Presale:

GSMS 2019-GC42

September 10, 2019

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Preliminary Ratings

Class(i)	Preliminary rating	Preliminary amount ($)	CE (%)
A-1	AAA(sf)	11,528,000	30.000
A-2	AAA(sf)	117,422,000	30.000
A-3	AAA(sf)	TBD	30.000
A-4	AAA(sf)	TBD	30.000
A-AB	AAA(sf)	20,849,000	30.000
X-A	AAA(sf)	823,402,000	N/A
X-B(iv)	NR	89,332,000	N/A
A-S	AAA(sf)	98,394,000	20.500
B	AA-(sf)	45,313,000	16.125
C	NR	44,019,000	11.875
D(iv)	NR	28,482,000	9.125
X-D	NR	50,491,000	N/A
E(iv)	NR	22,009,000	7.000
F-RR(iv)	NR	22,010,000	4.875
G-RR(iv)	NR	10,357,000	3.875
H-RR(iv)	NR	40,134,720	0.000
VRR(iv)	NR	27,400,000	N/A

Note: This presale report is based on information as of Sept. 10, 2019. 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. (i)The certificates will be issued to qualified institutional buyers according to Rule 144A of the Securities Act of 1933. (ii)The final balances of the class A-3 and A-4 certificates will be determined at final pricing. The certificates in aggregate will have a total balance of $575.209 million. The class A-3 certificates are expected to have a balance between $100.0 million and $270.0 million, and the A-4 certificates are expected to have a balance between $305.209 million and $575.209 million. The initial certificate balance of each class of the class E and F-RR certificates and the initial notional amount of the class X-D certificates are subject to change, based on final pricing of all certificates and the final determination of the fair market value of the class F-RR, G-RR, and H-RR certificates (collectively, the "HRR certificates"), which will be retained by the third-party purchaser in partial satisfaction of the retention obligations of Goldman Sachs Mortgage Company in its capacity as "retaining sponsor" (as defined under Regulation RR). (iii)Notional balance. The notional amount of the class X-A certificates will be equal to the aggregate certificate balance of the class A-1, A-2, A-AB, A-3, and A-4 certificates. The notional amount of the class X-B certificates will be equal to the aggregate certificate balance of the class A-S and B certificates. The notional amount of the class X-D certificates will be to the aggregate certificate balance of the class D and E certificates. (iv)Non-offered certificates. CE--Credit enhancement. NR--Not rated. TBD--To be determined. N/A--Not applicable.

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Profile

Expected closing date	Sept. 27, 2019.
Collateral	Thirty-six commercial mortgage loans with an aggregate principal balance of $1.06 billion ($912.734 million of offered certificates), secured by the fee and leasehold interests in 94 properties across 22 states.
S&P Global Ratings pooled trust LTV	93.7% (based on S&P Global Ratings' NCF and weighted average capitalization rate of 7.82%).
S&P Global Ratings pooled trust DSC	2.18x (based on S&P Global Ratings' NCF and the actual debt service payable on the mortgage loans).
S&P Global Ratings pooled trust debt yield	8.70% (based on S&P Global Ratings' NCF and the loan balances for the mortgage loans).
Payment structure	The transaction is structured to comply with risk retention requirements by way of an eligible vertical and horizontal residual interest, which includes the class F-RR, G-RR, and H-RR certificates. The VRR interest provides credit support only to the limited extent that it is allocated a portion of any losses incurred on the underlying mortgage loans. These losses are allocated between the VRR interest and the certificates, pro rata, according to their respective percentage allocation entitlements. The total required credit risk retention percentage for this transaction is 5.0%. On each distribution date, interest accrued for each class of certificates at the applicable pass-through rate will be distributed in the following priority, if funds are available: to the class A-1, A-2, A-AB, A-3, A-4, X-A, and X-B certificates, pro rata, based on their respective entitlements to interest for that distribution date, and then to the class A-S, then B, then C, then D, then E, then F-RR, then G-RR, and then H-RR certificates until interest payable to each class is paid in full. Principal payments on the certificates will be distributed to the class A-AB certificates until the balance is reduced to the planned principal balance for that distribution date, and then sequentially to the class A-1, A-2, A-3, A-4, A-AB, A-S, B, C, D, E, F-RR, G-RR, and H-RR certificates until each class' balance is reduced to zero. If the class A-S through H-RR certificates' total balance has been reduced to zero, principal payments on the certificates will be distributed to the class A-1, A-2, A-AB, and A-4 certificates, pro rata, based on each class' certificate balance. Losses will be allocated to each class of certificates in reverse alphabetical order starting with the class H-RR certificates through and including the class A-S certificates and then to the class A-1, A-2, A-3, A-AB, and A-4 certificates, pro rata, based on each class' certificate balance. The class X-A certificates' notional amount will be equal to the aggregate certificate balance of the class A-1, A-2, A-AB, A-3, and A-4 certificates. The class X-B certificates' notional amount will be equal to the aggregate certificate balance of the class A-S, B, and C certificates. The class X-D certificates' notional amount will be equal to the aggregate certificate balance of the class D and E certificates.
Depositor	GS Mortgage Securities Corporation II
Mortgage loan sellers and sponsors	Goldman Sachs Mortgage Company, Citi Real Estate Funding Inc., German American Capital Corporation
Master servicer	Midland Loan Services, a division of PNC Bank
Special servicer	Midland Loan Services, a division of PNC Bank
Trustee and certificate administrator	Wells Fargo Bank NA

