expected cumulative net loss (CNL) of 1.40%-1.60% for the class A, B, C, and D notes, respectively (see the Cash Flow Modeling Assumptions And Results section below for more details).

- Our expectation that under a moderate ('BBB') stress scenario (2.0x our expected loss level), all else being equal, our preliminary 'A-1+ (sf)' and 'AAA (sf)', 'AA (sf)', 'A (sf)', and 'BBB (sf)' ratings on the class A, B, C, and D notes, respectively, are consistent with the credit stability limits specified by section A.4 of the Appendix contained in "S&P Global Ratings Definitions," published Nov. 10, 2021.
- The timely interest and principal payments made under stressed cash flow modeling scenarios consistent with the assigned preliminary ratings.
- The credit enhancement in the form of a nondeclining reserve account and overcollateralization, yield supplement overcollateralization amount (YSOA), subordination for the more senior notes, and excess spread (see the Credit Enhancement Summary table above for details).
- The credit quality of the underlying pool, which consists of direct, prime automobile loans that have a weighted average non-zero FICO score of 770 and a minimum non-zero FICO score of 610 as of the cutoff date (see the Pool Analysis section below for more information).
- The pool's composition and credit quality, loss projections based on our review of Pentagon Federal Credit Union's (PenFed or the credit union) origination static pool data, the pool origination characteristics, a peer comparison of the collateral and origination static pool data, the performance of PenFed's managed portfolio, and our forward-looking view of the U.S. economy.
- PenFed's servicing experience, and its loan origination, underwriting, collections, and operational profile.
- The transaction's payment and legal structures, and cash flow mechanics.

Environmental, Social, And Governance (ESG)

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. We generally view environmental credit factors as above average because the collateral pool primarily consists of vehicles with internal combustion engines (ICEs), which emit pollutants that contribute to climate transition risk. Although the adoption of electric vehicles and future regulation could lower ICE vehicle values over time, we believe our current approach to evaluating recovery values adequately account for vehicle values over the transaction's relatively short, expected life. As a result, we did not identify this as a separate material ESG credit factor in our analysis.

Key Rating Considerations

Based on our review of PenFed's operations and performance history, and the securitized pool characteristics, we considered the following strengths in rating this transaction:

- PenFed, as a federal credit union (FCU), is regulated, insured, and supervised by the National Credit Union Administration (NCUA), which establishes, along with other regulations, capital and liquidity rules that PenFed must follow.

- PenFed has decades of experience providing diversified personal and business banking products and services, including savings, checking, credit cards, mortgage, merchant services, insurance, investment, and student and auto loans.
- As of Dec. 31, 2021, PenFed serves more than 2.6 million members worldwide, with approximately $33 billion in assets.
- The strong origination characteristics and managed portfolio performance of PenFed's direct auto loan program.
- The statistical collateral pool's weighted average nonzero FICO score of 770 June 30, 2022.

PenFed

PenFed is regulated by FCU and insured by the NCUA. The credit union is headquartered in Mclean, Va. and was established in 1935 as a credit union for military and civilian government employees and their families. Although membership was initially limited to those groups, PenFed now has an open membership charter, and it has expanded its geographic footprint and membership base through numerous acquisitions. The credit union now serves over 2.6 million members, with members in all 50 states and the District of Columbia, as well as in Guam, Puerto Rico, and Okinawa. It offers personal financial service and other secured products (including share deposits, mortgage loans, credit cards, vehicle loans), as well as unsecured loans.

Origination

PenFed provides direct financing for auto loans through applications accepted via internet or mobile access, phone, and in-branch channels. The credit union also provides indirect financing via its partnership with a network of auto dealers and financial technology companies.

PenFed's direct auto portfolio is geographically diverse with Puerto Rico representing the largest geographic concentration, at approximately 28%, and no other state accounting for more than 10% of direct loans. Loans originated in Puerto Rico are excluded from the PAROT 2022-A pool.

PenFed's indirect portfolio has also grown significantly since 2019.

The credit union industry is fairly acquisitive, and PenFed has acquired several smaller or underperforming credit unions. Through numerous mergers, PenFed has expanded its geographic footprint and grown its membership base to 2.6 million members as of Dec. 31, 2021.

The receivables included in the PAROT 2022-A securitization are direct originations that were originated in either electronic format or view paper contract. All indirect, acquisition, and Puerto Rico loans are excluded from the PAROT 2022-A pool.

Underwriting

PenFed has policies and procedures in place to regulate the various aspects of its underwriting and credit decision process. The credit union's underwriting approach is intended to gauge the applicant's ability to repay the loan amount and determine if the financed vehicle is adequate collateral for the loan.

Loan applications are first screened via PenFed's automated decisioning model, which reviews the applications and the applicants' credit scores to determine if PenFed's underwriting guidelines and credit scoring process are met, respectively. Applicants who meet PenFed's criteria are automatically approved. PenFed's underwriting team reviews all applications that are flagged for review by the automated decisioning model. The underwriting team has three levels of lending authorities: junior underwriters, senior underwriters, and high-risk underwriters. Applications are assigned to an underwriting level, based on risk and complexity. The loan committee reviews applications that require a policy exception approval.

