

Presale:

GBX Leasing 2022-1 LLC (Series 2023-1)

November 2, 2023

Preliminary ratings

Class	Preliminary rating	Preliminary amount (mil. \$)
A	AA (sf)	158.90
B	A (sf)	19.60

Note: This presale report is based on information as of Nov. 2, 2023. 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. NR--Not rated. N/A--Not applicable.

Profile

Expected closing date	Nov. 20, 2023.
Expected maturity	November 2030.
Legal final maturity date	November 2053.
Optional redemption	Subject to certain restrictions, the class A and B notes may be redeemed in full beginning on the May 2026 payment date at a price equal to the outstanding principal balance, together with accrued and unpaid interest thereon. The class B notes may not be redeemed while the class A notes are outstanding unless they are redeemed concurrently.
Collateral	A \$661,176,527 portfolio (the appraised value as of Oct. 1, 2023) containing 6,399 railcars. The issuer has the right to lease revenues from the portfolio and any residual cash flows from the sale of the railcars.
Issuer	GBX Leasing 2022-1 LLC.
Servicer	Greenbrier Management Services LLC.
Liquidity facility provider	Wells Fargo Bank N.A.
Indenture trustee	U.S. Bank N.A.

Rationale

The preliminary ratings assigned to GBX Leasing 2022-1 LLC's \$178.5 million fixed-rate secured railcar equipment notes series 2023-1 reflect:

PRIMARY CREDIT ANALYST

Brian Kearon
Englewood
+ 1 (212) 438 8156
brian.kearon
@spglobal.com

SECONDARY CONTACT

Steven Margetis
Englewood
+ 2124388091
steven.margetis
@spglobal.com

ANALYTICAL MANAGER

Ildiko Szilank
New York
+ 1 (212) 438 2614
ildiko.szilank
@spglobal.com

CORPORATE & GOVERNMENT CREDIT ANALYST

Betsy R Snyder, CFA
New York
+ 1 (212) 438 7811
betsy.snyder
@spglobal.com

RESEARCH ASSISTANT

Ishan Shankar
Pune

- The likelihood that timely interest and ultimate principal payments will be made on or before the legal final maturity date;
- The initial and future lessees' estimated credit quality;
- The railcar collateral's value and rental-generating potential;
- The transaction's legal and payment structures;
- The demonstrated servicing ability of Greenbrier Management Services LLC;
- The liquidity facility, which will have available advance amount of up to nine months' interest; and
- The ability of the rated notes to withstand our specific rating scenarios and sensitivity stresses.

Transaction Overview

Strengths

In our view, this transaction's strengths include:

- The railcar leasing market's historical stability and relatively high and stable utilization rates;
- The minimal risk of technical obsolescence and the equipment's long useful life;
- The portfolio's high current utilization, with 99.6% of railcars on lease as of Aug. 31, 2023;
- The railcars' low and, for the most part, fixed maintenance due to being early in their useful life;
- The servicer's experience and ability to perform its obligation;
- The liquidity facility, with available advance of up to nine months of interest due;
- The lessees' diversification by commodity group;
- The pool's characteristics, including the young age of the railcars, longer remaining terms of the leases, and the high lease rates compared to series 2022-1;
- The low write-offs; and
- The pool's diversification by type of railcar.

Weaknesses

In our view, this transaction's weaknesses include:

- A large portion of the initial leases are full-service (58.12%), which exposes the transaction to the railcars' uncertain variable expenses, such as maintenance.
- Of the initial railcars, 10.86% by unit count, are leased on a per-diem basis. The per diem railcars comprise 7.05% intermodal, 3.13% boxcar, and 0.69% autorack. Per diem terms expose the transaction to fluctuations in lease revenue based on the utilization of the railcars subject to this type of lease.
- Of the initial railcars, 11.74% by unit count are intermodals. These cars are often leased to railways as opposed to industrial companies and may be more subject to a utilization decrease in economic stress.

- The transaction terms allow for lease agreements with lessees domiciled in Canada without any limitations. Lease revenue under the lease agreements could be subject to Canadian withholding tax which could decrease the amounts available to the issuer.
- Similar to other transactions in this space, there is no documented cap on the senior expenses payable prior to the payment of interest on the notes. This could lead to a potential stress on interest payments on the notes if the fees were to fluctuate on a monthly basis.
- We have not rated most of the lessees (though a significant portion of those we don't rate are owned by or otherwise affiliated with entities that we do rate).
- Oil price fluctuation could put pressure on the re-lease rates of cars carrying crude oil.
- The largest single obligor in this portfolio leases 13.71% of the overall railcars by car count.
- The portfolio is subject to replacement of up to 100% of the railcars, in compliance with certain restrictions, including compliance with the concentration limits; the acquired railcars having a comparable remaining useful life and current appraisals; to the extent the replaced railcar is under lease, generating at least the same average monthly lease revenue; and having an average remaining lease term at least two-thirds as long as the remaining term of the railcars being replaced.

Mitigating factors

In our view, the transaction's weaknesses are mitigated by the following factors:

- A significant portion of the initial leases are net leases (30.58%), which limit the transaction to the railcars' uncertain expenses.
- Our stress scenarios include stresses to the expenses due on the portfolio's full-service leases.
- We ran a break-even scenario whereby the senior expenses were increased, and we observed some cushion for each class at their respective rating levels.
- We ran a stress scenario whereby all per-diem leases not subject to minimum lease rates earned \$0 lease rates for 20 years and we observed some cushion for each class at their respective rating levels.
- While there is no limit on Canadian leases, the initial pool only contains 8.0% of cars on lease to Canadian lessees. The issuer expects that any Canadian leases would allow the lessor to pass on any costs related to withholding taxes to the lessees as additional lease payments.
- Under the revenue haircut sensitivity, each class of notes was able to withstand a haircut to collections, in addition to the respective rating stress, of at least 15.00%.
- The 'AA' stress scenarios we apply to the utilization rates can typically incorporate up to 49.71% lessee defaults during the lease term for a five-year operating lease that is subject to seven months of downtime between lessees.
- The 'A' stress scenarios we apply incorporates up to 42.00% lessee defaults during the lease term for a five-year operating lease that is subject to six months of downtime between lessees.
- We apply stress scenarios to the cash flow modeling for fleet utilization, lease rates, and operating expenses through four four-year sector downturns.
- This portfolio contains no railcars carrying frac-sand, and only 1.56% of railcars carry crude oil.
- The railcar lessees are diversified by commodity group, with the largest commodity group

exposure accounting for 11.74% of the railcars by count.

- Our additional sensitivities included a scenario that models the effect of the portfolio railcars being replaced at the end of their existing leases by railcar types with more stressful lease rate assumptions.
- We ran a sensitivity stress scenario where we assumed all leases expiring in the next year were not renewed. During this time, we assumed the deal paid principal on schedule, and all these cars were subject to our model's release stress starting one year from close. This exercise was repeated for two years from close as well. In both scenarios, we observed some cushion for each class at their respective rating levels.

Environmental, Social, And Governance

Our rating analysis considered the transaction's potential exposure to environmental, social, and governance (ESG) credit factors. We have not identified any material ESG credit factors in our analysis. This transaction contains relatively few railcars that may be affected by environmental regulations, with only 1.56% of the railcars carrying crude oil and no railcars carrying frac sand. While 36.46% of the railcars are tanks, none of them being subject to retrofit requirements, social credit factors have a limited impact on our analysis. Governance credit factors average for this and other railcar transactions. Bankruptcy or other stress upon the manager could potentially disrupt the flow of payments to the securitization, and certain aspects of the maintenance and operation of the railcars. Therefore, ESG credit factors do not influence our assessment of the transaction's credit quality.

Industry Characteristics And Sector Outlook

The railcar leasing industry's key characteristics include:

- The industry is somewhat concentrated, with only a few major participants and several smaller ones.
- Railcar leasing is typically a stable and predictable cash flow source because of multiyear leases and relatively high-quality lessees compared with certain other transportation equipment-leasing businesses, such as marine cargo container leasing.
- Railroad companies and shippers typically choose to not invest in tank cars, so lessors own about 75.00% of tank cars in the U.S.
- Major railcar manufacturers include Greenbrier, which acquired American Railcar Industries in July 2019; Trinity Industries Inc.; Union Tank Car Co.; FreightCar America; and National Steel Car.
- Major railcar lessors include Greenbrier; Union Tank Car Co.; CIT Railcar Funding Co.; GATX Corp.; TTX Co.; Trinity Industries Leasing Co.; American Industrial Transport, formerly known as American Railcar Industries; and SMBC Rail Services LLC, which was formerly known as Flagship Rail Services, and acquired some of the assets of American Railcar Leasing LLC in June 2017.
- Demand for certain railcars, such as boxcars, is highly cyclical.
- Despite the extensive and immediate disruption in certain sectors, the impact of the COVID-19 pandemic was far less severe on the railcar leasing market due to the surge in goods transported intermodally (rail/ships/trucks) as consumers focused their spending in this area.

