

Presale:

Stack Infrastructure Issuer LLC (Series 2023-1)

March 2, 2023

Preliminary Rating

Class	Preliminary rating(i)	Preliminary amount (mil. \$)	Maximum LTV (%) (ii)	Anticipated maturity (years)	Legal maturity (years)
A-2	A- (sf)	250.00	70	5	25

Note: This presale report is based on information as of March 2, 2023. The ratings shown are preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings. (i)The preliminary rating does not address post-ARD additional interest. (ii)Maximum allowable class A LTV, according to the transaction documentation. LTV--Loan-to-value ratio. ARD--Anticipated repayment date.

Profile

Expected closing date March 17, 2023.

Collateral Primarily the first mortgage liens on the asset entities' real property interests in the data centers; the security interests in the data centers' tenant leases, reserves, and escrows; the security interests in certain transaction accounts; and the equity interest in each of the asset entities.

Issuer Stack Infrastructure Issuer LLC.

Manager Stack Infrastructure Inc.

Servicer Midland Loan Services, a division of PNC Bank N.A.

Indenture trustee Wilmington Trust N.A.

Arrangers Morgan Stanley & Co. LLC, Guggenheim Securities LLC, and SMBC Nikko Securities America Inc.

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Advance Notice Of Proposed Criteria Change: Data Center Securitizations

S&P Global Ratings announced on Jan. 18, 2023, that it is reviewing its approach for analyzing securitizations backed by data centers, and it aims to develop and publish specific criteria for this type of securitization. The ratings S&P Global Ratings assigns to the notes could change as a result of that review, depending on the final criteria adopted and our assessment of the transaction. We cannot provide an estimated completion date for our criteria review at this time (see "Advance Notice Of Proposed Criteria Change: Data Center Securitizations," published Jan. 18, 2023, for more information).

Transaction Overview

Stack Infrastructure Issuer LLC's series 2023-1 class A-2 note issuance is a securitization of the real estate and tenant lease payments for space and the electrical capacity in Stack Infrastructure Inc.'s (STACK, or the manager) eight completed and operating wholesale data center campuses, which are located in seven states.

No new properties were added to the master trust since the series 2021-1 issuance. However, the aggregate appraisal value increased to approximately \$2.62 billion for series 2023-1 from \$2.13 billion for the series 2021-1 issuance due to increased constructed and leased capacity at the existing data centers, among other factors. The data centers comprise both turnkey and powered shell facilities. Since the properties located in San Jose, Calif. and Chicago are currently undergoing expansions, we only gave credit to the cash flow from the built and leased capacity.

The transaction's underlying collateral includes triple-net and modified gross leases. In triple-net lease arrangements, the tenant is responsible for operating expenses, taxes, insurance, and electricity expenses--in addition to the base rent. In modified gross leases, the tenant does not explicitly reimburse the landlord operating expenses (other than electricity), taxes, and insurance expenses, although those expenses are typically accounted for in the tenant's base rent rate.

Series 2023-1 will be Stack Infrastructure Issuer LLC's fifth issuance from the master trust, and the transaction shares collateral with the existing series 2019-1, 2019-2, 2020-1, and 2021-1 notes. STACK plans to use the proceeds to repay a portion of the outstanding balance on the series 2019-1 class A-2 notes and for other general corporate purposes. The table below shows the outstanding ratings on the master trust.

Outstanding ratings

Issue	Rating	Balance at issuance (mil. \$)	Current balance (mil. \$)	Anticipated maturity	Legal maturity
Series 2019-1 class A-1	A- (sf)	125.00	112.50(i)	Feb. 26, 2024	Feb. 25, 2044
Series 2019-1 class A-2	A- (sf)	725.00	696.00(ii)	Feb. 26, 2024	Feb. 25, 2044
Series 2019-2 class A-2	A- (sf)	225.00	225.00	Oct. 25, 2024	Oct. 25, 2044
Series 2020-1 class A-2	A- (sf)	325.00	325.00	Aug. 25, 2025	Aug. 25, 2045
Series 2021-1 class A-2	A- (sf)	400.00	400.00	March 25, 2026	March 26, 2046

(i) The maximum commitment on series 2019-1 class A-1 notes is \$125 million. (ii) The expected paydown for the series 2019-1 class A-2 notes ranges from \$184 million to \$193 million, and the balance is expected to be in the \$503 million to \$512 million range at closing.

The transaction features an approximately \$17 million liquidity reserve account at closing, funded by a combination of cash and letter of credit. It also has a cash trap trigger and an early amortization trigger at 1.30x and 1.20x three-month average amortization debt service coverage ratio (DSCR) levels, respectively. The series 2023-1 class A-2 notes have zero annual scheduled amortization, a five-year anticipated repayment date (ARD), and a 25-year legal maturity.

Most of the data centers in the portfolio are leased by hyperscale tenants, which typically require 500 kilowatts (kW) or more of capacity to operate their computing equipment and networks

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(consisting of racks and servers, network gear, electrical distribution, containment, and network wiring). These tenants typically manage server fleets measured in the hundreds of racks, and they choose to house their infrastructure in hyperscale data centers like the manager's in order to design and control their own network infrastructure and manage their costs without sharing allocated space with other customers.

In a turnkey tenant lease:

- The manager owns the critical mechanical and electrical infrastructure; provides space, physical security, power, and cooling; and maintains the power and cooling systems; and
- The tenants are fully responsible for all other aspects of their computing infrastructure.

In a powered shell tenant lease:

- The manager provides only the space with power and connectivity--it does not provide any additional offering with respect to backup power and cooling; and
- The tenant is responsible for the ongoing maintenance and capital expenditure for computing infrastructure, power, and cooling.

Rationale

The preliminary rating assigned to Stack Infrastructure Issuer LLC's series 2023-1 class A-2 data center revenue notes reflects

- Our view of the lease portfolio's projected performance,
- The real estate value,
- The manager's and the servicer's experience,
- The advances by the servicer or indenture trustee if deemed recoverable,
- The available cushion as measured by the estimated closing date DSCR of approximately 2.46x,
- The initial liquidity reserve of approximately \$17 million, which covers the higher of three months of note interest and 12 months of senior expenses, and
- The transaction's structure.