All loans are required to have physical damage insurance for the financed vehicle. PenFed uses a third-party vendor to monitor for required insurance. If a loan fails to show continuing proof of adequate insurance coverage, PenFed will purchase physical damage insurance and charge the obligor the cost of the insurance.

Servicing and collections

PenFed, as the servicer, will be responsible for managing, administering, servicing, tracking performance, and making collections and remittances on the receivables. PenFed has over 40 years of experience servicing and collecting on its originated auto loans.

The credit union uses targeted and efficient collection efforts to remediate the delinquent account. PenFed's early-stage collection efforts focus on obligors self-curing delinquent accounts. When a scheduled payment is not made in full, PenFed initiates telephone, text, and email contact with the member. For accounts that are 21-50 days past due, PenFed works with two third-party vendors to cure the delinquent accounts. The credit union began working with third-party vendors in early 2020 and continued throughout the COVID-19 pandemic. Loans that are 51 days or more delinquent are assigned to a PenFed collector.

PenFed has integrated automation into its collection procedures to improve efficiencies and collect on delinquent accounts. These include automated delinquency notices by email and text message, and automatic account sweeps (when a loan is 16 days delinquent, unprotected available funds in the delinquent members deposit accounts are automatically applied to delinquent accounts).

Obligors may make payments using various methods, including automatic clearing house (ACH) debit, coupon payment books, branch payments, and a wire transfer.

Repossessions and charge-offs

PenFed's repossession review generally begins after a contract is 90 days delinquent. However, PenFed may repossess a vehicle before 90 days past due if the loan is deemed uncollectible. PenFed will consider a loan uncollectible if it determines that the financed vehicle is in danger of being damaged, destroyed, seized, impounded, or subjected to mechanic's lien; or if the obligor voluntarily surrenders the vehicle.

PenFed's policy for the receivables in PAROT 2022-A is to charge-off a loan as soon it determines the vehicle cannot be recovered and to recognize the loss no later than at the end of the collection period in which the loan becomes 120 days contractually delinquent. For a defaulted loan, it takes seven to eight months, on average, from the time a scheduled payment is missed, for PenFed to receive the recovery proceeds after repossession and auction.

Loan modifications and extensions

PenFed offers 30-day payment extensions to address short-term delinquency issues, and it allows members with qualifying loans to skip one monthly payment once each calendar year. Qualifying members must be current and have a loan established for 90 days.

PenFed also offers hardship payment deferments, where qualified members may receive up to six 30-day extensions. To qualify, the member must provide supporting documents, such as verification of unemployment, last two paystubs, last two years of income tax returns, most recent profit and loss statement, divorce decree, rental agreement, or any other documents that support the hardship request.

Transaction Overview

PAROT 2022-A is PenFed inaugural prime retail auto loan ABS transaction. The notes will be backed by a pool of fixed-rate retail installment sales contracts used to finance new and used automobiles, sport utility vehicles, light duty trucks, and vans purchased by prime borrowers.

PenFed has been originating direct prime auto loans for approximately 40 years, and it introduced risk-based pricing in 2015. The origination characteristics for PenFed's direct portfolio (excluding Puerto Rico) has weakened slightly over the past six years. However, the characteristics are still favorable and are somewhat consistent with the characteristics of the PAROT 2022-A pool.

The PAROT 2022-A collateral will only include obligors with FICO scores of at least 610. The actual collateral pool has a weighted average FICO score of 770, a weighted average original term of 66 months, and a weighted average loan-to-value (LTV) ratio of 87%.

The trust will issue five classes of fixed-rate notes with interest and principal scheduled to be paid on the 15th day of each month (or the next business day), beginning Sept. 15, 2022.

PAROT 2022-A incorporates the following structural features:

- A sequential-pay mechanism among the notes that will result in increased credit enhancement for the senior notes as the pool amortizes;
- Initial overcollateralization of 0.10% that will build to a target of 1.30% of the initial adjusted pool balance, which is also the overcollateralization floor;
- A nonamortizing reserve fund that will equal 0.50% of the initial pool balance;
- A YSOA that initially will be 6.70% of the adjusted pool balance and recalculated each month as the pool amortizes, based on the difference between the aggregate receivables balance outstanding and the present value of the receivable balance, discounted at 7.50% per year. The YSOA is sized so that the yield on the contracts with APRs below the YSOA-required rate, 7.50%, is raised to the required rate; and
- Excess spread, to the extent available after covering net losses, to pay principal on the outstanding notes to build to and maintain overcollateralization at the target and floor of 1.30% of the initial adjusted pool balance.