Historically, the demand for certain type of railcars has been highly cyclical, based on economic cycles as well as commodity prices. We believe other factors affecting demand include: the needs of railroads, the available supply and cost of equipment, and the availability of capital to purchase or lease the needed equipment.

From mid-2020 through mid-2022, railcar lessors benefited significantly from increased consumer demand for goods transported intermodally (rail/ships/trucks), the shortages of equipment to transport these goods, and congestion at ports. However, since mid-2022, consumer spending has focused more on services (such as travel) than goods. This has resulted in North American carloads, which increased by 4.5% in 2021, declining by 1.9% and 3.5% in 2022 and year-to-date 2023, respectively, according to the Association of American Railroads. However, demand for certain railcar types, such as those that transport farm products, minerals, and motor vehicles have risen. As a result, overall utilization remains high at around 99%, with lease rates and average renewal terms increasing. In addition, the backlog for new equipment deliveries remains high. S&P Global Ratings is forecasting U.S. GDP growth to moderate to 2.2% in 2023 compared with 2.1% in 2022 and 5.9% in 2021. Forecasted growth is 1.3% in 2024 and 1.4% in 2025. However, despite lower expected growth, we expect demand and lease rates to continue to increase, the latter due to continued strong demand as well as higher interest costs. In addition, railcar lessors can reduce capital spending on railcars (which has increased in 2023) if demand warrants, thereby aiding utilization and lease rates.

The average age of railcars in the North American revenue-earning fleet increased in 2022 to above 20 years for the first time in at least a decade, a sign that new cars are being built slower than old cars are being retired. Unlike in years past, when manufacturers responded to elevated demand with increased new car builds, we see fewer new railcars being added to the fleet, which reduces the risk of the boom-bust cycles the industry has experienced in the past.

Transaction Structure

GBX Leasing 2022-1 LLC (the issuer) is a bankruptcy-remote limited-liability company organized under the laws of Delaware. The issuer is a wholly owned special purpose subsidiary of GBX Leasing LLC (GBXL). The issuer's business is limited to owning railcars, leases, and related assets.

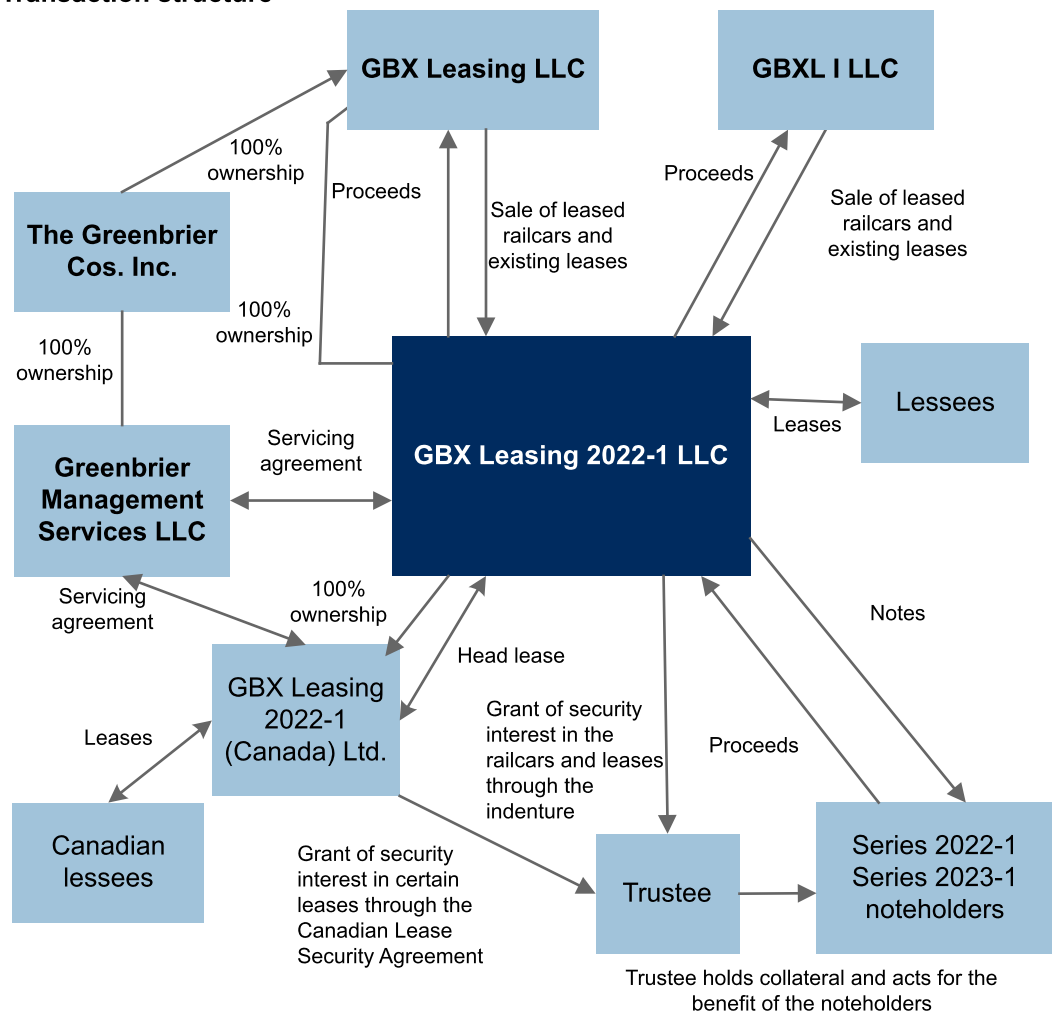
Series 2023-1 is the second issuance to date from this master trust. Series 2022-1 was issued in February 2022. Series 2023-1 will consist of class A and B notes. The leased railcars will be purchased from two sources: GBXL and GBXL I LLC (GBXL I), a wholly owned direct subsidiary of GBXL.

The issuer has granted a security interest in the leased railcars and leases, along with the rights under the related agreements and accounts, to the indenture trustee for the bondholders' benefit.

The trustee will pay principal and interest due on the notes from the payments that the underlying lessees make, the earnings from any invested funds, the proceeds from any railcar dispositions, the insurance proceeds, and the amounts on deposit in the specified cash accounts.

Chart 1

Transaction structure



Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Shared collateral

Additional railcars will be purchased by the issuer using the proceeds from the issuance of the series 2023-1 notes. These railcars, together with the existing collateral portfolio of the issuer, will be held by the trustee for the benefit of the series 2023-1 bondholders and the already existing bondholders. Available collections will be allocated to each series and class of notes based on the provisions of the indenture. Similar provisions would apply to the issuance of additional series in the future. At the time of the series 2023-1 notes' issuance, it is expected that notes from the issuer's series 2022-1 will also be outstanding.

Administrator/Servicer

GBXL is a limited liability company formed under the laws of the state of Delaware. GBXL is a wholly owned subsidiary of The Greenbrier Cos. Inc. (Greenbrier). GBXL will act as administrator for the issuer under the administrative services agreement. Greenbrier Management Services LLC (GMS) is a limited liability company formed under the laws of the state of Delaware and a wholly owned subsidiary of Greenbrier. GMS will act as servicer for the issuer, the Canadian subsidiary under the servicing agreement, and as insurance manager under the insurance agreement.

As of Aug. 31, 2023, the servicer's fleet consisted of approximately 45,121 railcars, including approximately 13,353 railcars that are owned by certain subsidiaries of Greenbrier, and approximately 31,768 railcars (including 6,743 small cube covered hopper railcars) that are owned by unrelated third parties. At the closing date, the railcars are expected to consist of 6,399 railcars (or approximately 14.18% of the servicer's fleet as of the statistical date). As of Aug. 31, 2023, the utilization rate for the servicer's fleet was approximately 95.40% (98.20% excluding small cube covered hopper railcars). A portion of the servicer's fleet may remain idle (i.e., not subject to a lease) at any time.