We rated the notes under our "Principles of Credit Ratings," criteria published Feb. 16, 2011, with certain stress assumptions borrowed from our triple-net ABS criteria "Methodology And Assumptions For Rating North American Single-Tenant Real Estate Triple-Net Lease-Backed Securitizations," published March 31, 2016. Wholesale data center leases are not in the scope of our triple-net ABS criteria due to the properties' multitenant nature and the fact that wholesale data center leases are not all triple-net, among other factors.

We amended several of our typical triple-net lease assumptions to consider the limited historical performance of the wholesale data center sector and the manager, the multitenant nature of the data centers, and the possibility for average tenant credit quality to decline over the transaction's life.

As part of our analysis, we also considered the potential risk related to the construction of the San Jose, Calif., and Chicago campuses. The construction in San Jose is scheduled to occur in four phases, three of which have been delivered to the tenant. The Chicago campus is undergoing an expansion to the existing campus. In our property underwriting and lease cash flow analysis, we

did not give credit to the capacity for which construction is not completed (see the S&P Global Ratings' Stress Scenario Assumptions section below for more detail).

Environmental, Social, And Governance (ESG) Credit Factors

Our rating analysis considered the potential exposure of the transaction to ESG credit factors. In our view, the transaction's exposure to ESG credit factors is in line with other transactions in the sector. Data center securitizations typically consist of a pool of data center properties and related leases with tenants.

Data centers are more exposed to environmental risks than other property types because physical climate risk could impact the building structure as well as access to power. This risk is exacerbated in pools with relatively high concentration by geography and number of properties. Nonetheless, the properties are designed to be resilient to prolonged power outages, and the geographic diversity of the collateral pool may partially mitigate these environmental risks.

The transaction's collateral pool consists of eight data center campuses located in seven states, a similar concentration to other rated data center securitizations. To mitigate risks from extreme weather events (such as flood or earthquake), fire and casualty events, or incidents of terrorism, tenants generally have insurance policies to mitigate the risk of natural disasters and damage-causing events.

Social credit factors are neutral for this sector because data centers are not as labor intensive and also are typically not subject to health and safety risks. Social trends towards working from home, online shopping, and increased digitization of workstreams all stand to support the growth and stability of data centers.

Governance credit factors for data center ABS are neutral. We considered STACK's strategy, risk management, and internal controls within our operational risk assessment framework. Given that collateral pools are typically static, the roles and responsibilities of each transaction party and the allocation of cash flows are well defined, and transactions are structured to achieve isolation of the assets from the seller. However, governance weaknesses at the property manager levels could still have a negative rating effect.

Key Rating Considerations

In our analysis, we considered the following strengths, weaknesses, and mitigating factors of the transaction.

Transaction strengths

We believe the transaction's strengths include the following:

- The relatively long contract terms, with a weighted average remaining term of 6.6 years (weighted by total annualized adjusted base rent [AABR]).
- The current tenants' high average credit quality (85.1% are investment grade [rated 'BBB-' and above] by AABR).
- The staggered lease maturities, which range from 2023 to 2035.
- The low historical customer churn rates, which are partly supported by the high cost of tenant relocation.

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- The leases' importance to the tenants' core businesses.
- The in-place lease rates are competitive with local market rates, with a weighted average lease rate of slightly over \$115 per kW per month for the turnkey data centers in the pool.
- The geographic diversity, with sites in Hillsboro, Ore.; San Jose, Calif.; Plano, Texas; Alpharetta, Ga., Elk Grove Village, Ill.; New Albany, Ohio; and Sterling, Va.
- The limited supply and strong demand for wholesale data center space in the data centers' respective markets.
- The strong management team, which has extensive experience in data center operations.
- The class A loan-to-value (LTV) ratio, which is constrained at 70% of the assets' appraised value.
- The draw conditions for the variable-funding notes, which require post-draw maintenance of a maximum LTV ratio of 70% and a minimum three-month average DSCR of 1.80x.
- The transaction's structural features, including performance tests that trigger cash trapping or early amortization if the DSCR drops below certain minimum thresholds.

Transaction weaknesses

We believe the transaction's weaknesses include the following:

- The limited tenant diversity: approximately 44% of the leased capacity and 35% of AABR is attributable to one tenant, and 75% of the total AABR is attributable to the top five tenants.
- The prospective tenant lease includes termination provisions if the additional constructed capacity is not completed within 90 days of the scheduled delivery.
- The limited industry diversity: most tenants are in various subsectors of the technology industry.
- The limited historical sector performance data: approximately 13 years for the wholesale data center segment.
- The limited historical manager performance data: the sponsor only has 10 years of operating history. We considered the potential disruption risk during an economic downturn in our operational risk assessment.
- The liquidity reserves, sized to approximately three months of note interest, could prove insufficient if a disruptive event, such as a natural disaster, rendered any of the data center campuses inoperable for an extended period of time.
- The lack of restrictions on the terms of future eligible leases, such as tenant credit quality, contract length, and optional termination features, which means the overall credit risk profile of the lease portfolio could erode over time.
- The potential for decreased data center demand: upon lease expiration, tenants with reduced needs could choose to migrate to the public cloud or other retail colocation data centers, while tenants with increased needs could opt to build, own, and operate their own data centers.
- The supply and demand conditions within the data centers' local markets could change adversely over time, driving down lease rates or driving up vacancy rates.
- The high current demand for data center operations personnel could make it expensive to replace current key members of the sponsor's leadership team, including the chief operating

officer and senior engineering team members.

Mitigating factors

The following factors partly mitigate the transaction's weaknesses:

- The high costs for tenants to move to alternative data centers, including time, redundancy (to avoid service interruption), and logistical expenses (moving or duplication of network gear, racks, servers, and related fit-out).
- The lack of penalty-free optional termination provisions in the leases (except for three existing leases, which represent less than 7% of the AABR and may exercise early termination under limited conditions).
- The underlying tenants' initial credit quality, with the largest tenant rated 'AAA' and comprising 55% of AABR (including its wholly owned subsidiary).
- The requirement that the issuer maintain comprehensive liability, fire, earthquake, extended coverage, business interruption, and rental loss insurance policies, which we expect to be compliant with the minimum requirements of our insurance criteria for U.S. and Canadian CMBS transactions.
- The decreased wholesale data center demand due to the migration of the manager's smaller tenants to the public cloud or retail colocation may be offset by increased demand from the manager's larger tenants, some of which are themselves retail colocation and public cloud providers.
- The manager's role as a provider of data center space to retail colocation and public cloud tenants, which may allow it to benefit from increased demand even as smaller tenants choose to migrate to colocation or public cloud data center providers.
- The servicer advancing interest, priority operating expenses, and maintenance capital expense, with a backup obligation by the indenture trustee, Wilmington Trust N.A.
- The stress scenarios performed in our cash flow analysis, which considered the pool's industry concentration, the limited industrial history, and the potential for downward migration in average tenant credit quality.