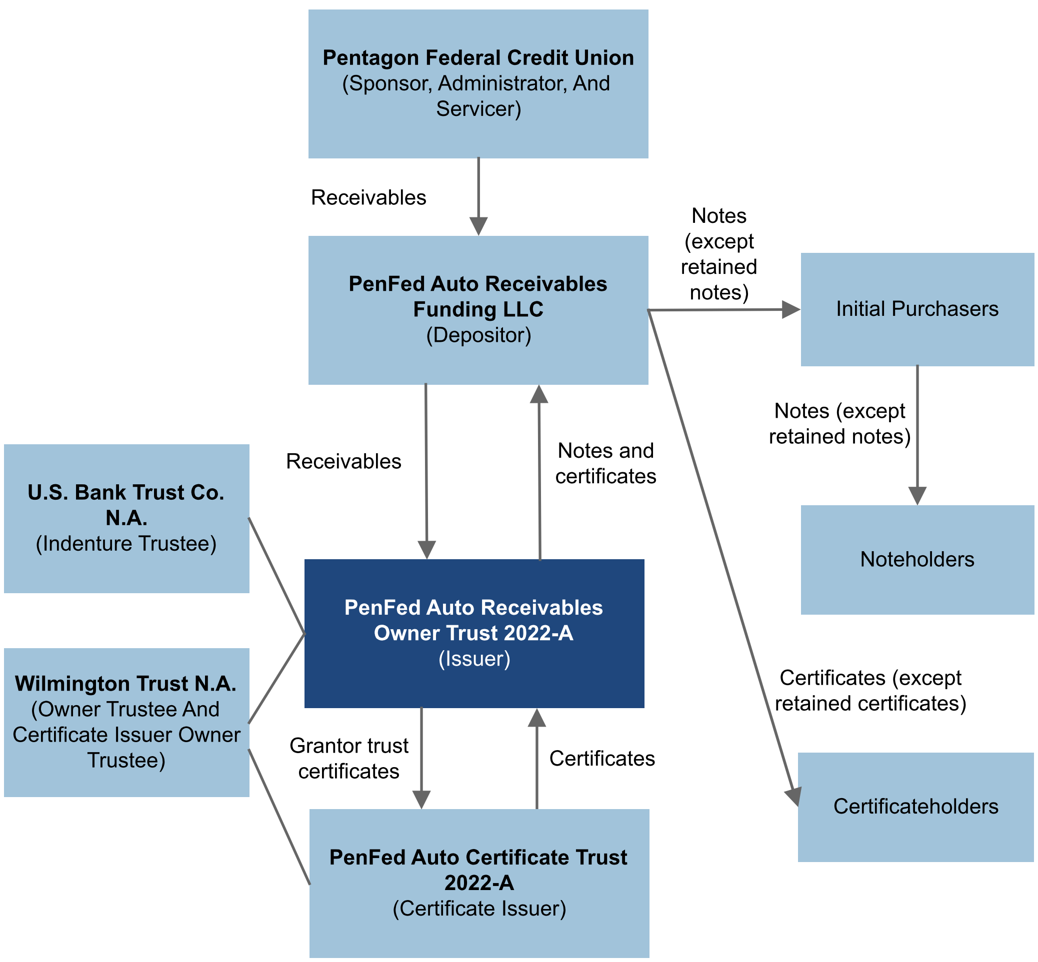
Transaction Structure

The transaction is structured such that PenFed (the sponsor, originator, servicer, and administrator) will sell and assign its entire interest in the receivables, including its security interest, in the related financed vehicles, to PenFed Auto Receivables Funding LLC (the depositor), without recourse. The depositor will then sell its interest in the receivables to PAROT 2022-A (the issuer). PAROT 2022-A will then issue the notes and the grantor trust certificate, and the certificate issuer will execute and deliver the certificates. The issuing entity will pledge its interest to the indenture trustee on the noteholders' behalf.

Chart 1 shows the transaction structure.

Chart 1

Transaction Structure



In rating this transaction, S&P Global Ratings will review the relevant legal matters outlined in its criteria.

Payment Structure

Distributions will be made from available collections according to the payment priority shown in table 1.

Table 1

Payment Waterfall

Priority	Payment
1	To the indenture trustee, owner trustee, and the certificate issuer owner trustee (if any), any accrued and unpaid fees, expenses, and indemnification amounts, capped at $200,000 annually.
2	Servicing fee of 1.00% per year.
3	Class A note interest to the class A noteholders, pro rata.
4	First principal allocation (if any) sequentially to the class A noteholders if the class A notes' outstanding amount exceeds the pool balance.
5	Class B note interest to the class B noteholders.
6	Second principal allocation (if any) sequentially to the class A and B noteholders if the class A and B notes' outstanding amount exceeds the pool balance.
7	Class C note interest to the class C noteholders.
8	Third principal allocation (if any) sequentially to the class A, B, and C noteholders if the class A, B, and C notes' outstanding amount exceeds the pool balance.
9	Class D note interest to the class D noteholders.
10	Fourth principal allocation (if any) sequentially to the class A, B, C, and D noteholders if the class A, B, C, and D notes' outstanding amount exceeds the pool balance.
11	To the reserve account, any additional amounts required to increase the amount on deposit in the reserve account to its specified reserve account balance.
12	Principal sequentially to achieve the specified overcollateralization amount (the regular allocation of principal).
13	To the owner trustee, indenture trustee, and certificate issuer owner trustee, any fees and expenses not previously paid.
14	To the servicer, any expenses and costs incurred; and to any successor servicer, any costs and expenses related to the servicer transition.
15	To hired agencies, any upfront and ongoing rating modeling fees incurred.
16	To the certificate distribution account for distribution.