LTV--Loan-to-value ratio, which is based on S&P Global Ratings' values. DSC--Debt service coverage. NCF--Net cash flow. TBD--To be determined.

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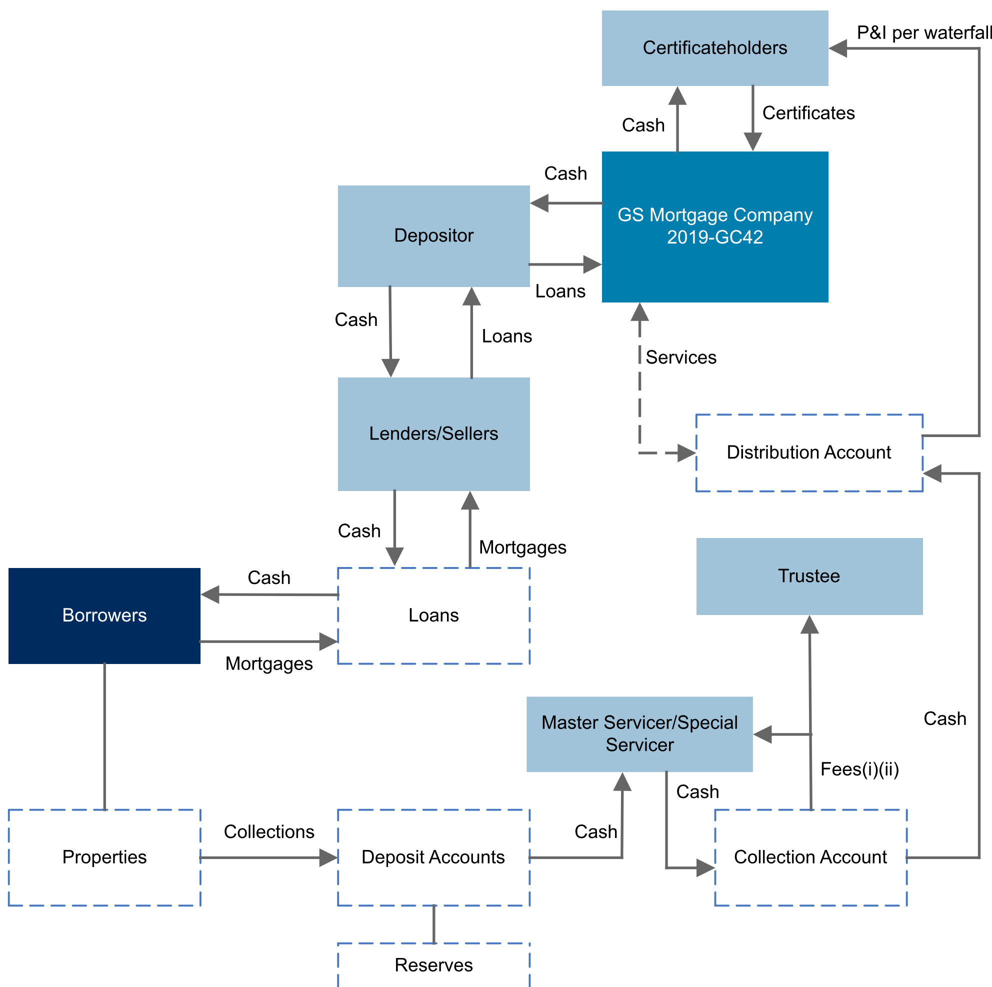
Rationale