Wholesale Data Centers

Data centers are real estate facilities that house computer servers and network equipment within a highly secure environment with redundant mechanical, cooling, electrical power systems, and network connections. The wholesale data center operator (the manager of this transaction) is responsible for maintaining the facility's infrastructure, providing physical security, and re-leasing the sites' capacity as it becomes vacant. Wholesale tenants are entirely responsible for the maintenance and management of their racks, storage, and networking equipment.

Wholesale data centers place the entire responsibility for managing the tenant's network and equipment on the tenant, whereas retail colocation facilities, which tend to support tenants with shorter-term and smaller capacity needs, may offer varying levels of hands-on support and other services. In either model (wholesale or retail data center), the proper provision of uninterruptable power and cooling is critical to avoid any disruption in the tenant's business operations, especially those whose services necessitate consistent connection to their network through these data

centers.

Data center leases are structured in various ways, including triple-net and modified gross leases. Triple-net leases require tenants to reimburse the site manager for costs, including taxes, insurance, operating expenses, and electricity. Modified gross leases, on the other hand, only require the tenants to reimburse the manager for their electricity expense. Under both types of leases, tenants are responsible for all costs related to the provision, installation, and upkeep of their equipment and network connectivity. Triple-net and modified gross leases are expected to make up approximately 45% and 55% (by AABR), respectively, of the annualized base rent generated by the series 2023-1 portfolio as of closing, though this proportion could change over time as capacity is released to future tenants.

Industry Characteristics: Data Center Sector Outlook

We believe the exponential increase in data usage, broad migration to the cloud, and transition to a fully digitized economy will continue to shape demand for third-party operated data centers. Overall supply and demand is relatively balanced as new data center development has been constrained in certain markets by site availability, and lingering supply chain issues and more recently power capacity constraints.

Although we expect data centers to see some growth deceleration in a recessionary environment, we believe it will be mitigated by the critical nature of data centers. Against the high inflation backdrop, elevated raw material costs, coupled with rising cost of capital and possible material shortages, could slow the pace of expansion and medium-term revenue growth rates of data center operators.

Business Description: Stack

Stack is an owner, developer, and operator of large, multitenant wholesale data centers. It is owned by IPI Partners LLC, a joint venture sponsored by ICONIQ Capital LLC and Iron Point Partners LLC (the latter, a real estate fund manager formed in 2007). Stack has invested in the 16 multitenant wholesale data centers across 10 North American markets. Stack's management team has an average of over 20 years of experience. The company has a staff of roughly 30 employees, with teams dedicated to sales, legal, accounting, etc. The ABS portfolio includes over 138 megawatts of leased capacity and approximately \$188 million of annualized base rent in ABS.

Stack's customer base includes tenants across a range of sectors such as telecommunications, big data, media, cloud computing, and software.

Transaction Structure

Chart 1 shows an overview of the transaction's structure.

The issuer is a bankruptcy-remote, Delaware limited-liability company formed solely to hold the equity interests and to issue notes. The issuer will be a direct, wholly owned subsidiary of Stack Infrastructure Guarantor LLC, the guarantor, and an indirect wholly owned subsidiary of Stack Infrastructure Parent LLC, the parent. Each asset entity is a direct wholly owned subsidiary of the issuer. The issuer has granted a security interest in all of the equity interest in each asset entity to the indenture trustee on behalf of the noteholders as collateral security for the notes.

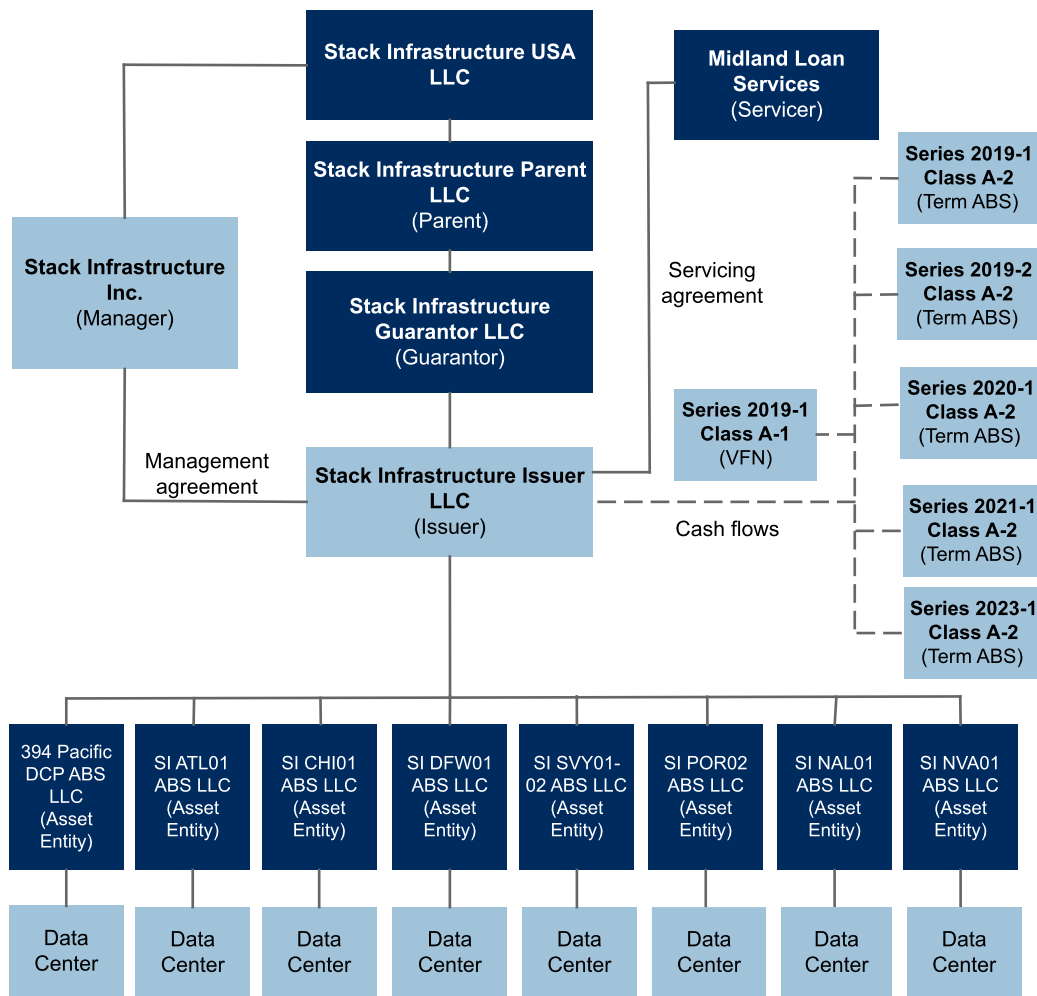
Series 2023-1 class A-2 notes is issued in addition to the existing series 2019-1, 2019-2, 2020-1