Events of default

The following events will result in an event of default under the indenture:

- An interest payment default on any controlling class of notes that continues for five or more business days.
- A principal payment default on any note on its final scheduled payment date or redemption date.
- The issuer fails to observe or perform any of its covenants or agreements.
- A breach of any issuer representation or warranty that has a material adverse effect on the noteholders and continues unremedied for 60 days after notice.

- An issuer experiences insolvency event.

Payment distribution after an event of default

The payment priorities will change following an event of default. On each payment date after the notes have been accelerated following an event of default, the indenture trustee will distribute the available funds according to the payment priority shown in table 2.

Table 2

Payment Waterfall Following An Event of Default

Priority	Payment
1	To the owner trustee, indenture trustee, and certificate issuer owner trustee, any fees, expenses, and indemnification amounts (uncapped), pro rata.
2	To the servicer, the servicing fee and all unpaid servicing fees related to prior collection periods.
3	Class A interest, pro rata.
4	Class A-1 principal until paid in full.
5	Class A-2, A-3, and A-4 principal, pro rata, until paid in full.
6	Class B note interest.
7	Class B note principal until paid in full.
8	Class C note interest.
9	Class C note principal until paid in full.
10	Class D note interest.
11	Class D note principal until paid in full.
12	To the servicer, any legal expenses and costs.
13	Any remaining funds to the grantor trust certificateholder.

Servicer default

The following events will result in a servicer default:

- The servicer fails to deliver any required payment to the indenture trustee for deposit into the collection account or the reserve account, and it remains remedied for five business days.
- The servicer fails to observe or perform any covenants or agreements, and the failure materially and adversely affects the rights of the noteholders or certificateholders, and it continues unremedied for 90 days.
- A representation or warranty of the servicer proves to be incorrect, and the failure materially and adversely affects the rights of the issuer or the noteholders, and it continues unremedied for 90 days.
- The servicer experiences an insolvency event.

Managed Portfolio

PenFed is the receivables' originator, sponsor, and servicer. As of June 30, 2022, PenFed's direct serviced portfolio of auto receivables (excluding Puerto Rico) totaled approximately $2.361 billion, a 35.36% increase year over year from approximately $1.744 billion as of June. 30, 2021 (see table 3). Total 30-plus-day delinquencies decreased to 0.86% as of June 30, 2022, from 0.57% a year earlier, while annualized net charge-offs (as a percentage of average principal balance outstanding) decreased to 0.11% from 0.25%.

Table 3

PenFed's Managed Portfolio

	As of June 30		As of Dec. 31				
	2022	2021	2021	2020	2019	2018	2017
Outstanding receivables principal balance ($000s)	2,360,676	1,743,941	1,995,753	1,615,705	1,579,812	1,578,548	1,634,743
Delinquencies (% of outstanding balance)							
30-59 days	0.40	0.21	0.32	0.28	0.34	0.33	0.37
60-119 days	0.17	0.10	0.08	0.09	0.10	0.14	0.12
120-359+ days	0.25	0.23	0.21	0.21	0.35	0.43	0.44
Total 30+ days	0.54	0.81	0.61	0.58	0.79	0.90	0.93
Net charge-offs (% of the period end receivables outstanding principal amount)	0.11	0.25	0.22	0.39	0.53	0.71	0.52

PenFed's direct originations (excluding Puerto Rico) have generally shown a slight weakening in credit quality, with lower weighted average FICO scores and a gradual increase in the weighted average original term (see table 4). In addition, the end-of-year LTV ratios for PenFed's managed portfolio of direct loans have gradually increased since 2017.

Still, despite these trends, PenFed's direct origination characteristics are still favorable, with a weighted average FICO score of 760 and a weighted average original term of 63 months as of April 30, 2022.

Table 4

PenFed Origination Characteristics For Direct Loans

	As of April 30	As of Dec. 31				
	2022	2021	2020	2019	2018	2017
Aggregate original principal balance (mil. $)	1,082.57	1,521.49	1,013.47	987.83	1,018.37	1,265.07
WA original term (mos.)	64	62	60	59	58	57
WA APR (%)	3.60	3.34	3.88	3.91	3.62	2.88
WA FICO score	762	776	776	783	782	786
Loans secured by new vehicles (%)	40	44	44	47	50	49
WA LTV ratios (%)	91	87	86	87	87	90

WA--Weighted average. APR--Annual percentage rate. LTV--Loan to value.