The preliminary ratings assigned to the Goldman Sachs Mortgage Company 2019-GC42's commercial mortgage pass-through certificates reflect the credit support provided by the transaction's structure, our view of the underlying collateral's economics, the trustee-provided liquidity, the collateral pool's relative diversity, and our overall qualitative assessment of the transaction. S&P Global Ratings determined that the collateral pool has, on a weighted average basis, debt service coverage (DSC) ratio of 2.18x and beginning and ending loan-to-value (LTV) ratios of 93.7% and 90.9%, respectively, based on our values.

Transaction Overview

The chart shows an overview of the transaction's structure, cash flows, and other considerations.

Transaction Structure



(i)Special servicing, liquidation, and workout fees. (ii)Includes reimbursements. P&I--Principal and interest.

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Strengths

The transaction exhibits the following strengths:

- The pool is geographically diverse, with 94 properties spread across 22 states. The largest concentration is in Texas (18 properties, 18.3% of the pooled trust balance), followed by New York (six properties, 17.3%) and California (seven properties, 16.0%). No other state accounts for more than 7.2% of the pooled trust balance.
- The transaction has a high weighted average S&P Global Ratings' DSC ratio of 2.18x based on actual debt service and, for the partial-term interest-only loans, the debt service due when the interest-only period expires. Nevertheless, the prevailing low interest rate environment influences this DSC ratio, and any increase in interest rates could affect the loans' ability to refinance at maturity. Our DSC ratios for the pool range from 1.27x-3.97x.
- The transaction has a strong concentration of properties in primary markets, specifically within relatively strong metropolitan statistical areas (MSAs), including New York, Cleveland, and Tampa. Of the pooled trust balance, 52.9% is located in primary markets (as defined by S&P Global Ratings) and 32.0% in secondary markets. The remaining properties (15.2%) are located in tertiary markets.
- The transaction is well-diversified by loan balance, with an effective loan count (as measured by the Herfindahl Index) of 26.6. The 10 largest loans represent 50.6% of the pooled trust balance. More diversified transactions can be less susceptible to volatility in default and loss rates due to their reduced exposure to loan-related event risk, such as lease rollover, tenant bankruptcy, or changes in local market conditions. The effective loan count was one of the key factors in our derivation of credit enhancement for this transaction.
- The loan pool has a relatively diverse mix of property types. Of the pooled trust balance, 42.1% is backed by office properties, 14.7% by retail properties, 13.6% by mixed-use properties, 12.8% by industrial properties, 11.2% by multifamily properties, 4.6% by lodging properties, and 0.9% by self-storage.
- Thirty-six loans (100.0% of the pooled trust balance) have borrowers that are structured as special-purpose entities (SPEs). Thirty-three loans (93.6%) provided lenders with non-consolidation opinions, including all of the top 10 loans.
- Thirty-five of the loans (97.2% of the pooled trust balance) have some form of lockbox: 23 loans (76.6%) are structured with a hard lockbox, 10 loans (12.2%) with springing lockboxes, two loans (8.4%) with soft lockboxes, and one loan (2.8%) with a hybrid lockbox. Six loans (22.8%) have in-place cash management, and 30 loans (77.2%) are structured with springing cash management.
- Eighteen loans (48.6% of the pooled trust balance) represent acquisition or acquisition/recapitalization financing. Although some of these loans have limited operating data due to their recent acquisition, the loans benefit from the recent equity contribution by their sponsors. The weighted average LTV ratio for these loans, based on the appraiser's "as-is" value, was 60.0%, reflecting average equity contribution of 40.0% for these loans.
- Ten loans (27.4% of the pooled trust balance) are secured by multiple properties, ranging from two to 30 properties, which may lessen their net cash flow (NCF) volatility. However, some of these portfolio loans include properties located within the same city or state, which limits their geographic diversification. Additionally, 15 of the loans (41.7%) allow for property releases, subject to various conditions, which may reduce the diversity benefit from these loans.