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and 2021-1 notes. The issuer may issue additional series of notes (subject to the satisfaction of certain conditions, including DSCR and LTV ratio tests) that are secured by the entire collateral pool. Future series issuance will share collateral within this master trust.

Chart 1

Transaction Structure



ABS--Asset-backed securities. VFN--Variable funding note.
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Pool And Structural Characteristics

Stack Infrastructure Issuer LLC's data center revenue notes series 2023-1 is a securitization of lease revenue, secured by fee simple ownership interests in seven operating wholesale data centers and one operating wholesale data center that is leased according to a tax abatement program (in which the related asset entity will obtain fee simple ownership by December 2025). The data centers are located in Portland, Ore.; Atlanta; Chicago; Dallas; San Jose, Calif.; New Albany, Ohio; and Sterling, Va. The operational data centers represent a total of 1.917 million square feet and 138 megawatts of leased capacity available to tenants to operate their servers

and computing equipment.

Table 1 shows comparisons of data center pools and their respective leases.

Table 1

Pool Characteristics

	Stack 2023-1	Stack 2021-1	Aligned 2022-1	Sabey 2022-1/2	Compass 2022-1	Vantage 2021-1
Appraised value of data centers (mil. \$)	2,621	2,134	2,626	2,002	1,131	3,636
No. of data center campuses	8	8	5	6	13	13
No. of tenants	26	26	32	92	5	14
S&P Global Ratings' value (mil. \$)(i)	1,327.00	1,032.00	1,279.00	833	452	1,609
S&P Global Ratings' weighted average cap rate (%) (iii)	8.7	8.8	8.7	8.8	9.1	8.8
CLP leased (kW)	138,305	128,895	161,466	76,082	43,525	157,900
Capacity ramped (kw)	118,680	84,385	130,308	69,430	34,911	148,750
Total potential CLP (kw)	143,980	133,980	162,000	81,849	43,525	175,700
Annualized adjusted base rent (AABR) (mil. \$)	187.6	143.4	174.0	120.9	55.1	236.6
Turnkey (%) (ii)	93.8	94.9	100.0	78.0	100.0	100.0
Powered Shell (%) (ii)	6.2	5.1	0.0	22.0	0.0	0.0
% leases triple-net(ii)	45.0	55.0	0.0	19.0	32.8	0.0
% leases modified gross(ii)	55.0	45.0	100.0	81.0	67.2	100.0
Weighted average original lease term (years) (weighted by AABR)	10.9	10.6	7.0	12.1	10.0	12.1
Weighted average remaining lease (years) (weighted by AABR)	6.6	7.0	5.0	6.3	5.6	9.0
Range of original lease (mos.)	36-183	12-200	36-144	36-294	53-182	36-240
Range of remaining lease (mos.)	12-145	10-162	1-120	1-155	3-168	1-167
Closing date DSCR	2.46	2.19	2.47	2.07	2.22	2.61

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Table 1

Pool Characteristics (cont.)