PenFed's origination vintage CNL performance for 2017 shows losses trending higher overall compared to the more recent vintages (see charts 2 and 3). We believe the 2018 and later vintages' improved performance reflects the tighter underwriting standards PenFed rolled out at the end of 2017, and the benefits borrowers received from COVID-19-related federal stimulus and expanded extension offerings.

Chart 2

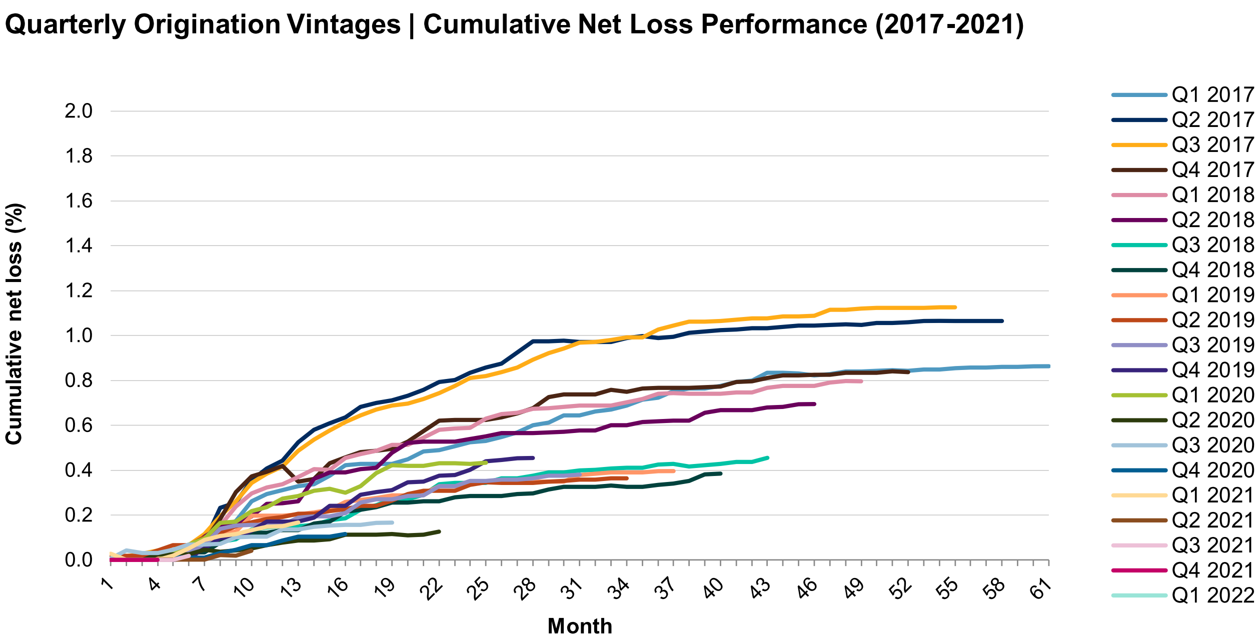
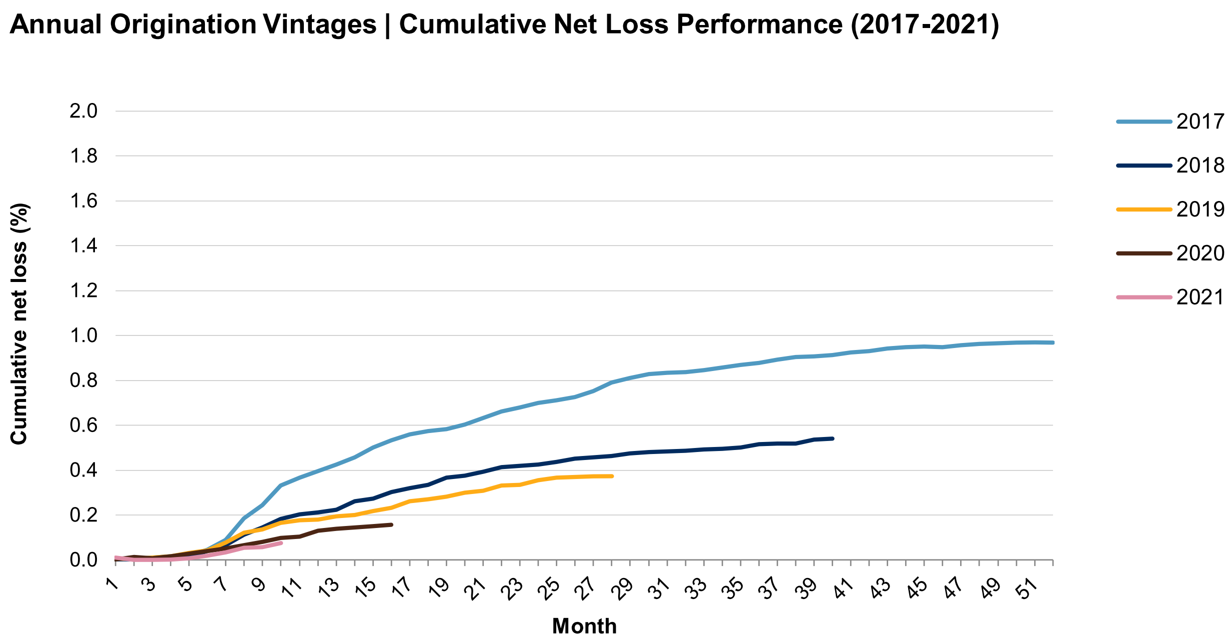