The servicing agreement contains provisions requiring GMS to operate, maintain, lease, and re-lease the railcars it manages regardless of whether the railcars are part of the securitized fleet, its own fleet, or other fleets that it manages.

Lease revenues include all ancillary services that are provided along with the railcar rentals. Shippers typically lease approximately 75.00% of the tank car fleet, a percentage that has held relatively constant for the past several years. Tank cars are used to transport renewable fuels; agricultural, chemical, semi-gaseous, or gaseous products; and other types of industrial liquids, including petroleum-based products. Non-tank freight cars include:

- Open-top hoppers, which transport products such as coal and mineral aggregates;
- Covered hoppers, which transport products such as grain, cement, plastic products, and other granular products;
- Autoracks, which transport passenger cars and light-duty trucks;
- Boxcars, which transport paper, auto parts, and refrigerated consumable products;
- Mill gondolas, which transport rolled steel and other milled metal products; and
- Intermodal cars, which transport standardized intermodal containers.

The issuer relies on GMS' expertise to provide certain services for the portfolio railcars. If the administrator fails to perform its obligations under the administration agreement, the noteholders could experience delays and reduced payments. The administrator cannot replace the servicer unless certain events occur, including Greenbrier's failure to pay certain debts when due, a utilization differential for the servicer's fleet exceeding specified limits, and a monthly lease differential for the servicer's fleet exceeding specified limits.

Other key transaction parties

Wells Fargo Bank N.A. (WFBNA) is a national banking association and serves as the liquidity facility provider to the transaction. Upon closing, the issuer will establish a liquidity facility with WFBNA to provide it with additional liquidity in an amount up to nine months interest on the rated notes to pay interest due on the notes and senior fees owed.

Under the terms of the liquidity facility agreement, should S&P Global Ratings' rating of the liquidity facility provider be lowered below 'A-', withdrawn, or suspended, the liquidity provider must, within 60 days, either arrange for an equivalent replacement facility from an eligible provider, or fund the transaction reserve account with an advance equal to nine months of rated notes' interest. We assessed the strength of the replacement provisions under our counterparty criteria; based on those criteria, we did not assume any default of the counterparty in either 'AA' or 'A' scenarios, nor do we directly link the rating of the notes to the rating of the liquidity facility provider.

Portfolio Characteristics

The issuers' portfolio includes approximately 6,399 railcars. The portfolio includes (by unit count) 58.12% full-service leases, 30.58% net leases, 10.86% per diem leases, and 0.44% railcars off lease. Table 1 shows a portfolio breakdown by railcar type. All information regarding the issuer's fleet is as of Aug. 31, 2023.

Table 1

Portfolio breakdown by railcar type

Car type	No. of railcars	% of total
Freight	4,066	63.54
Tank	2,333	36.46
Total	6,399	100.00

The portfolio is early in its useful life; the weighted average age by unit count is 7.54 years. The 6,399 railcars are a diversified mix of freight and tank cars with leases expiring in the next zero to 120 months as of Aug. 31, 2023. In most cases, our assumed lease rate factor for the cars is less than the actual lease rate factor. This results in a lower assumed rent once the current lease expires. We assume the railcars are sold at a fraction of their depreciated value at the end of their useful lives (see the Cash Flow Assumptions section). A railcar's useful life is typically 30-50 years, which is longer than the transaction's 30-year life (see table 2 and chart 2).

Table 2

Portfolio stratification by year of manufacture

Year of manufacture	No. of railcars	% of total(i)
1996	126	1.97
1998	210	3.28
1999	693	10.83
2000	255	3.98
2001	75	1.17
2013	198	3.09
2015	181	2.83
2017	300	4.69
2018	300	4.69
2019	679	10.61
2020	577	9.02

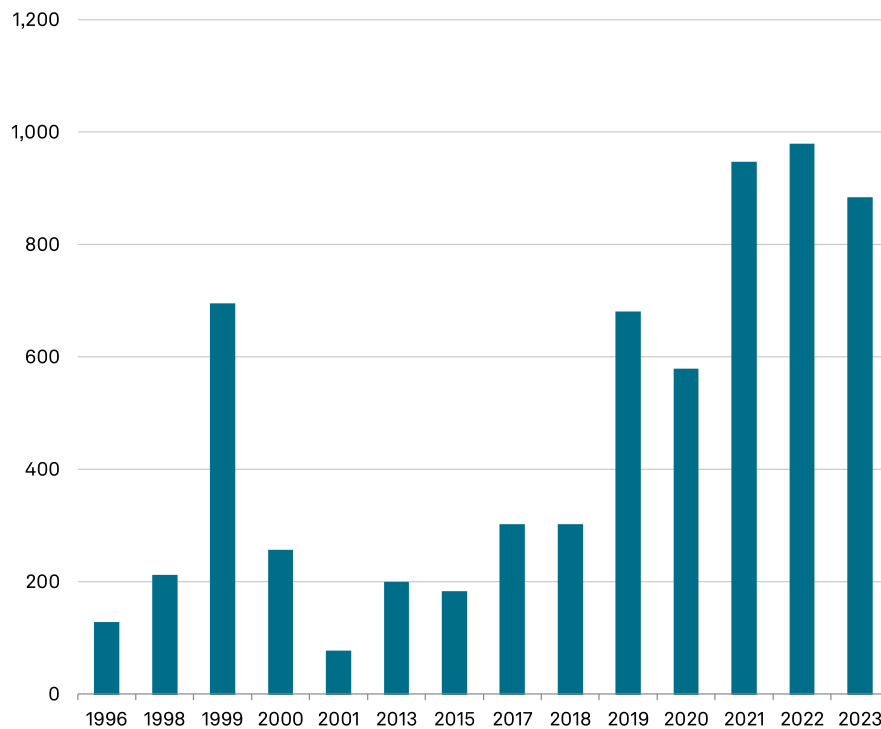
Table 2

Portfolio stratification by year of manufacture (cont.)

Year of manufacture	No. of railcars	% of total(i)
2021	945	14.77
2022	978	15.28
2023	882	13.78
Total	6,399	100.00

(i) Amounts may not total due to rounding.

Chart 2

Portfolio stratification by year of manufacture

Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

The demand for specialty railcars is typically based on overall economic growth, the growth of certain industry and commodity group segments, such as manufacturing and shipping, and the replacement of older equipment. Of all the railcar types, tank car leasing has historically been the most stable and predictable cash flow source. Their lease terms average more than three years, and, in many cases, the equipment stays with a single lessee for its entire life, which results in utilization rates of more than 90.00% throughout economic cycles. The commodities these cars transport tend to be less affected by economic cycles than other commodities. To counter the

lower demand for specialty railcars in economic downturns, lessors tend to shorten lease terms with lower lease rates to maintain strong utilization levels. This allows lessors to extend lease terms at higher rates when demand recovers.

We believe the transaction's closing date portfolio services a diverse mix of industries. Table 3 and chart 3 show a portfolio breakdown by commodity group.

Table 3

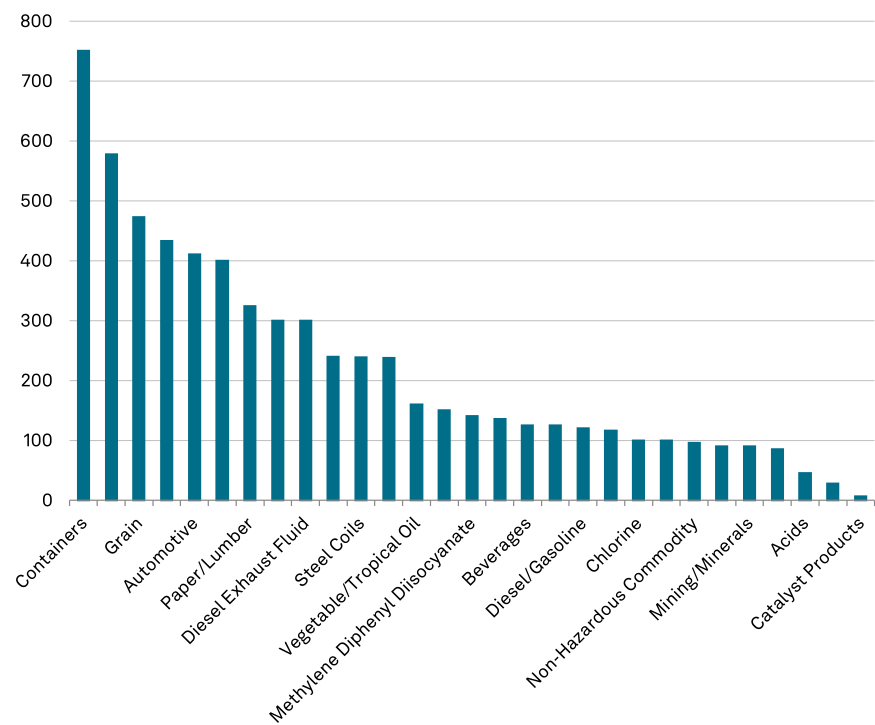
Portfolio stratification by commodity group served