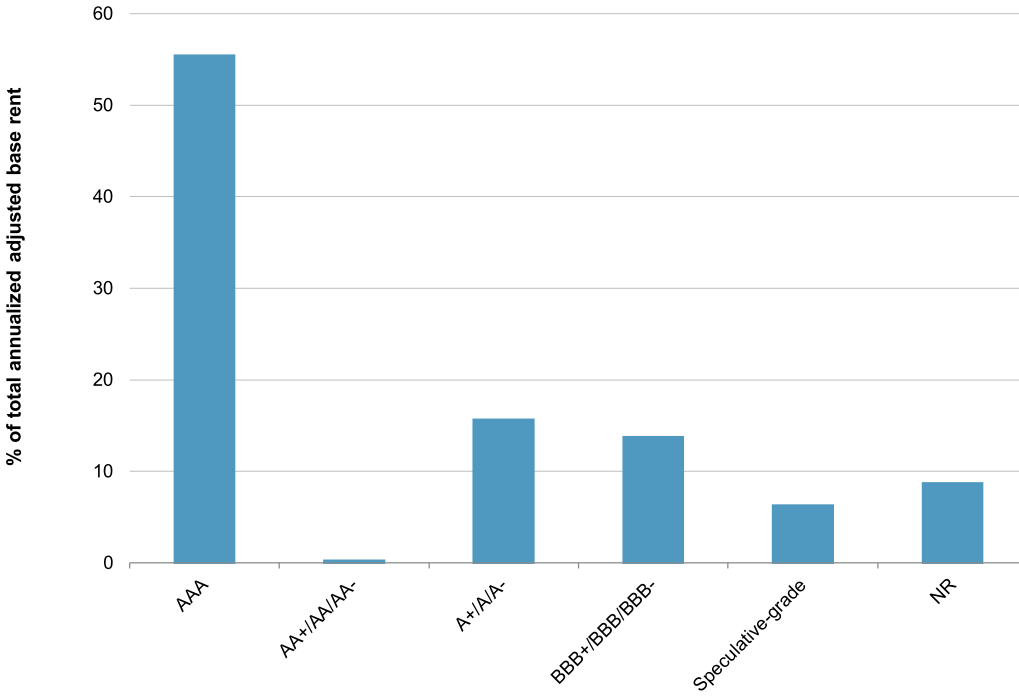
	Stack 2023-1	Stack 2021-1	Aligned 2022-1	Sabey 2022-1/2	Compass 2022-1	Vantage 2021-1
% of investment-grade tenants (ii)	85.1	70.9	62.2	69.3	67.2	89.8
Largest five tenants (% of AABR)	74.8	67.0	74.3	49.6	100.0	86.7
Largest five tenants(iii)	Tenant 1 (35.4%), tenant 2 (20.0%), tenant 3 (8.2%), tenant 4 (6.2%), tenant 5 (5.0%)	Tenant 1 (22.0%), tenant 2 (20.5%), tenant 3 (10.2%), tenant 4 (8.4%), tenant 5 (6.2%)	Tenant 1 (26.4%), tenant 2 (19.3%), tenant 3 (11.3%), tenant 4 (10.5%), and tenant 5 (6.9%)	Tenant 1 (15.9%), tenant 2 (12.7%), tenant 3 (9.0%), tenant 4 (6.0%), and tenant 5 (6.0%)	Tenant 1 (54.2%), tenant 2 (22.1%), tenant 3 (6.7%), tenant 4 (4.0%), and tenant 5 (12.9%)	Tenant 1 (58.7%), tenant 2 (12.7%), tenant 3 (5.6%), tenant 4 (5.3%), and tenant 5 (4.3%)
Largest three business sectors(ii)	Big data (46.4%), Media (20.0%), Telecommunications (12.7%)	Big data (37.9%), Media (22.5%), Telecommunications (15.5%)	Cloud (40.7%), tech (34.8%), and financial services (12.7%)	Technology (71.0%), health care (14.4%), and media (3.3%)	Hyperscaler (67.2%), colocation (28.8%), and enterprises (4.0%)	Cloud (63.1%), tech hardware (16.5%), and big data (6.2%)
State concentrations(ii)	California (28.2%), Illinois (20.1%), Texas (18.1%), Oregon (17.9%), Virginia (9.8%), Georgia (5.2%), Ohio (0.8%)	Texas (24.7%), Oregon (22.9%), Illinois (22.1%), California (14.0%), Virginia (8.3%), Georgia (7.1%), Ohio (0.9%)	Arizona (43.3%), Utah (25.1%), Virginia (24.2%), and Texas (7.5%)	Washington (80.8%), Virginia (11.0%), and New York (8.2%)	Quebec (54.2%), Ontario (12.9%), Texas (8.0%), Tennessee (7.3%), North Carolina (7.2%), Minnesota (6.7%), and Oklahoma (3.6%)	California (72.4%), Washington (13.5%), and Quebec (14.1%)

(i)Represents the liquidation value estimated in accordance with "CMBS Global Property Evaluation Methodology," published Sept. 5, 2012.
(ii)By annualized adjusted base rent. Aligned--Aligned Data Centers Issuer LLC. Compass--Compass Datacenters Issuer LLC. Sabey--Sabey Data Center Issuer LLC. Stack--Stack Infrastructure Issuer LLC. Vantage--Vantage Data Centers Issuer LLC. CLP--Critical load power.
DSCR--Debt service coverage ratio. kW--Kilowatt.

Charts 2-6 show additional details about the underlying portfolio.

Chart 2

Tenant Credit Rating



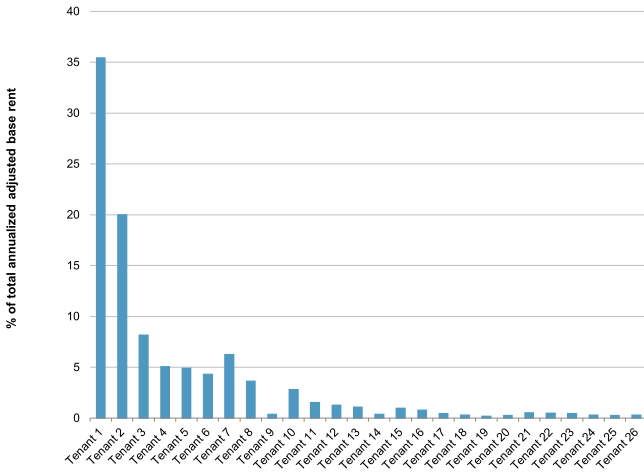
NR--Not rated.