Chart 3



Pool Analysis And Peer Comparison

As of the June 30, 2022, cutoff date, the PAROT 2022-A statistical pool totaled $519.81 million, with a weighted average FICO score of 770, a minimum nonzero FICO score cutoff of 610, and a weighted average LTV ratio of approximately 86.89%. The pool has approximately 18 months of weighted average seasoning as of the cutoff date, and loans with terms greater than 72 months accounted for approximately 9.20% of the pool.

We compared PAROT 2022-A's statistical pool with PenFed's peers in the prime auto loan sector. We believe that the Ally Auto Receivables Trust 2022-1 (AART 2022-1) and Unify Auto Receivables Trust 2021-1 (UART 2021-1) transactions have somewhat comparable characteristics (see table 5). PAROT 2022-A exhibits the highest weighted average FICO score of the three transactions.

Loans with 73-84-month terms represent approximately 9.20% of the PAROT 2022-A pool, compared with 10.00% for AART 2022-1 and 88.03% for UART 2021-1. However, although the PAROT 2022-A pool has the lowest percentage of 73-84-month term loans, there appears to be some risk layering because the weighted average FICO score and weighted average LTV ratio distributions for this segment are less favorable than those of the overall pool.

PAROT 2022-A is geographically diverse, with the largest concentration in Texas (approximately 10%), compared with UART 2022-1, which has a high concentration in Nevada (approximately 33%).

Overall, we believe the PAROT 2022-A pool characteristics are more favorable than those of the UART 2021-1 pool, and they are similar to, if not slightly more favorable than, the AART 2022-1 pool (see table 5). The higher expected CNL for PAROT 2022-A when compared to AART 2022-1 primarily reflects PenFed's limited historical performance data compared to Ally Bank's extensive managed portfolio and securitization performance data.

Table 5

Collateral Comparison

	PAROT 2022-A	AART 2022-1	UART 2021-1
Receivable balance (mil. $)	519.82	1,084.57	302.93
No. of receivables	26,692	59,861	11,204
Avg. loan balance outstanding ($)	19,475	18,118	35,952
WA APR (%)	3.86	6.56	4.99
WA original term (mos.)	66	70	82
WA remaining term (mos.)	48	55	64
WA seasoning (mos.)	18	15	18
WA FICO score	770	725	748
% of pool with original term more than 60 mos.	53.30	78.18	97.98
% of pool with original term more than 75 mos.	9.19	10.00	84.58
WA LTV ratio(i)	86.89	93.30	108.46
New vehicles (%)	44.1	50.18	55.0
Used vehicles (%)	55.9	49.82	45.0
Top three state concentrations (%)	TX=10.15	TX=12.55	NV=32.59
	CA=9.94	CA-9.46	KS=14.96
	FL=9.56	FL=9.40	CA=14.93
Initial expected CNL(ii)	1.40-1.60	1.05-1.15	2.75-3.00

(i)PAROT 2022-A and UART 2021-1 define the LTV ratio for new vehicle as the amount financed divided by the manufacturer's suggested retail price. For used vehicles, UART 2021-1 defines the LTV ratio as the amount financed divided by National Automobile Dealers Assn. or Kelley Blue Book value, while AART 2022-1 defines it as the ratio of the amount financed to the dealer invoice cost for new vehicles and the amount financed over values received from the dealer, validated based on market guides. (ii)All percentages are of the initial receivables balance. AART--Ally Auto Receivables Trust. UART--Unify Auto Receivables Trust. WA--Weighted average. APR--Annual percentage rate. LTV--Loan-to-value ratio. CNL--Cumulative net loss.

S&P Global Ratings' Expected Loss: 1.40%-1.60%

To derive the base-case loss for the transaction, we analyzed quarterly origination static pool data in aggregate, and segmented into various credit tiers (FICO score band, term, LTV, new and used, purchased and refinanced), consistent with this pool of receivables. We used PenFed's 2017 loss curve to develop expected net loss projections for each outstanding tier and cohort.