Industry type	No. of railcars	% of total(i)
Containers	751	11.74
Plastic pellets	578	9.03
Grain	473	7.39
Steel/Iron	433	6.77
Automotive	411	6.42
Other plastics	400	6.25
Paper/Lumber	324	5.06
Corn syrup/liquid sweeteners	300	4.69
Diesel exhaust fluid	300	4.69
Other chemicals	240	3.75
Steel coils	239	3.73
Refined products	238	3.72
Vegetable/Tropical oil	160	2.50
Tallow	150	2.34
Methylene diphenyl diisocyanate	140	2.19
Agriculture products excluding grain	136	2.13
Beverages	125	1.95
Molten sulfur	125	1.95
Diesel/Gasoline	120	1.88
Ethanol/Bio fuels	116	1.81
Chlorine	100	1.56
Crude oil	100	1.56
Non-Hazardous commodity	96	1.50
Distillers corn oil	90	1.41
Mining/Minerals	90	1.41
Distillers dried grain	85	1.33
Acids	45	0.70
Off lease	28	0.44
Catalyst products	6	0.09
Total	6,399	100.00

(i) Amounts may not total due to rounding.

Chart 3

Portfolio stratification by commodity group served



Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

As of Aug. 31, 2023, there were 60 lessees in the pool. On the closing date, we expect the largest lessee will account for approximately 13.71% (by unit count) of the total railcars leased. Railcars leased to the five largest lessees account for approximately 32.54% (by unit count) of the total railcars leased. A lessee default could increase the portion of railcars that may need to be remarketed because of repossession. Most of the lessees are not rated by S&P Global Ratings, though a significant proportion of such lessees are owned by or otherwise affiliated with entities that we do rate.

Generally, once a lessee defaults, GBXL would have to repossess the railcars and remarket them. We performed a sensitivity analysis of the utilization rate to address the risk that the issuers would not receive cash flow during the downtime. In the 'AA' and 'A' rating scenarios, respectively, the stress levels we apply to the utilization rate can incorporate 49.71% and 42.00% lessee defaults during the lease term as shown in the Cash Flow Results section of this report.

GBXL establishes each lease's rate when its term begins. After the initial lease terms have expired, the leases generally continue on the same terms on a month-to-month basis. The servicer will establish renewal lease rates for those railcars on which the related lease is renewed. Renewal lease rates are typically based on the initial lease rate, the railcar industry's strength, customer demand, and the applicable railcar's age and expected useful life. As of Aug. 31, 2023, the initial lease rates for the railcars averaged \$727 per month on a weighted-average basis, excluding off-lease cars. In addition, the leases' weighted-average remaining term was

approximately 4.1 years (see tables 4-6 and charts 4 and 5).

Table 4

Portfolio stratification by lease rate range

Monthly lease rates (\$)	No. of railcars	% of total(i)
\$150 to \$299	247	3.86
\$300 to \$449	754	11.78
\$450 to \$599	1,255	19.61
\$600 to \$749	800	12.50
\$750 to \$899	555	8.67
\$900 to \$1,049	1,350	21.10
\$1,050 to \$1,199	660	10.31
\$1,200 to \$1,349	8	0.13
\$1,350 to \$1,499	2	0.03
\$2,100 to \$2,249	5	0.08
\$2,250 to \$2,399	20	0.31
\$2,550 to \$2,699	20	0.31
Off lease	28	0.44
Per diem	695	10.86
Total	6,399	100.00

Table 5

Portfolio stratification by remaining lease term

Remaining lease term (months)	No. of railcars	% of total(i)
<= 0	65	1.02
1 to 12	1,251	19.55
13 to 24	645	10.08
25 to 36	540	8.44
37 to 48	405	6.33
49 to 60	1,428	22.32
61 to 72	635	9.92
73 to 84	563	8.80
97 to 108	385	6.02
109 to 120	222	3.47
121 to 132	260	4.06
Total	6,399	100.00

(i) Amounts may not total due to rounding.

Table 6

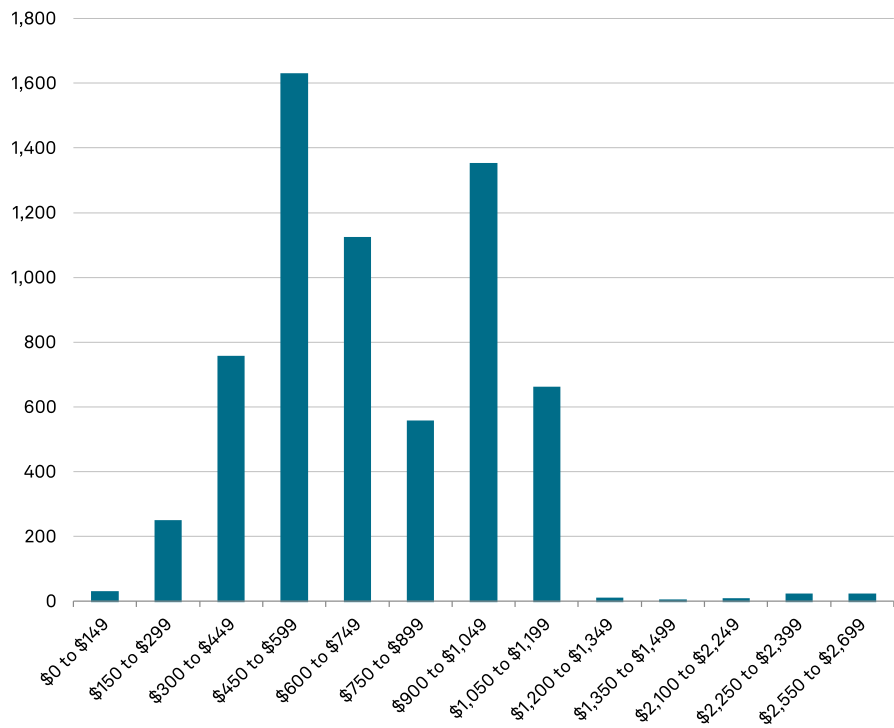
Comparison with recent transactions(i)

	USQ Rail																																			
	GBX Leasing 2022-1 LLC (Series 2023-1)			GBX Leasing 2022-1 LLC (Series 2022-1)			Trinity Rail Leasing 2022 LLC (Series 2022-1)			Trinity Rail Leasing 2021 LLC (Series 2021-1)			Trinity Rail Leasing 2020 LLC (Series 2020-2)			Trinity Rail Leasing 2018 LLC (Series 2020-1)			Trinity Rail Leasing 2019 LLC (Series 2019-2)			Trinity Rail Leasing 2019 LLC (Series 2019-1)			TRIUMPH RAIL LLC (Series 2021-2)			TRP 2021 LLC (Series 2021-1)			NP SPE X L.P. (Series 2021-1)					
No. of railcars	6,399	4,489	6,466	3,652	3,023	5,770	4,363	5,727	6,830	13,426	8,003	6,788	6,350	8,347																						
Average age (years)	7.5	8.4	13.5	7.0	5.3	7.2	8.1	10.7	7.6	7.7	7.4	12.1	10.1	8.6																						
Average remaining lease term (years)	4.1	3.5	2.2	4.7	3.2	3.6	5.0	3.4	3.9	4.7	5.3	2.3	2.2	2.4																						
Average monthly lease rate (\$)	727	578	603	687	876	741	692	713	697	663	628	580	596	647																						
% of tank cars	36.46	25.08	55.89	57.63	64.90	51.00	60.46	52.70	44.00	47.04	42.85	52.59	50.16	0.00																						
Largest lessee (%)	13.71	19.25	7.15	17.91	7.20	7.00	7.61	10.40	8.80	4.20	5.20	7.76	8.16	5.28																						
% investment-grade lessees	40.27	51.47	42.70	29.24	40.40	50.70	46.37	37.00	48.50	55.52	58.50	42.37	38.13	44.34																						
Largest commodity group (%)	11.74	18.47	15.82	19.55	28.50	19.50	13.18	16.00	16.20	8.89	11.12	15.09	13.65	21.78																						

(i)% by number of railcars.