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Risk Considerations

We considered these risks when analyzing this transaction:

- The transaction has high leverage, with a weighted average LTV ratio of 93.7% based on S&P Global Ratings' values. The LTV ratio was one of the primary factors in S&P Global Ratings' derivation of credit enhancement levels for this transaction.
- Twenty-six loans (81.7% of the pooled trust balance) are interest-only for their entire loan terms, including nine of the top 10 loans (47.2%). The interest-only loans have a lower weighted average S&P Global Ratings LTV ratio of 91.8%, and nine loans (33.2%) have LTV ratios over 100%. Five loans (8.8%) have a partial interest-only period, including one of the top 10 loans, and five loans in the pool (9.5%) are structured as amortizing loans. The transaction is scheduled to amortize 3.2% through maturity. S&P Global Ratings considered loan amortization characteristics when assigning credit enhancement levels to the individual loans and the transaction.
- Eight loans (14.7% of the pooled trust balance) are secured by retail assets. The U.S. retail sector has been facing numerous challenges over the past several years given the continued growth of e-commerce, increasing consumer price sensitivity due to stagnating wage growth, and changing consumer tastes. These trends have resulted in declining sales, store closures, and smaller average store sizes for many national retailers. However, brick-and-mortar retail stores in well-situated class A malls and within shopping centers, as well as freestanding properties that are located in infill locations near major transportation nodes and in areas with strong demographic profiles, continue to prosper. Low supply growth in recent years may help keep vacancy levels at their currently low levels and boost rent growth. Two of the eight retail loans (4.7% of the pooled trust balance) are secured by a property located in a tertiary location, and one of the loans is considered an unanchored retail loan (0.7%).
- Three loans (4.6% of the pooled trust balance) are secured by lodging assets. S&P Global Ratings considers lodging properties among the riskiest property types because their pricing structure changes daily, they have a significant underlying operating business, and they have a higher expense ratio relative to other property types. Additionally, the lodging properties in this transaction have a high S&P Global Ratings weighted average LTV ratio of 106.4%.
- Fifty-nine properties (43.3% of the pooled trust balance) are leased to a single tenant. The largest of these is Moffett Towers II Buildings 3 & 4 (6.2%), a San Jose, Calif., office property, which is 100% leased to Facebook through July 6, 2029. The other 58 properties account for 37.1% of the pool balance.
- Seventeen loans in the pool (63.5% of the pooled trust balance) have a pari passu component; one loan (1.9% of the pooled trust balance) has a subordinated first-mortgage loan components in addition to its senior trust and pari passu loan components. In addition, five loans (24.9%) permit the borrower to incur future mezzanine debt.
- The transaction documents include provisions for the transaction parties to seek rating agency confirmation (RAC) that certain actions will not result in a downgrade or withdrawal of the then-current ratings on the securities. The definition of RAC in the transaction documents includes an option for the transaction parties to deem their RAC request satisfied if, after having delivered a RAC request, the transaction parties have not received a response to the request within a certain period of time. We believe it is possible for a situation to arise where an action subject to a RAC request would cause us to downgrade the securities according to our ratings methodology, even though a RAC request is deemed to be satisfied pursuant to this

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option.

Pool Characteristics

Collateral description

The pool contains 36 loans that are secured by first-mortgage liens on the fee and leasehold interests in 94 properties. The top five and 10 loan concentrations represent 28.8% and 50.6% of the pooled trust balance, respectively. (See table 9 for a detailed description of the 10 largest loans in the pool.)

Property type distribution

The top two property types in the pool are office assets, which accounts for 42.1% of the pooled trust balance, and retail, which accounts for 14.7% (see table 1).