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Chart 3

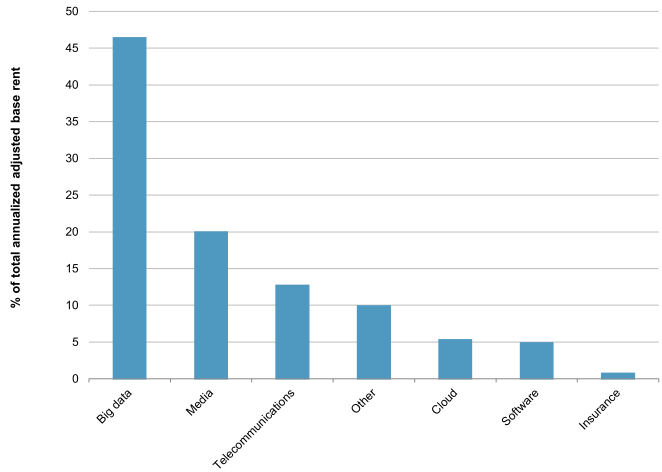
Portfolio Distribution By Tenant



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Chart 4

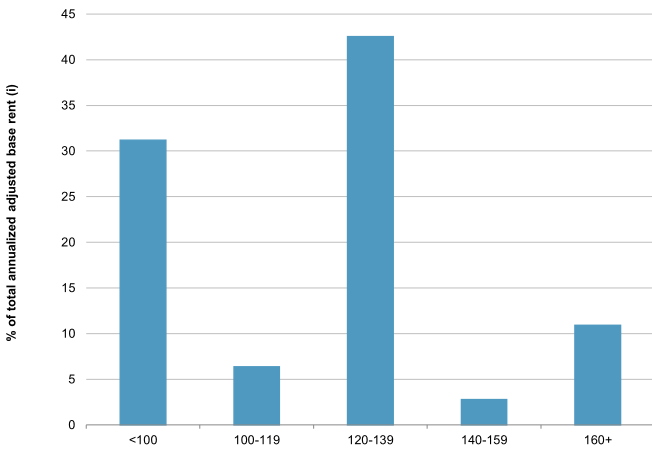
Portfolio Distribution By Industry



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Chart 5

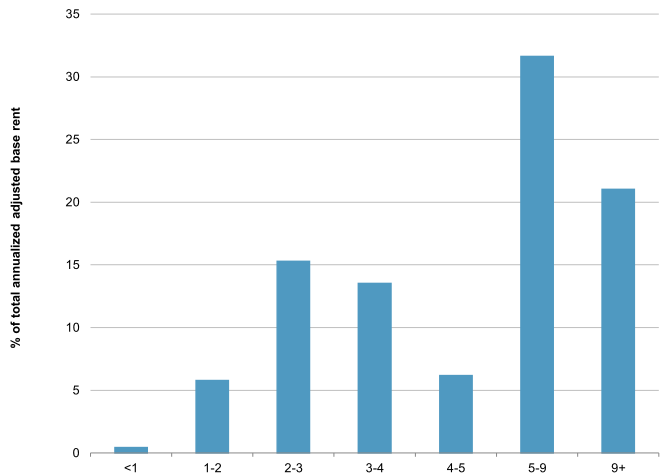
Portfolio Distribution By Monthly Rent (\$/kW)



(i)The concept of capacity leases in kW is not applicable to powered shell capacity. kW--Kilowatt.
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Chart 6

Portfolio Distribution By Remaining Term (Years)



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Manager Operating Duties

STACK, as the transaction's manager, will have certain operating duties specified in the management agreement. Those duties include:

- Marketing the data center space to new tenants;
- Negotiating and executing new tenant leases and renewals;
- Administering tenant leases, including invoicing rent and other receipts, and managing

- delinquencies and defaults;
- Maintaining insurance (including property, casualty, and business interruption);
- Paying real and personal property taxes;
- Keeping the data centers in compliance with applicable laws and regulations;
- Providing for necessary maintenance and arranging for utilities (including electricity), services, equipment, and supplies;
- Providing physical security to the data centers, including guards, fingerprint monitors, fencing, and other mechanisms to provide for the physical safety of tenants' infrastructure; and
- Managing capital improvements and other construction in connection with the leasing of site space.

The issuer will pay the manager a monthly management fee equal to 3.0% of the aggregate base rent as compensation for those duties (not including the operating and maintenance capital expenses, or powered shell tenant lease rent).

Manager Performance Obligation

For the turnkey arrangements in the portfolio, the tenant leases include service-level agreements (SLAs) that require the manager to provide uninterrupted levels of electricity, access, and cooling to the tenant. In support of that requirement, the manager maintains, as part of the data center infrastructure, backup batteries and generators that provide uninterrupted power in the event of temporary electric utility outages. Most SLAs provide remedies for the prolonged or repeated interruption of critical services.

These remedies are generally limited to the reimbursement of a portion of already-paid rent in proportion to the duration of the outage (although, in practice, no cash flows would be paid back to the tenant and would merely be netted against future rent obligations). Based on our assessment of the manager's operational procedures, the experienced management team, and the negligible number of SLA breaches during its operating experience, we believe SLA breaches represent a minimal risk to the cash flows.

Transaction Expenses

Transaction expenses, other than the management fee, fall into the three categories summarized in table 2. These expense categories are applied against the unreimbursed portion of the aggregate critical load power of the completed data centers.

Table 2

Expenses

Expense category	Payment priority	Expenses covered	Monthly budgeted expense amount
Priority expenses	First payment in application of funds	Taxes, insurance premiums; electricity (subsequently charged to the tenants); and, if applicable for future series, rents payable relating to any data center including any ground rents.	\$10.82 per kW for each data center, subject to an annual 2% escalator.

Table 2

Expenses (cont.)

Expense category	Payment priority	Expenses covered	Monthly budgeted expense amount
Operating expenses	Fifth payment in application of funds (following the payment of note interest)	Site labor operations, repairs and preventative maintenance, utilities (excluding electricity), and security.	\$53.06 per kw for New Albany and \$24.90 per kw for the other data centers, subject to an annual 2% escalator.
Maintenance capital expenses	Fifth payment in application of funds (following the payment of note interest)	Maintenance and replacement of batteries; capacitors (uninterruptable power supply), electrical switches, and generators; chiller plants; cooling towers, motors, and compressors; and other infrastructure components.	\$4.51 per kW for each data center, subject to an annual 2% escalator.

(i)Applied against aggregate critical load power of the completed data centers. Kw--Kilowatt.

Based on the manager's expense estimates, the expense estimates provided by the independent real estate appraiser in conjunction with the data center appraisals, and the comparable values we have seen in CMBS transactions, we believe the expenses budgeted for in the payment priority are adequate. Furthermore, in the Sensitivity Analysis section below, we assessed the break-even increase in operating and maintenance capital expenses (beyond the 2.0% annual escalation currently budgeted for in the transaction documentation) that the transaction can withstand while still paying timely interest and ultimate principal.

Payment Priority

The issuer is a bankruptcy-remote special-purpose entity that may, at a future date, issue additional series of notes (subject to satisfaction of certain conditions, including DSCR and LTV tests), secured by the entire collateral pool. Each month, available funds will first be used to pay expenses on the collateral pool in the priority shown in table 3.

Table 3

Collateral Pool Expense Waterfall

Priority	Payment
1	Priority expense reserve.
2	Prior payment dates' unpaid indenture trustee, servicing, and other servicing fees; then, unreimbursed advances and interest; and then, remaining unpaid indenture trustee, servicing, and other servicing fees.
3	Additional issuer expenses to the indenture trustee, servicer, and/or other applicable person so as not to exceed the annual additional issuer expense limit; and then the VFN agent fee.
4	Accrued note interest for all notes and accrued and unpaid commitment fees, as well as other fees, expenses and other amounts due to the VFN notes (including LOC fees).
5	Monthly expense amount to the obligors' excess of amounts drawn from the liquidity reserve for operating and maintenance capital expenditures or liquidity LOCs.
6	Unpaid management fee to the manager.
7	Operating expenses and maintenance capital expenditures for current calendar month in excess of amounts drawn from the liquidity reserve subaccount or liquidity LOCs, not including servicer-approved monthly expense amounts.
8	Required liquidity reserve amount.