Chart 4

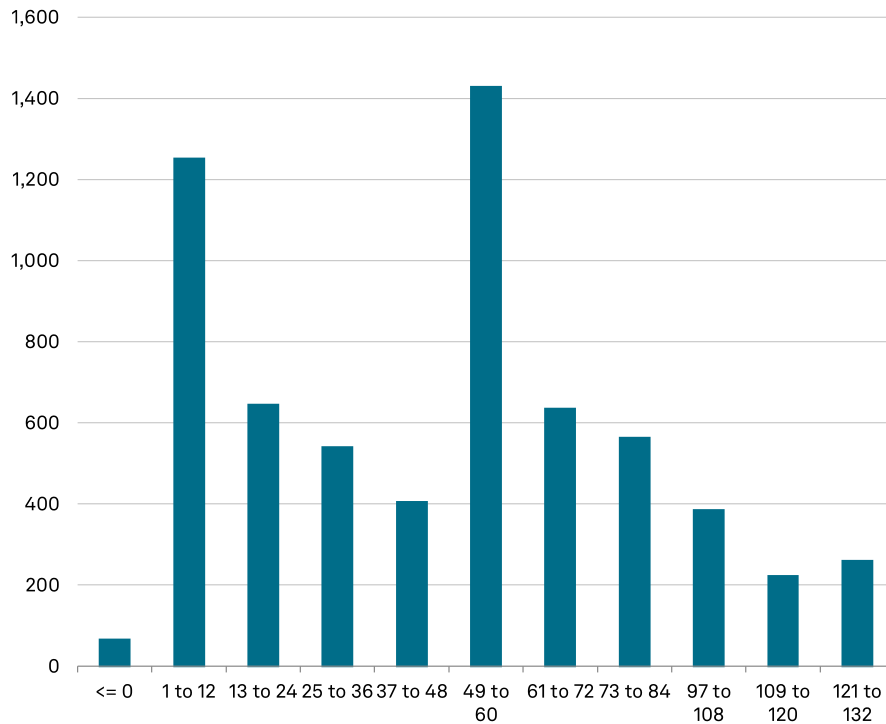
Portfolio stratification by lease rate range



Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Chart 5

Portfolio stratification by remaining lease term



Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Of the 6,399 cars in this pool, no cars are expected to be subject to retrofitting requirements.

Cash Flow Assumptions

The transaction's cash flows depend on a number of key inputs, some of which are contractual (for example, lease rates) and some of which, we modeled based on historical performance, our economic scenarios, and our expectation of the railcars' lifespan. We have incorporated the stresses for each of those components into four sector downturns (which are each four years long) during the fleet's life. The downturns' depth, length, and starting time are rating-dependent, meaning a higher rating is subject to deeper and longer downturns within a shorter time frame. Our internal cash flow model includes input assumptions for:

- The railcars' lease rates and terms by car type;
- The railcars' depreciation schedule by car type;
- The railcars' maintenance schedule by car type;
- The base fees and write-off assumptions;
- The inflation rate for rent, maintenance, and other expenses; and
- The railcars' residual value ranges from 0.00%-10.00% at the end of the transaction.

In addition, our internal cash flow model includes input assumptions for the following economic conditions:

- Years 1-4: recession;
- Years 5-9: normal economic conditions;
- Years 10-13: recession;
- Years 14-18: normal economic conditions;
- Years 19-22: recession;
- Years 23-27: normal economic conditions; and
- Years 28-31: recession.

Under our stress assumptions, we expect that the transaction will pay timely interest on each payment date and full principal by the final maturity date. We have stressed and changed four of these aforementioned inputs during the transaction's life. We adjusted our assumptions for the value of these inputs to stress the transaction at a level that we believe is commensurate with our assigned preliminary ratings.

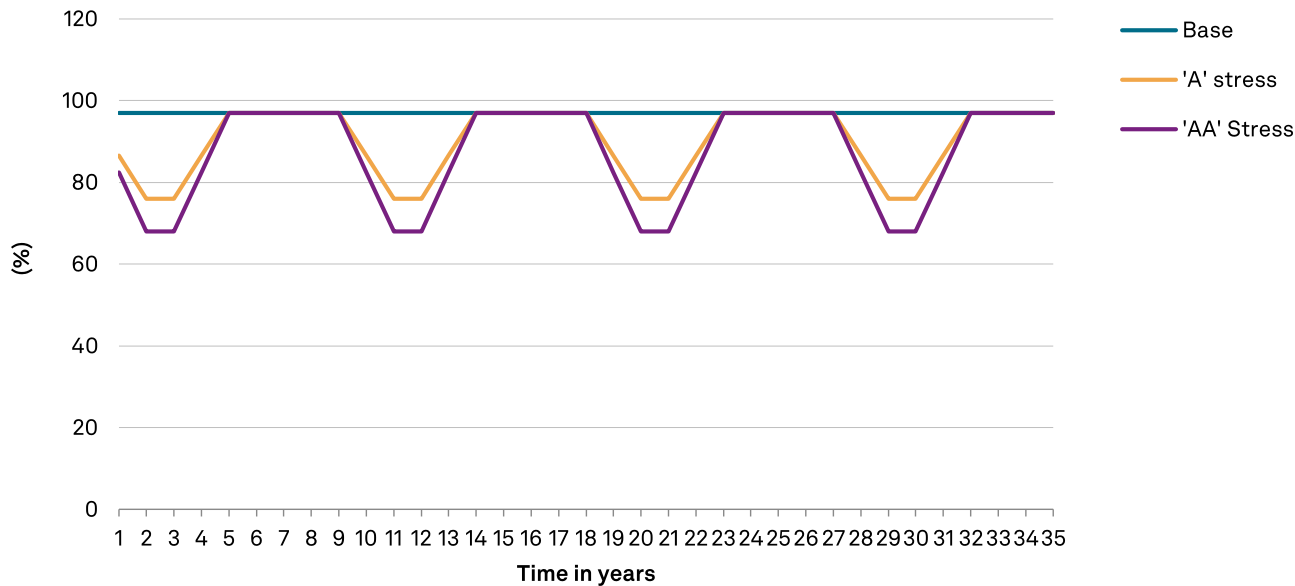
Utilization Rates

Fleet utilization is generally a function of several operating parameters, including lease term, downtime in transit between lessees, and lessee default assumptions. For example, as seen in our 'A' rating scenario, for a five-year operating lease that is subject to six months of downtime in between lessees, 76.00% utilization can typically incorporate 42.00% lessee defaults during the lease term (see chart 6). In the 'AA' rating scenario, the same lease that is subject to seven months of downtime in between lessees, 68.00% utilization can typically incorporate 49.71% lessee defaults during the term.

During a four-year downturn, we assumed that the utilization at the beginning (year one) and end (year four) of the downturn was halfway between the bottom and base levels.

Chart 6

Base versus stressed utilization rates



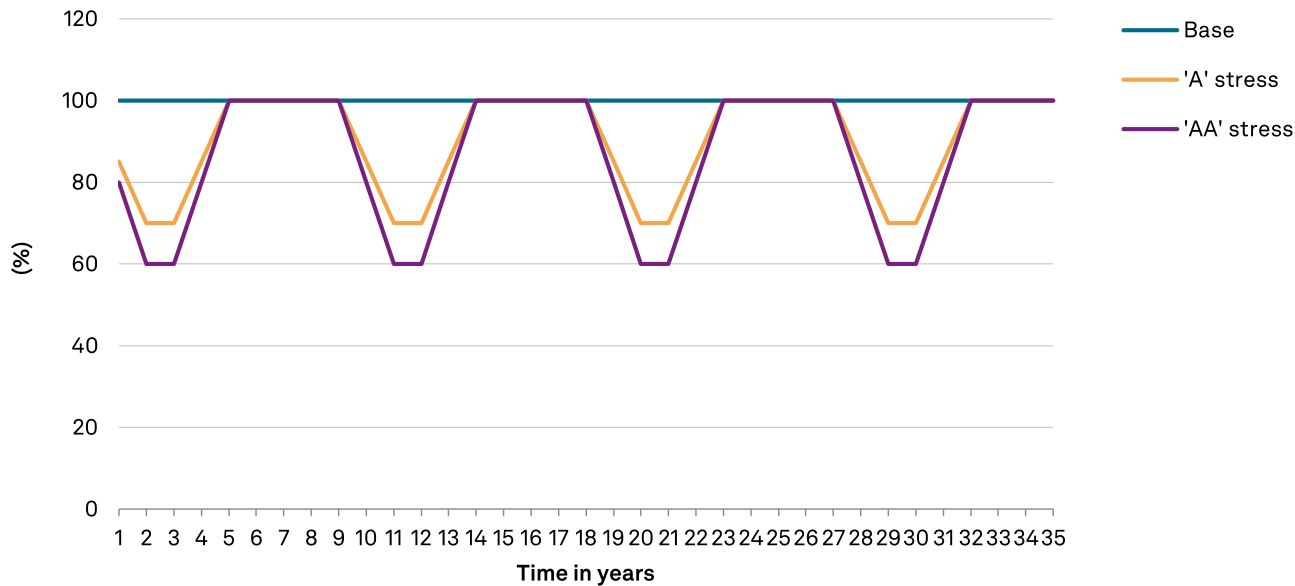
Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Lease Rates