Table 1

Property Type Composition

Type(i)	No. of loans	Pooled trust balance (mil. $)	% of pooled trust balance	Weighted average S&P LTV ratio (%)	Weighted average S&P DSC ratio (x)
Office	11	446.9	42.1	97.4	2.18
Retail anchored	7	148.7	14.0	96.2	2.13
Industrial	4	136.2	12.8	84.0	2.51
Multifamily	3	119.0	11.2	102.0	1.74
Mall	2	70.0	6.6	53.1	3.03
Other	2	61.2	5.8	102.4	2.10
Lodging	3	48.5	4.6	106.4	1.59
Single tenant--non-investment-grade	1	12.5	1.2	81.5	2.34
Self-storage	2	9.9	0.9	104.3	1.38
Retail unanchored	1	7.5	0.7	102.8	1.78
Total	36	1060.4	100.0	93.7	2.18

(i)Based on S&P Global Ratings' classification. LTV--Loan-to-value. DSC--Debt service coverage.

Geographic distribution

The pool consists of properties that are located in 22 states. Of these properties, 51.6% (by pooled trust balance) are located in three states: Texas, New York, and California. The top five states represent 65.4% of the pooled trust balance.

As part of our property analysis, we classify the MSA in which each property is located as primary, secondary, or tertiary. Generally, primary markets have higher barriers to entry than secondary

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and tertiary markets. The nature of each market type affects capitalization rates and valuation dynamics, and can influence the timing and amount of liquidation proceeds if a mortgage loan is foreclosed. (See table 2 for the pool's distribution by state and market type.)

Table 2

Geographic Concentrations

			Market type (%)		
State	**Pooled trust balance (mil. $)**	**No. of properties**	**Primary**	**Secondary**	**Tertiary**
Texas	194.3	18	38.2	36.0	25.7
New York	183.5	6	100.0	-	-
California	169.9	7	75.8	12.8	11.5
Ohio	76.9	8	-	100.0	-
Florida	68.6	6	-	98.5	1.5
Virginia	61.2	7	100.0	-	-
New Jersey	54.7	1	100.0	-	-
Colorado	48.5	3	-	100.0	-
South Carolina	43.2	7	-	54.9	45.1
Illinois	37.1	5	87.6	-	12.4
Other states--12	122.6	26	20.8	25.2	53.9
Total	1060.4	94	52.9	32.0	15.2

Borrower concentration

The largest borrower sponsors in the pool are Jay Paul Company (one loan; 6.2% of the pooled trust balance) and William Z. Hertz, Isaac Herz, and Sarah Hertz (one loan; 6.2%).

Three groups of loans have related borrower-sponsors:

- BREIT Operating Partnership L.P. is the sponsor for the Powered Shell Porfolio–-Manassas and the Powered Shell Portfolio-–Ashburn, which account for 6.6% of the pooled trust balance combined;
- Brookfield Property Reit Inc. is the sponsor for Woodlands Mall and Grand Canal Shoppes, which account for 5.7% of the pooled trust balance combined; and
- George Thacker, Lawrence Charles Kaplan, and Richard Schontz are the sponsors for the GA & KY Self Storage Portfolio and the Cypresswood Self Storage loans, which account for 1.0% of the pooled trust balance combined.

Single-tenant properties

There are 59 properties in 11 loans (38.5% of the pooled trust balance) that are backed by properties that are leased to a single tenant. Nine loans and 41 properties (30.2%) have lease terms that exceed the loan maturity date while the remainder of the properties have leases that expire before the loan matures (see table 3).

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Table 3

Single-Tenant Properties

Property	Tenant	Tenant S&P rating	Pooled trust balance (mil. $)	% of pooled trust balance	Lease expiration date
Moffett Towers II Buildings 3 & 4	Facebook	NR	65.6	6.2	5/31/2034
19100 Ridgewood	Marathon Petroleum	BBB/Stable	55.0	5.2	5/31/2029
105 East 17th Street	New York University	AA-/Stable	49.5	4.7	10/31/2051
Capitol Commons	State of Michigan		32.5	3.1	6/30/2029
TJ Maxx--Philadelphia	TJ Maxx	NR	25.5	2.4	12/31/2034
30 Hudson Yards	Warner Media	BBB/Stable	20.0	1.9	6/30/2034
Amazon--West Columbia	Amazon.com Inc.	AA-/Stable	19.5	1.8	9/30/2026
Legacy Corporate Centre I & II	USAA	AA+/Stable	13.6	1.3	10/31/2033
Crosstown Center I	USAA	AA+/Stable	12.5	1.2	8/31/2030
1609 Avenue Y	Marshalls	NR	12.5	1.2	8/31/2032
Crosstown Center II	USAA	AA+/Stable	11.1	1.1	12/31/2033
Total	-	-	458.7	43.3	-

NR--Not rated.