We also noted that the static pool performance since March 2020 likely benefited from the federal stimulus and unprecedented extension offers related to the COVID-19 pandemic, and loss performance could have been somewhat muted during that time. As a result, we also ran our projections with a peer historical loss curve. We believe PenFed's 2017 vintage performance would have been negatively affected by the pandemic and thus analyze the projections using a loss curve that had less exposure to pandemic-related stimulus. Similarly, we ran the loss projections stripping out performance months that were affected by the pandemic. Our loss projections for the data as of February 2020 were higher than those that included the most recent performance months.

Our expected loss analysis also factored in the limitation on the historical performance data. We only reviewed historical performance dating back to 2017 and believe these vintages are likely skewed by the pandemic. Without reviewing a historical vintage that paid off before the pandemic, it is difficult to determine how the portfolio would perform in an environment without the benefit of government stimulus and assistance, or even in a stressed economic environment. In addition, PenFed has made some changes to its underwriting standards in recent years, and the historical performance data provided do not show whether those changes have impacted performance.

Based on our review of the issuer's origination static pool data and the composition of the PAROT 2022-A pool, a peer comparison of the collateral pool, and static pool data, the performance of PenFed's managed portfolio data, and our forward-looking view of the economy, we expect the PAROT 2022-A transaction to experience CNL in the 1.40%-1.60% range.

Cash Flow Modeling Assumptions And Results

Our cash flow modeling tests the availability and timing of excess spread, which can be affected by many factors, such as the absolute level and timing of defaults, the speed of prepayments, timing lags in payments, and the collateral term. We modeled the transaction to simulate stress scenarios commensurate with the preliminary 'A-1+ (sf)', 'AAA (sf)', 'AA (sf)', 'A (sf)', and 'BBB (sf)' ratings.

In our modeling approach, under a single-pool method, we used the assumptions outlined in table 7. The front- and back-loaded loss curve scenarios test the transaction structure.

We also applied a supplemental bifurcated-pool method, in which the underwater receivables or low-annual percentage rate (APR) loans prepay at a much slower rate than the above-water receivables (for cash flow purposes, we define underwater receivables as those with APRs of 5.90% or lower). By running low prepayments (0.25%) on the lower-APR receivables (which cause these loans to amortize slower over time) and higher prepayments (1.50%) on the higher-APR receivables, the cash flows stressed the pool's yield and excess spread. In addition, we applied a slower and faster curve for the under- and above-water receivables, respectively, which, increases the likelihood that the YSOA will be used for yield enhancement, rather than credit enhancement.

In a stressed scenario, liquidity risk could arise because of interest shortfalls if the yield on the assets is lower than the yield on the bonds (negative carry)--especially because the bonds pay sequentially, leading to higher-coupon debt outstanding at the tail end of the transaction. Increasing the use of the YSOA for liquidity decreases the amount of the YSOA available to cover credit losses, thus lowering break-even levels.

Under this supplemental bifurcated-pool method, the credit support fell by approximately 30-45 basis points across all classes, relative to the break-even for the single-pool method shown in table 7. However, under both the single-pool and the supplemental bifurcated-pool methods, the break-even net loss results show that the available credit support for the notes provide coverage appropriate for the assigned preliminary ratings.

Table 7

Cash Flow Assumptions And Results

	Class			
	A	B	C	D
Scenario (preliminary rating)	AAA (sf)	AA (sf)	A (sf)	BBB (sf)

Table 7

Cash Flow Assumptions And Results (cont.)

	Class			
	A	B	C	D
Cumulative loss timing by months (12/24/36/48/60) (%)				
Front-loaded loss curve	40/80/95/5	40/80/95/5	40/80/95/5	40/80/95/5
Back-loaded loss curve	25/65/85/95/5	25/65/85/95/5	25/65/85/95/5	25/65/85/95/5
Voluntary ABS (%)	1.50	1.50	1.50	1.50
Recoveries (%)	50	50	50	50
Servicing fee (%)	1.00	1.00	1.00	1.00
Approximate break-even net loss levels (%)(i)				
Front-loaded loss curve	9.87	7.64	5.18	3.69
Back-loaded loss curve	9.74	7.59	5.18	3.67

(i)The maximum cumulative net losses on the pool, with 90% credit to excess spread, that the transaction can withstand without triggering a payment default on the relevant class of notes.

Sensitivity Analysis

In addition to running break-even cash flows, we ran sensitivity scenarios to see how the ratings on the notes could be affected by losses that are moderately higher than what we currently expect. For these sensitivity scenarios, we also applied both front- and back-loaded loss curves under a single pool method (see table 8 and chart 4).