We model future lease rates based on a "lease rate factor curve," which converts a railcar's value to the corresponding lease rentals using a factor that changes (one that typically increases) over time. To determine this calculation, we begin with the fair market value provided by the issuer. This has two components, the adjusted value of the existing cars in the portfolio as of Oct. 31, 2023, as well as appraised values of the 1,860 new cars from third-party appraisers, RailSolutions Inc. and Biggs Appraisal in this case. The appraisal values from RailSolutions Inc. and Biggs Appraisal are \$269,024,106 and \$279,070,918, respectively. We used the average of the two appraisal values, \$274,047,512, and added it to the adjusted value of the existing cars, \$387,129,016, to get \$661,176,527 as the starting value in our cashflow analysis. We model the car depreciation by applying a 6.00% and 7.00% constant compound factor to freight cars and tank cars, respectively. We forecast the lease rates, including an inflation factor, using this model as our base case. For our stress tests, we reduce the base-case lease rates by 40.00%-90.00% for the 'AA' rating level and by 30.00%-75.00% for the 'A' rating level. Similarly to how we model fleet utilization, we "step down" to halfway between the base and low levels during years one and four of each downturn (see chart 7).

Chart 7

Base versus stressed lease rates



Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Useful Life And Residual Proceeds

Railcars typically have a useful life of approximately 30-50 years, depending on the car type. For the purposes of modeling, we assume that all railcars have a 35-year useful life. At the end of the useful life, we assume that the railcars are sold at a haircut commensurate with the lease rate stress. We determine the book value by depreciating the initial railcar value by railcar type. We use the fair market value and the depreciated original equipment cost, respectively, for the initial value in our two rating runs.

Although most of the cash flow comes from lease rentals, we do assume a modest residual value of around 10.00% at the end of a railcar's useful life.

Operating Expenses

Operating expenses include maintenance, storage, insurance, and taxes for the portion of the fleet on full-service leases. During a downturn, companies often return cars more frequently, which leads to increased maintenance expenses. Lower U.S. fleet utilization has reduced congestion and increased the leased cars' speed and mileage. In addition, railroad operators have increasingly deployed wheel sensors to detect possible damages and have been removing cars from the operating fleet for wheel replacement more proactively than in the past. This has also increased maintenance expenses, which we have incorporated into our cash flow model.

For our base-case modeling, we adjusted the railcars' maintenance costs so that they were in line

with the utilization rate, assuming that unleased railcars require minimal maintenance. We generally inflate expenses by 2.00%-2.50% per year. During a downturn, we stress operating expenses by 33.00%-37.00% for the 'AA' rating stress level, and by 25.00%-30.00% for the 'A' rating stress level. Similarly to how we model utilization and lease rates, we "step up" this stress halfway to the peak during the first and last year of each downturn we model.

Cash Flow Results

We ran a number of stress tests where cash flow is put through sector downturns when both fleet utilization and re-leasing rates decrease and operating expenses increase. The magnitude of the stresses is rating-dependent.

The modeled stress at the 'AA' rating level:

Utilization is cut to 68.00%, and the base-case lease rates are reduced by 30.00%-90.00%, while increasing the operating expense by 33.33% during four sector downturns; starting values are depreciated by 6.00%-7.00% for residual values, with additional stress during a recession. The initial railcar values and lease rate curves are modeled based on two different methods: fair market value and depreciated original equipment cost.

The modeled stress at the 'A' rating level:

Utilization is cut to 76.00%, and the base-case lease rates are reduced by 22.50%-75.00%, while increasing the operating expense by 25.00% during four sector downturns; starting values are depreciated by 6.00%-7.00% for residual values, with additional stress during a recession. The initial railcar values and lease rate curves are modeled based on two different methods: fair market value and depreciated original equipment cost.

In our rating analysis, to decrease the volatility in forecasting lease rates, which results from fluctuations in the fair market value of railcars, we use as the initial railcar value--in addition to the fair market value of railcars--the depreciated original equipment cost (OEC) (see table 7). Under the depreciated OEC approach, we developed a lease rate factor curve (as a percentage of the depreciated OEC) based on lease rate data going back as far as 1980.

Table 7

Cash flow results--fair market approach(i)

Description	Outcome
'AA' stress case	Timely interest and ultimate principal are paid to the class A noteholders.
'A' stress case	Timely interest and ultimate principal are paid to the class B noteholders.

(i)Using average appraised values and S&P Global Ratings' lease rate factor curve based on fair market value.

Table 8

Cash flow results--original equipment cost approach(i)

Description	Outcome
'AA' stress case	Timely interest and ultimate principal are paid to the class A noteholders.

Table 8

Cash flow results--original equipment cost approach(i) (cont.)

Description	Outcome
'A' stress case	Timely interest and ultimate principal are paid to the class B noteholders.

(i)Using S&P Global Ratings' depreciated value from OEC and lease rate factor curve based on OEC. OEC--Original equipment cost.

Sensitivity Analysis**Break-even scenarios and sensitivity analyses**

We performed certain sensitivity analyses, such as break-even scenarios, where we held certain stress assumptions constant and increased the stress based on a single factor, including utilization or re-leasing rates.

Based on our results (see tables 9 and 10), we believe the transaction can withstand a further increase of utilization or re-leasing rate stress and holding everything else constant before the transaction fails to pay the full principal amount at legal final maturity.

Table 9

Break-Even scenarios--fair market value(i)

Description	Stress modeled	Maximum stress the notes can withstand
Revenue breakeven scenario ('AA')	Same as the 'AA' stress case listed in table 7 but decreasing transaction proceeds until the notes would not get paid in full.	15% additional stress for the class A noteholders.
Revenue break-even scenario ('A')	Same as the 'A' stress case listed in table 7 but decreasing transaction proceeds until the notes would not get paid in full.	20% additional stress for the class B noteholders.

(i)Using average appraised values and S&P Global Ratings' lease rate factor curve based on fair market value.

Table 10

Break-Even scenarios--original equipment cost(i)

Description	Stress modeled	Maximum stress the notes can withstand
Revenue breakeven scenario ('AA')	Same as the 'AA' stress case listed in table 8 but decreasing transaction proceeds until the notes would not get paid in full.	16% additional stress for the class A noteholders.
Revenue break-even scenario ('A')	Same as the 'A' stress case listed in table 8 but decreasing transaction proceeds until the notes would not get paid in full.	20% additional stress for the class B noteholders.

(i)Using S&P Global Ratings' depreciated value from OEC and lease rate factor curve based on OEC. OEC--Original equipment cost.

Additionally, we performed a sensitivity scenario based upon the portfolio's car type composition changing over time, which addresses the risk of significant replacement of railcars occurring within the portfolio. This stress modeled the effect of the portfolio railcars being replaced at the

end of their existing leases by railcar types with more stressful lease rate assumptions. The class A and B notes were paid off before final maturity under this scenario, in addition to the respective rating stresses.

Additional sensitivity runs

The transaction documents allow for permitted discretionary sales without any limitations. There are certain criteria for reinvesting in qualifying replacement railcars. We ran a sensitivity scenario to stress the potential impact on lease rates in the event the transaction reinvests the proceeds in lower yielding assets. We observed some interest shortfalls on the notes when this stress was run in conjunction with our ratings scenario.

Similar to other transactions in this space, there is no documented cap on the senior expenses payable prior to the payment of interest on the notes. This could lead to a potential stress on interest payments on the notes if the fees were to fluctuate on a monthly basis. We ran a break-even sensitivity scenario whereby the senior expenses were increased and we observed some cushion for each class at their respective rating levels.