Loan Characteristics

Loan type, origination date, term, and amortization

All of the loans in the pool pay a fixed interest rate and were originated between November 2018 and July 2019. The weighted average loan interest rate is 3.76%.

The original loan terms range from 60 to 121 months, with a weighted average original loan term of 113.2. The weighted average remaining loan term is 112.4.

Twenty-six loans (81.7% of the pooled trust balance) are interest-only for the entire term, one loan is interest-only followed by an anticipated repayment date (ARD), and five (8.8%) are structured with partial interest-only periods followed by a 360-month amortization schedule. The partial interest-only loans have initial interest-only periods ranging from 36 to 60 months. Five loans (9.5%) have no interest-only periods, and they amortize on a 360-month schedule. There are five fully amortizing loans (9.5%). S&P Global Ratings adjusted its analysis to reflect the various amortization terms and loan structures (see table 4).

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Table 4

Loan Amortization

Loan type	No. of loans	% of pool balance	S&P Global Ratings' DSC ratio (x)	S&P Global Ratings' weighted average LTV ratio (x)
Interest-only	26	81.7	2.35	91.85
Partial interest-only	5	8.8	-	105.25
Amortizing balloon	5	9.5	-	-
Fully amortizing	-	-	-	-

DSC--Debt service coverage. LTV--Loan-to-value. ARD--Anticipated repayment date. N/A--Not applicable.

Subordinated debt

Seventeen loans in the pool (63.5% of the pooled trust balance) have a pari passu component. one loan (1.9% of the pooled trust balance) has a subordinated first-mortgage loan components in addition to its senior trust and pari passu loan components. In addition, five loans (24.9%) permit the borrower to incur future mezzanine debt.

Table 5

Loans With Existing Additional Debt

Property	Pooled trust balance (mil. $)	% of pooled trust balance	Pari passu debt (mil. $)	Junior trust note (mil. $)	B-note balance (mil. $)	Mezzanine balance (mil. $)	Total debt (mil. $)
Moffett Towers II Buildings 3 & 4	65.6	6.2	284.4	155.0	-	85.0	590.0
Northpoint Tower	65.5	6.2	25.0	-	-	-	90.5
2 Cooper	65.0	6.1	-	-	-	10.0	75.0
19100 Ridgewood	55.0	5.2	85.0	-	-	-	140.0
New Jersey Center of Excellence	54.7	5.2	36.5	-	-	0.0	91.2
Woodlands Mall	50.0	4.7	197.6	177.4	-	40.0	465.0
Diamondback Industrial Portfolio 1	50.0	4.7	20.0	60.2	-	-	130.2
105 East 17th Street	49.5	4.7	60.5	-	-	-	110.0
USAA Office Portfolio	45.0	4.2	197.4	-	-	-	242.4
U.S. Industrial Portfolio V	32.8	3.1	97.6	-	-	-	130.4
Powered Shell Portfolio - Manassas	32.2	3.0	51.6	-	-	-	83.8
Millennium Park Plaza	30.0	2.8	180.0	-	-	-	210.0
Pharr Town Center	30.0	2.8	40.0	-	-	-	70.0

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Table 5

Loans With Existing Additional Debt (cont.)

Property	Pooled trust balance (mil. $)	% of pooled trust balance	Pari passu debt (mil. $)	Junior trust note (mil. $)	B-note balance (mil. $)	Mezzanine balance (mil. $)	Total debt (mil. $)
Powered Shell Portfolio - Ashburn	29.0	2.7	40.8	-	-	-	69.8
Cross Bay Plaza	29.0	2.7	-	-	-	6.0	35.0
222 Kearny Street	23.8	2.2	23.8	-	-	-	47.5
30 Hudson Yards	20.0	1.9	1100.0	310.0	-	-	1430.0
Grand Canal Shoppes	20.0	1.9	740.0	-	215.0	-	975.0
Midland Office Portfolio	20.0	1.9	49.5	-	-	-	69.5

Third-Party Review

We reviewed appraisal, environmental, engineering, and seismic reports on the properties we analyzed, where applicable. All of these reports were completed within the past 12 months (see table 5).