Table 3

Collateral Pool Expense Waterfall (cont.)

Priority	Payment
9	If an amortization period is not then in effect and no event of default has occurred and is continuing, an amount equal to any class A LTV test sweep amount as of the application date.
10	If an amortization period is not then in effect, a cash trap condition is not then in effect, and no event of default has occurred and is continuing, an amount equal to the class A-2 monthly amortization amount for any series' class A-2 notes.
11	If an amortization period is not then in effect and no event of default has occurred and is continuing, the additional principal payment amount together with any applicable prepayment consideration.
12	If after the ARD for any series of outstanding VFN or term notes, an amortization period is not in effect and no event of default is continuing, the aggregate unpaid principal balance of the series' outstanding VFN notes or term notes.
13	If a cash trap condition is continuing and no event of default has occurred and is continuing, the remaining amount of available funds to the cash trap reserve subaccount.
14	During an amortization period or continuation of an event of default, the principal balance of all outstanding notes.
15	To the debt service subaccount until the amount on deposit is equal to the amount of contingent interest, deferred contingent interest, post-ARD additional interest, and deferred post-ARD additional interest due to the notes for the relevant payment date.
16	Additional issuer expenses not paid in item 3 due to the annual additional issuer expense limit plus accrued interest to the indenture trustee, servicer, and/or other applicable person.
17	Operating expenses and maintenance capital expenditures of the asset entities not paid in items 5 and 7.
18	Executed forward starting lease reserve subaccount and/or qualifies new amount at the direction of the manager.
19	Optional payments on the principal to the class A-1 noteholders at the issuer's direction.
20	Manager-determined amounts to the capital expenditures reserve subaccount.
21	Unreimbursed advances, including advance interest, to the manager.
22	The remaining available funds to the issuer.

VFN--Variable-funding note. ARD--Anticipated repayment date. LOCs--Letters of credit. LTV--Loan-to-value.

The transaction features a liquidity reserve account of approximately \$17.0 million at closing, \$12.5 million of which is supported by a letter of credit issued from the series 2019-1 class A-1 VFN. The liquidity reserve is sized to cover the greater of three months of note interest or 12 months of priority expense and maintenance capital expenses.

A cash trap condition will occur if the three-month average amortization DSCR is less than 1.30x (the cash trap amortization DSCR), and it will continue until it is above 1.30x for two consecutive determination dates. During a cash trap condition, excess cash flow otherwise payable to the issuer will be diverted to the cash trap reserve subaccount.

An amortization period will occur if the three-month average amortization DSCR is less than 1.20x (the minimum amortization DSCR), and it will continue until it is above 1.20x for two consecutive determination dates. During an amortization period, or after and during an event of default, all excess cash flow will be applied to the aggregate unpaid principal amount of the notes sequentially across classes and pro rata among outstanding notes of the same class.

The amortization DSCR is calculated as the ratio of the annualized adjusted net operating income to mandatory debt service, where mandatory debt service consists of interest on the class A notes

to be paid over the succeeding 12 payment dates plus 30-year mortgage-style principal that would be paid over the succeeding 12 periods if class A note principal payments were determined assuming a 30-year remaining term and an interest rate equivalent to the blended average rate of all outstanding class A notes.

The servicer must make interest advances on the notes, if deemed recoverable. The advances are meant to cover any shortfalls resulting from timing mismatches because of missed lease payments and any interest shortfalls. This requirement excludes make-whole amounts, post-anticipated repayment date (ARD) additional interest, and deferred post-ARD additional interest. If the servicer fails to make an advance, the indenture trustee must make the advance in its place. These requirements for advances serve as a form of liquidity for the notes. Nevertheless, we do not give credit to the servicer advances in our cash flow analysis.

S&P Global Ratings' Stress Scenario Assumptions

To determine the appropriate preliminary ratings for the series 2023-1 notes, we analyzed the transaction's cash flows utilizing stress assumptions derived in part from our criteria for rating single-tenant real estate triple-net lease-backed securitizations. We ran various cash flow scenarios to test the transaction's sensitivity to changes in default timing, given the transaction's credit enhancement (see "Methodology And Assumptions For Rating North American Single-Tenant Real Estate Triple-Net Lease-Backed Securitizations," published March 31, 2016).

We believe the risk to the cash flow generated from the portfolio of data centers and their associated leases stems from several major factors:

- Defaults of the initial pool of tenants (the lessees);
- The property manager's ability to fill the vacant space at a comparable lease rate upon a lessee default or lease expiration;
- The lease terms for new tenants (rental rate and lease term);
- The new tenants' credit profile; and
- The data centers' liquidation value may decline as the transaction approaches its legal final maturity date.

For this transaction, we made the following primary modifications to our triple-net lease criteria to address the differences between triple-net and wholesale data center leases, as well as the data centers' relative lack of performance history:

- We did not assume any lease acceptance in the bankruptcy proceedings for defaulted tenants, given the lack of historical observations of defaulted wholesale data center tenants.
- We did not assume property liquidations before the 12-month window before the transaction's legal final maturity for a portion of the defaulted lease pool as we typically would for triple-net leases because the data centers are multi-tenant. We believe it would likely be more economical for the manager to continue operating the centers rather than liquidate them, even during periods of high vacancy rates.
- For tenants not rated by S&P Global Ratings, we assumed a 'CCC-' rating rather than the typical 'B' rating specified in the triple-net lease criteria. This assumption was driven by the wholesale data sector's lack of performance data.
- Given the lack of eligibility requirements for future tenants' credit quality, we assumed that during the second default wave, the tenant pool will have migrated from its current average

credit quality down to an average 'CCC-' credit quality.

- Given the limited history of wholesale data lease rates and the uncertainty around future supply and demand conditions, we applied re-lease haircuts for both performing and defaulted leases that are consistent with those that are one rating category above the haircut rates specified in the criteria. For example, at the 'A' category, we would assume a 20% loss in rental income upon lease renewal for a performing lease rather than the 15% specified in the criteria. Similarly, at the 'A' category we would assume a 35% haircut to re-lease rental rates post-default for defaulted leases rather than the 30% specified in the criteria.