We ran a sensitivity at the 'AA' rating stress level to test the pool's resilience in the face of an immediate economic slowdown. Namely, we rolled the portfolio forward one and two years, and while the notes were paid down on schedule, we assumed none of the expiring leases were renewed during those time periods. This accounts for approximately 20.5% of cars in year one, and an additional 10.1% of cars in year two. In both sensitivities, we observed some cushion for each A class of notes.

Payment Priority

The class A and B notes are fixed-rate notes. On each monthly payment date, as long as no event of default has occurred and is continuing, according to the transaction's documents, the funds will be distributed in the payment priority shown in table 11. There will be no class C or subordinated notes on the closing date.

Table 11

Payment waterfall

Priority	Payment
1	Operating expenses due and the required expense amount to the expense account.
2	Service provider fees to the service providers.
3	Reimburse servicer advances to the servicer.
4	Pro rata, all current and past-due interest on the class A notes other than current or past-due additional interest, interest owed to the liquidity facility provider, senior hedge payments (if any), and indemnifications to the liquidity facility provider, provided that the liquidity facility may only be drawn to pay the first three listed items.
5	Pro rata, all current and past due interest on the class B notes other than current or past due additional interest
6	Repay any drawn amounts the liquidity facility provider and then to the liquidity account until the balance is equal to the liquidity reserve target amount.
7	The scheduled principal payment amount currently due on the class A notes, to the earliest issued series and then to each subsequent series in chronological order or issuance and, within each series, to each class sequentially in ascending numerical designation of each class but pro rata among any alphabetical sub-classes of the same class.

Table 11

Payment waterfall (cont.)

Priority	Payment
8	Pay or reimburse the servicer for optional modification on behalf of the issuer (capped at 2% of initial appraised value).
9	If a rapid amortization event has occurred, to pay the class A notes' unpaid principal balance sequentially, provided no early amortization exists.
10	If an early amortization event is ongoing, to the class A notes' unpaid principal balance pro rata.
11	The scheduled principal payment amount currently due on the class B notes, to the earliest issued series and then to each subsequent series in chronological order or issuance and, within each series to each class sequentially in ascending numerical designation of each class but pro rata among any alphabetical sub-classes of the same class.
12	If a rapid amortization event has occurred, to pay the class B notes' unpaid principal balance sequentially, provided no early amortization exists.
13	If an early amortization event is ongoing, to the class B notes' unpaid principal balance pro rata.
14	Pro rata, all current and past due interest on the class C notes other than current or past due additional interest
15	The scheduled principal payment amount currently due on the class C notes, to the earliest issued series and then to each subsequent series in chronological order or issuance and, within each series to each class sequentially in ascending numerical designation of each class but pro rata among any alphabetical sub-classes of the same class.
16	If a rapid amortization event has occurred, to pay the class C notes' unpaid principal balance sequentially, provided no early amortization exists.
17	If an early amortization event is ongoing, to the class C notes' unpaid principal balance pro rata.
18	All current and past due additional interest on the class A notes.
19	All current and past due additional interest on the class B notes.
20	All current and past due additional interest on the class C notes.
21	Any redemption premium owing to the class A noteholders, pro rata.
22	Any redemption premium owing to the class B noteholders, pro rata.
23	Any redemption premium owing to the class C noteholders, pro rata.
24	Any subordinated hedge payments.
25	To the subordinated notes, in chronological order of series issuance, and within such series, to each class sequentially in ascending numerical designation of each such class, first, all current and past-due interest, other than current or past-due additional interest, pro rata, based on the amount due and, second, if the subordinated note amortization date has occurred, to the repayment of the outstanding principal amounts of such series of subordinated notes, pro rata, based on the amount due.
26	To the subordinated notes, in chronological order of series issuance, and within such series, to each class sequentially in ascending numerical designation of each such class, to the payment of all current and past due additional interest due on such series of subordinated notes, pro rata, based on the amount due;
27	Any of the issuer's indemnities to the initial purchaser of the existing notes and additional notes.
28	Pay or reimburse the issuer for the optional modification costs.
29	Pay all other monetary obligations of the issuer under the operative agreements.
30	The remaining proceeds to the issuer.

Payment priority after an event of default

If an event of default occurs, collections will be distributed according to the payment priority outlined in table 12.

Table 12

Payment waterfall after an event of default

Priority	Payment
1	Operating expenses due and the required expense amount to the expense account.
2	Service provider fees to the service provider.
3	Reimburse servicer advances to the manager.
4	Pro rata, all current and past-due interest on the class A notes other than current or past-due additional interest, interest owed to the liquidity facility provider, senior hedge payments (if any), and indemnifications to the liquidity facility provider, provided that the liquidity facility may only be drawn to pay the first three listed items.
5	To the class A notes' unpaid principal balance pro rata.
6	Pay or reimburse the servicer for optional modification on behalf of the issuer (capped at 2% of initial appraised value).
7	Pro rata, all current and past due interest on the class B notes other than current or past due additional interest.
8	To the class B notes' unpaid principal balance pro rata.
9	All current and past due additional interest on the class A notes.
10	All current and past due additional interest on the class B notes.
11	Any redemption premium owing to the class A noteholders, pro rata.
12	Any redemption premium owing to the class B noteholders, pro rata.
13	Any subordinated hedge payments.
14	Pro rata, all current and past due interest on the class C notes other than current or past due additional interest.
15	To the class C notes' unpaid principal balance pro rata.
16	All current and past due additional interest on the class C notes.
17	Any redemption premium owing to the class C noteholders, pro rata.
18	To the subordinated notes, in chronological order of series issuance, and within such series, to each class sequentially in ascending numerical designation of each such class, first, all current and past-due interest, other than current or past-due additional interest, pro rata, based on the amount due and, second, if the subordinated note amortization date has occurred, to the repayment of the outstanding principal amounts of such series of subordinated notes, pro rata, based on the amount due.
19	To the subordinated notes, in chronological order of series issuance, and within such series, to each class sequentially in ascending numerical designation of each such class, to the payment of all current and past-due additional interest due on such series of subordinated notes, pro rata, based on the amount due.
20	Any of the issuer's indemnities to the initial purchaser of the existing notes and additional notes.
21	Pay or reimburse the issuer for the optional modification costs.
22	Pay all other monetary obligations of the issuer under the operative agreements.
23	The remaining proceeds to the issuer.

On each payment date, as long as no event of default has occurred and is continuing, if the net

disposition proceeds have been transferred to the collections accounts, the balance in either account should be applied in the following priority (table 13).

Table 13

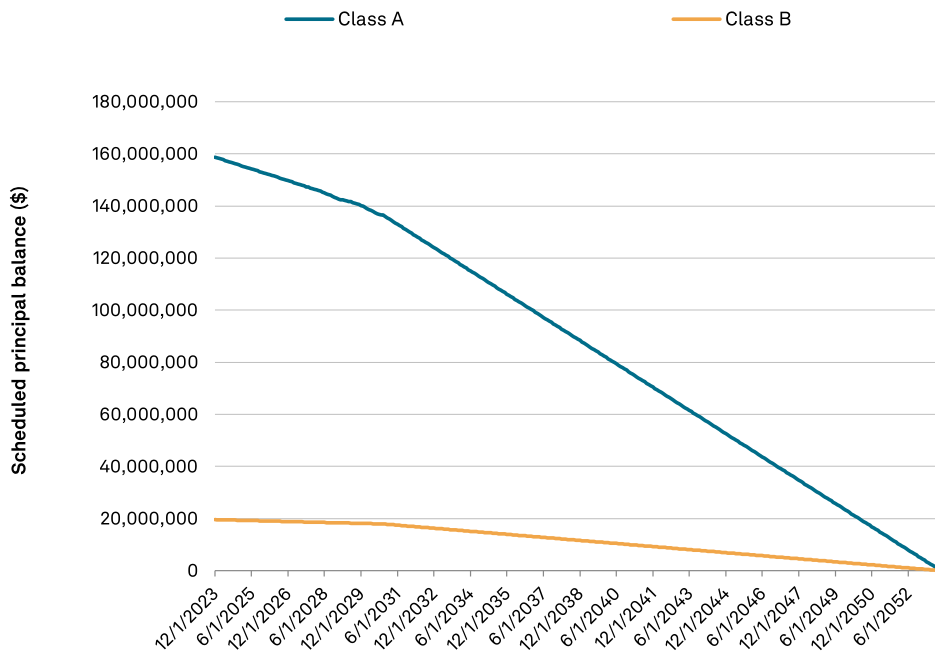
Payment waterfall after railcar disposition