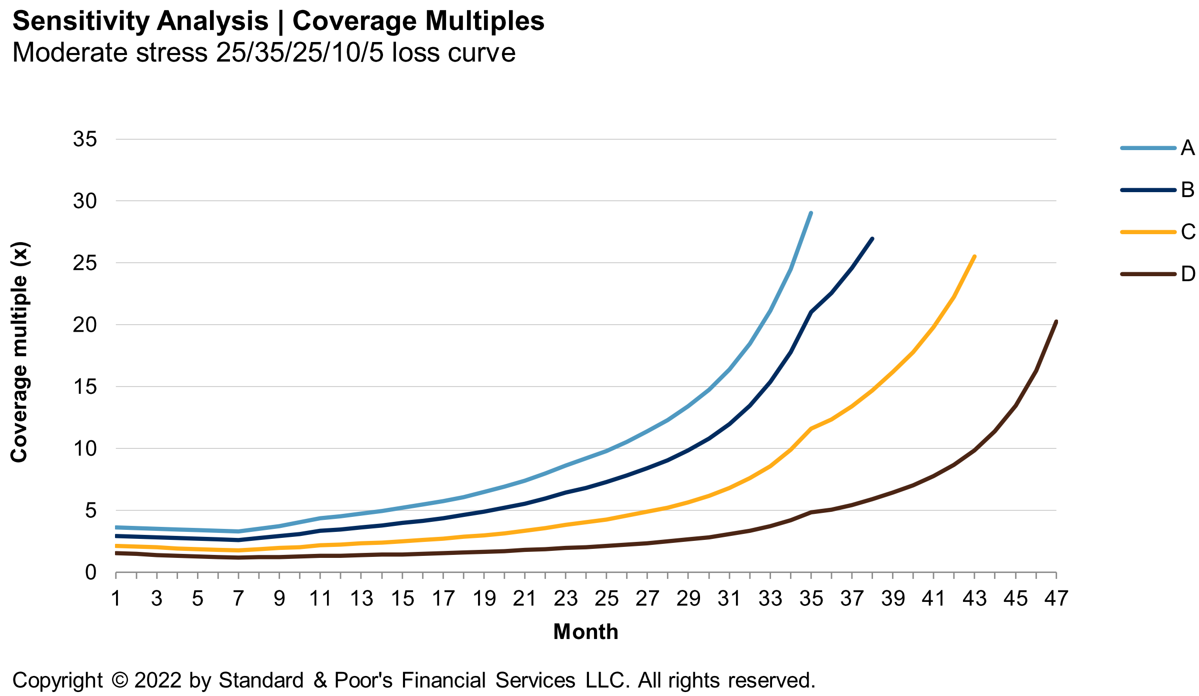
Table 8

Sensitivity Analysis Summary--Moderate (BBB) Loss Scenario

Cumulative net loss level (%)	3.00
Cumulative loss timing by months outstanding (12/24/36/48/60) (%)	40/80/95/5
Cumulative loss timing by months outstanding (12/24/36/48/60) (%)	25/65/85/95/5
Voluntary ABS (%)	1.50
Recovery rate (%)	50.00
Servicing fee (%)	1.00
Credit to excess spread (%)	90

ABS--Absolute prepayment speed.

Chart 4



We also applied a supplemental bifurcated-pool method to our sensitivity scenarios that resulted in slightly lower coverage multiples than those shown above under the back-loaded loss curve single pool method.

Under the 2.0x moderate stress scenario, all else being equal, for both the single and bifurcated-pool methods, our preliminary 'A-1+ (sf)' and 'AAA (sf)', 'AA (sf)', 'A (sf)', and 'BBB (sf)' ratings on the class A, B, C, and D notes, respectively, are consistent with the tolerances outlined in our credit stability criteria (see "S&P Global Ratings Definitions," published Nov. 10, 2021).

Money Market Tranche

The proposed money market tranche (class A-1) has a legal final maturity date of Sept. 15, 2023. To test whether the money market tranche can be repaid by then, we ran cash flows using assumptions to delay the principal collections, and assumed zero defaults and a 0.25% absolute prepayment speed under the single pool method. In addition, as a supplemental test under the bifurcated pool method, we ran zero defaults and a 0.00% absolute prepayment speed for the underwater receivables, and a 0.25% absolute prepayment speed for the remaining receivables. Under both methods, the results show that less than 11 months of principal collections would be sufficient to pay off the money market tranche.

Legal Final Maturity

To test the legal final maturity dates for the mezzanine tranches (classes A-2 through C), we determined the date on which the respective notes would fully amortize in a zero-loss, zero-prepayment scenario, then added three months to the result. For the longest-dated security (class D), we added 13 months to the tenor of the longest receivable in the pool to accommodate the maximum months of extensions on the receivables. In the break-even scenario for each rating level, we also confirmed that there was sufficient credit enhancement to cover losses and repay the related notes in full by their legal final maturity date.

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. Business Cycle Barometer: The Party's Over, July 27, 2022
- The American Dream May No Longer Be In Reach, July 20, 2022
- U.S. Auto Loan ABS Tracker: May 2022 Performance, July 13, 2022
- Financial Fragility of U.S. Households and Businesses: On the Rise While Still Below Its Historical Average, July 11, 2022
- Credit Conditions North America Q3 2022: Credit Headwinds Turn Stormy, June 28, 2022
- Economic Outlook U.S. Q3 2022: The Summer Of Our Discontent, June 27, 2022