We applied two waves of default and used S&P Global Ratings' CDO Evaluator to determine the initial collateral pool's scenario default rate, with the following assumptions:

- For the first default wave: the initial lessee's issuer credit rating from S&P Global Ratings or 'CCC-' for unrated lessees;
- For the second default wave: 'CCC-' for the entire portfolio;
- The allocated collateral value per lease, calculated as each lease's total remaining scheduled payments;
- The current remaining terms of the leases; and
- The higher of the portfolio default rate and the largest obligor default rate.

We determined the portfolio's property liquidation value using our commercial real estate methodology (see "CMBS Global Property Evaluation Methodology," Sept. 5, 2012). We assumed rental income based on the in-place leases, the appraiser's estimate of market rent, and recent leasing data from the market and then applied a vacancy deduction to the potential gross income. We estimated expenses and expense reimbursements based on information from the appraisal reports and comparable properties. These expenses included fixed items such as real estate tax and insurance, estimated management fees, and variable expenses, which were reimbursed in our income projections. We determined net cash flow after deducting estimated leasing commissions, tenant improvement expenses, and capital reserves and expenditures, based on projected lease roll assumptions. We selected direct capitalization rates, based on factors such as appraisal and market capitalization rates, property performance and tenant strengths, and property location.

Table 4 shows a summary of stress assumptions.

Table 4

Cash Flow Assumptions

Stress level (%)	A-
Standard scenario default rate (%)	
Portfolio scenario default rate (default wave 1)(i)	22.7
Portfolio scenario default rate (default wave 2)(i)	93.8
Nondefaulting leases (%)	
Lease rate credit upon renewal	81.7
Defaulting leases (%)	
Accepted in bankruptcy (%)	0
Rejected in bankruptcy and re-leased	100

Table 4

Cash Flow Assumptions (cont.)

Rejected leases – Re-leased

Re-lease lag (months) – turnkey	12
Re-lease lag (months) – powered shell	18
Lease rate credit (%)	66.7
Liquidation proceeds (\$)	1,327,631,421

(i) We select the higher of the standard default rate and the largest-obligor test for each wave.

Cash Flow Analysis

We used various simulated cash flow scenarios to determine whether the available credit support is sufficient to withstand the assumed losses. In each scenario, we applied the cumulative effects of the assumptions outlined in table 4 with four default timing curves, where the first default wave starts in year one, the second default waves starts in year 16, and final liquidation starts one year before the notes' earliest legal final maturity date (see table 5).

In each scenario, assuming the maximum commitment of \$125 million on the VFN, the notes paid timely interest and full principal by their rated final maturity, and there were no deferred expenses (priority, operating, or maintenance capital expenses). Although the transaction documents require the servicer or indenture trustee to make advances on interest payments (if deemed recoverable), no advances were assumed in the cash flow modeling scenarios.

Table 5

Default Curves

Year	Curve 1 (%)	Curve 2 (%)	Curve 3 (%)	Curve 4 (%)
1	40	10	10	15
2	10	10	10	15
3	10	10	10	15
4	10	40	10	15
5	10	10	10	15
6	10	10	10	15
7	10	10	40	10

Sensitivity Analysis

Assuming a base-case scenario in which we assumed contractual cash flows with no losses and renewals at the same lease rate following the initial lease term, we ran several break-even cash flow runs to measure the transaction's ability to withstand decreases in revenue or increases in expenses.

Sensitivity run 1: gross revenue reduction stress

We found that the transaction could withstand a 37% reduction in monthly gross revenue and still pay timely interest and full principal by the rated final maturity.

Sensitivity run 2: maintenance capital expense stress

We found that the transaction could withstand 10x increases in monthly budgeted maintenance capital expenses and still pay timely interest and full principal by the rated final maturity.

Sensitivity run 3: priority expense, operating expense, and maintenance capital expense stress

We found that the transaction could withstand 11% annual escalations of priority expenses, operating expenses, and maintenance capital expenses (instead of the 2% assumed in the rating scenario) and still pay timely interest and full principal by the rated final maturity.

Legal Structure

The issuer is a bankruptcy-remote, Delaware limited-liability company formed solely to hold the equity interests and to issue notes. The issuer will be a direct wholly owned subsidiary of the guarantor and an indirect wholly owned subsidiary of Stack Infrastructure Parent LLC.

We expect the issuers' special-purpose entity provisions to be consistent with our bankruptcy-remoteness criteria. In rating this transaction, we will review the legal matters we believe are relevant to our analysis, as outlined in our criteria.

Surveillance

We will maintain active surveillance on the rated notes until the notes mature or are retired. The purpose of surveillance is to assess whether the notes are performing within the initial parameters and assumptions applied to each rating category. The transaction terms require the issuer to supply periodic reports and notices to S&P Global Ratings for maintaining continuous surveillance on the rated notes.

Related Criteria

- Criteria | Structured Finance | ABS: Advance Notice Of Proposed Criteria Change: Data Center Securitizations, Jan. 18, 2023
- 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

Presale: Stack Infrastructure Issuer LLC (Series 2023-1)

- Criteria | Structured Finance | General: Counterparty Risk Framework: Methodology And Assumptions, March 8, 2019
- Criteria | Structured Finance | ABS: Methodology And Assumptions For Rating North American Single-Tenant Real Estate Triple-Net Lease-Backed Securitizations, March 31, 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

Related Research

- Economic Outlook U.S. Q1 2023: Tipping Toward Recession, Nov 28, 2022
- Credit FAQ: How U.S. Data Centers Are Navigating Inflation And Recession Risks, July 21, 2022
- ESG Credit Indicator Report Card: Real Estate, Dec. 14, 2021
- Field Of Data Streams: If You Build It, They Will Come, Sept. 20, 2019
- Cloud Disruption: Cloud Adoption And Digital Transformation Are Positives For The Data Center Industry, Sept. 7, 2018
- Despite Continued Growth, U.S. Data Centers May Face Long-Term Risks From Financial Pressures And Uncertain Tech Developments, Oct. 30, 2017
- Global Structured Finance Scenario And Sensitivity Analysis 2016: The Effects Of The Top Five Macroeconomic Factors, Dec. 16, 2016
- Credit FAQ: Analyzing The Real Estate Characteristics Of Data Centers, July 25, 2016

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