Seven properties (14.0% of the pooled trust balance) are located in seismic zones 4. The loan with the highest overall probable maximum loss (PML) of 16% is 18321 Ventura Boulevard (0.4%). The remaining properties in seismic zones 4 had PMLs of 11% or lower, and no properties are required to carry earthquake insurance.

Table 6

Third-Party Review

Third-party reports	No. of properties	% of pooled trust balance
Appraisal review within the past 12 months	92	100.0%
Environmental review within the past 12 months	92	100.0%
Engineering review within the past 12 months	92	100.0%
Seismic review for properties in zones 3 or 4	7	14.0%

Structural Review

We reviewed structural matters that we believe are relevant to our analysis, as well as the major transaction documents, including the prospectus, pooling and servicing agreement, and other relevant documents and opinions, to understand the transaction's mechanics and its consistency with applicable criteria. We also conducted a focused structural review of the 10 largest loans in the pool. We note the structural matters, if any, that we factored into our analyses of these loans in the Top 10 Loans section below.

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S&P Global Ratings' Credit Evaluation

Our analysis of the pool included the following:

- We derived an S&P Global Ratings NCF for 24 of the 36 loans in the pool (84.4% of the pooled trust balance). For the remaining loans, we extrapolated NCF haircuts according to property type and selected capitalization rates for each property. We excluded certain outlier loans from our extrapolation calculation. (See Appendix I for S&P Global Ratings' NCF variance applied to each loan in the transaction.)
- We conducted site inspections for 10 properties across 10 loans (36.3% of the pooled trust balance).
- We analyzed the property-level operating statements, rent rolls, and third-party appraisal, environmental, engineering, and, if applicable, seismic reports for each loan that we reviewed in the pool.
- We reviewed structural matters that we considered relevant to the analysis of the loans and the transaction, and we performed a loan-level structural analysis for the 10 largest loans in the pool.

S&P Global Ratings' NCF variance

S&P Global Ratings' property-level cash flow analysis derives what it believes to be a property's long-term sustainable NCF. In our analysis, we considered issuer-provided projections, historical and projected operating statements, third-party appraisal reports, relevant market data, and assessments of the various properties' competitive positions. On a pool-wide basis, our weighted average NCF was 17.6% lower than the issuer's underwritten NCF. (See Appendix I for S&P Global Ratings' NCF variance for each loan.)

S&P Global Ratings' DSC Ratio

We calculated the pool's 2.18x DSC ratio using the respective loans' contract interest rate and the S&P Global Ratings NCF (see table 7).

Table 7

S&P Global Ratings' DSC Range

DSC ratio range (x)	No. of loans	Loan balance (mil. $)	% of pooled trust balance
Less than 1.00	-	-	-
1.00–1.10	-	-	-
1.10–1.20	-	-	-
1.20–1.30	3	98.7	9.3
1.30–1.40	1	6.9	0.7
1.40–1.50	2	27.0	2.5
1.50–1.60	1	17.2	1.6
1.60–1.70	2	48.9	4.6
1.70–1.80	4	152.0	14.3

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Table 7

S&P Global Ratings' DSC Range (cont.)

DSC ratio range (x)	No. of loans	Loan balance (mil. $)	% of pooled trust balance
1.80–1.90	3	99.0	9.3
1.90–2.00	1	4.6	0.4
Greater than 2.00	19	606.2	57.2

DSC--Debt service coverage.

S&P Global Ratings' LTV

Based on our analysis, S&P Global Ratings' weighted average beginning LTV ratio is 93.7% and its ending LTV ratio is 90.9%, which reflects the 7.82% weighted average S&P Global Ratings capitalization rate (see table 8).