Priority	Payment
1	Operating expenses due and the required expense amount to the expense account.
2	Pro rata, to repay any drawn amounts the liquidity facility provider and to the liquidity account until the balance is equal to the liquidity reserve target amount.
3	Pro rata, to the class A, B, and C notes, sequentially, 105% of the allocable note balance, and senior hedge payments.
4	Pay or reimburse the servicer for optional modification on behalf of the issuer (capped at 2% of initial appraised value).
5	Any redemption premium owing to the class A noteholders, pro rata.
6	If a rapid amortization event has occurred, to pay the class A notes' unpaid principal balance sequentially, provided no early amortization exists.
7	If an early amortization event is ongoing, to the class A notes' unpaid principal balance pro rata.
8	Any redemption premium owing to the class B noteholders, pro rata.
9	If a rapid amortization event has occurred, to pay the class B notes' unpaid principal balance sequentially, provided no early amortization exists.
10	If an early amortization event is ongoing, to the class B notes' unpaid principal balance pro rata.
11	Any subordinated hedge payments.
12	All current and past due interest on the class C notes, other than additional interest.
13	Any redemption premium owing to the class C noteholders, pro rata.
14	If a rapid amortization event has occurred, to pay the class C notes' unpaid principal balance sequentially, provided no early amortization exists.
15	All current and past due additional interest on the class A notes.
16	All current and past due additional interest on the class B notes.
17	All current and past due additional interest on the class C notes.
18	If an early amortization event is ongoing, to the class C notes' unpaid principal balance pro rata.
19	To the subordinated notes, in chronological order of series issuance, and within such series, to each class sequentially in ascending numerical designation of each such class; first, all current and past-due interest, other than current or past-due additional interest, pro rata, based on the amount due; second, an amount equal to 105% of the allocable note balance; and third, if the subordinated note amortization date has occurred, to the repayment of the outstanding principal amounts of such series of subordinated notes, pro rata, based on the amount due.
20	To the subordinated notes, in chronological order of series issuance, and within such series, to each class sequentially in ascending numerical designation of each such class, to the payment of all current and past-due additional interest due on such series of subordinated notes, pro rata, based on the amount due.
21	Any of the issuer's indemnities to the initial purchaser of the existing notes and additional notes.
22	Pay or reimburse the issuer for the optional modification costs.
23	Pay all other monetary obligations of the issuer under the operative agreements.
24	The remaining proceeds to the issuer.

Chart 8 shows the class A and B notes' scheduled target principal balances.

Chart 8

Class A and B notes' scheduled principal balances



Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Events Of Default

Under the transaction documents, each of the following constitutes an event of default.

Table 14

Events of default

No.	Event of default
1	A failure to pay timely interest on class A and B notes.
2	A failure to pay principal and unpaid interest on any notes by legal final maturity.
3	A failure to pay any other amount, to the extent that on the payment date there are funds available in the transaction accounts.
4	A failure by the issuer or sellers to comply with the covenants or conditions of the operative documents.
5	A material breach of the representations or warranties made by the issuer.
6	The issuer is subject to involuntary bankruptcy proceedings.
7	The issuer initiates voluntary bankruptcy proceedings.
8	An uninsured judgement exceeding \$10,000,000 is rendered against the issuer.

Table 14

Events of default (cont.)

No.	Event of default
9	The issuer is required to register as an investment company under the Investment Company Act of 1940.
10	The issuer or an authority with jurisdiction over the issuer asserts that any of the operative documents are invalid.
11	The servicer has been removed under a servicer termination event and goes unreplaced for over 180 days.
12	Written notice is provided to the trustee that the outstanding principal balance of the notes exceeds the value of the collateral and related transaction accounts.
13	An insurance manager default occurs under the insurance agreement and goes unremedied for 30 days.
14	The issuer sells or disposes of collateral other than as prescribed by the operative documents.

Early And Rapid Amortization Events

Early amortization

Under the transaction documents, an early amortization event will occur if any of the events or conditions listed below occurs on a payment date (and has not been cured or waived):

- The number of railcars that are subject to a lease is less than 80.00% of the total number of railcars; or
- The debt service coverage ratio is less than 1.05.

Rapid amortization

A rapid amortization event occurs if the class A and B notes have not been paid in full on or before the expected principal repayment date (November 2030).

Legal Matters

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

Surveillance

We use surveillance data to perform periodic reviews on all rated railcar securitizations to identify potential and emerging trends. Our ratings reflect our opinion of the transaction's ongoing risk profile. Our surveillance group undertakes a number of steps to determine whether the ratings assigned to a transaction continue to reflect our view of that transaction's performance. These steps include:

- Analyzing the servicer reports that detail the underlying collateral's performance;
- Making periodic telephone calls and holding meetings with the issuers' and servicers' key management personnel to identify any emerging trends or changes in servicing standards;

- Monitoring the supporting ratings on a transaction; and
- Keeping informed of related industry developments and events that may affect a rated transaction's overall performance.

We will continue to develop and provide performance information, research, and analysis to increase the level of transparency, as well as provide information on our methodology, ratings, and rated transactions' performance.

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
- Legal Criteria: Structured Finance: Asset Isolation And Special-Purpose Entity Methodology, March 29, 2017
- Criteria | Structured Finance | ABS: North America Railcar Lease-Backed ABS Methodology And Assumptions, June 2, 2016
- 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

Copyright © 2024 Standard & Poor's Financial Services LLC. All rights reserved.

No content (including ratings, credit-related analyses and data, valuations, model, software or other application or output therefrom) or any part thereof (Content) may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of Standard & Poor's Financial Services LLC or its affiliates (collectively, S&P). The Content shall not be used for any unlawful or unauthorized purposes. S&P and any third-party providers, as well as their directors, officers, shareholders, employees or agents (collectively S&P Parties) do not guarantee the accuracy, completeness, timeliness or availability of the Content. S&P Parties are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, for the results obtained from the use of the Content, or for the security or maintenance of any data input by the user. The Content is provided on an "as is" basis. S&P PARTIES DISCLAIM ANY AND ALL EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE, FREEDOM FROM BUGS, SOFTWARE ERRORS OR DEFECTS, THAT THE CONTENT'S FUNCTIONING WILL BE UNINTERRUPTED OR THAT THE CONTENT WILL OPERATE WITH ANY SOFTWARE OR HARDWARE CONFIGURATION. In no event shall S&P Parties be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs or losses caused by negligence) in connection with any use of the Content even if advised of the possibility of such damages.

Credit-related and other analyses, including ratings, and statements in the Content are statements of opinion as of the date they are expressed and not statements of fact. S&P's opinions, analyses and rating acknowledgment decisions (described below) are not recommendations to purchase, hold, or sell any securities or to make any investment decisions, and do not address the suitability of any security. S&P assumes no obligation to update the Content following publication in any form or format. The Content should not be relied on and is not a substitute for the skill, judgment and experience of the user, its management, employees, advisors and/or clients when making investment and other business decisions. S&P does not act as a fiduciary or an investment advisor except where registered as such. While S&P has obtained information from sources it believes to be reliable, S&P does not perform an audit and undertakes no duty of due diligence or independent verification of any information it receives. Rating-related publications may be published for a variety of reasons that are not necessarily dependent on action by rating committees, including, but not limited to, the publication of a periodic update on a credit rating and related analyses.

To the extent that regulatory authorities allow a rating agency to acknowledge in one jurisdiction a rating issued in another jurisdiction for certain regulatory purposes, S&P reserves the right to assign, withdraw or suspend such acknowledgment at any time and in its sole discretion. S&P Parties disclaim any duty whatsoever arising out of the assignment, withdrawal or suspension of an acknowledgment as well as any liability for any damage alleged to have been suffered on account thereof.

S&P keeps certain activities of its business units separate from each other in order to preserve the independence and objectivity of their respective activities. As a result, certain business units of S&P may have information that is not available to other S&P business units. S&P has established policies and procedures to maintain the confidentiality of certain non-public information received in connection with each analytical process.

S&P may receive compensation for its ratings and certain credit-related analyses, normally from issuers or underwriters of securities or from obligors. S&P reserves the right to disseminate its opinions and analyses. S&P's public ratings and analyses are made available on its Web sites, www.standardandpoors.com (free of charge), and www.ratingsdirect.com and www.globalcreditportal.com (subscription), and may be distributed through other means, including via S&P publications and third-party redistributors. Additional information about our ratings fees is available at www.standardandpoors.com/usratingsfees.