Table 8

S&P Global Ratings' LTV Ratios(i)

LTV ratio range (%)	No. of loans	Loan balance (mil. $)	% of pooled trust balance
Less than 50	1	50.0	4.7
50–55	1	50.0	4.7
55–60	-	-	-
60–65	-	-	-
65–70	-	-	-
70–75	2	40.0	3.8
75–80	-	-	-
80–85	3	32.5	3.1
85–90	4	126.7	12.0
90–95	2	82.7	7.8
95–100	9	209.5	19.8
100–105	7	233.1	22.0
105–110	5	175.6	16.6
Greater than 110	2	60.2	5.7

LTV--Loan-to-value.

S&P Global Ratings' credit assessment by property type

Table 9 summarizes S&P Global Ratings' NCF and valuation assessment by property type.

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Table 9

Cash Flow Analysis And Valuation

Property type	% of pooled trust balance	S&P Global Ratings' DSC (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' weighted average LTV ratio (%)	S&P Global Ratings' value per unit/sq. ft. ($)
Office	42.1	2.18	(22.2)	7.86	97.4	348
Retail anchored	14.0	2.13	(11.5)	8.17	96.2	249
Industrial	12.8	2.51	(11.8)	8.07	84.0	43
Multifamily	11.2	1.74	(18.6)	6.74	102.0	261,297
Mall	6.6	3.03	(13.5)	6.43	53.1	907
Other	5.8	2.10	(19.2)	8.25	102.4	132
Lodging	4.6	1.59	(15.2)	10.02	106.4	195,189
Single tenant--non-investment-grade	1.2	2.34	(11.7)	7.25	81.5	562
Self-storage	0.9	1.38	(9.6)	8.35	104.3	58
Retail unanchored	0.7	1.78	(11.7)	7.25	102.8	874
Total/weighted average	100.0	2.18	(17.6)	7.82	93.7	-

(i)Calculated based on S&P Global Ratings' NCF and the fixed loan interest rate. (ii)The difference between S&P Global Ratings' estimated NCF and the underwriter's estimated NCF as a percentage of the underwriter's estimated NCF. DSC--Debt service coverage. NCF--Net cash flow. LTV--Loan-to-value.

S&P Global Ratings' credit assessment of the top 10 loans

Table 10 summarizes S&P Global Ratings' NCF and valuation assessment of the top 10 loans. We provide individual analyses of these loans in the Top 10 Loans section below.

Table 10

Top 10 Loans

Property	Property type	% of pooled trust balance	S&P Global Ratings' trust DSC ratio (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV ratio (%)	S&P Global Ratings' value per unit/sq. ft. ($)
Moffett Towers II Buildings 3 & 4	Office	6.2	2.38	(31.1)	7.25	89.1	560
Northpoint Tower	Office	6.2	2.94	(11.1)	8.25	93.9	110
2 Cooper	Multifamily	6.1	1.71	(24.9)	6.54	101.7	446,872
19100 Ridgewood	Office	5.2	1.90	(21.8)	8.00	109.6	207
New Jersey Center of Excellence	Office	5.2	2.07	(36.3)	8.50	106.9	109
Woodlands Mall	Mall	4.7	3.35	(15.3)	6.50	45.0	726
Diamondback Industrial Portfolio 1	Industrial	4.7	3.97	(10.5)	7.75	51.6	61

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Table 10

Top 10 Loans (cont.)

Property	Property type	% of pooled trust balance	S&P Global Ratings' trust DSC ratio (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV ratio (%)	S&P Global Ratings' value per unit/sq. ft. ($)
105 East 17th Street	Office	4.7	1.77	(12.1)	7.00	104.0	846
USAA Office Portfolio	Office	4.2	2.05	(27.7)	7.52	97.1	283
Covington Portfolio	Industrial	3.4	1.27	(10.8)	8.50	111.4	27
Total/weighted average	-	50.6	2.37	(20.7)	7.55	91.1	-

(i)Calculated based on S&P Global Ratings' NCF and the fixed loan interest rate. (ii)The difference between S&P Global Ratings' estimated NCF and the underwriter's estimated NCF as a percentage of the underwriter's estimated NCF only. For pari passu loans, S&P Global Ratings' DSC and LTV are based on the trust and pari passu balance. DSC--Debt service coverage. NCF--Net cash flow. LTV--Loan to value.

Table 11 summarizes S&P Global Ratings' NCF and valuation assessment of loans 11-20. For these loans, our weighted average NCF is 14.6% lower than the issuer's underwritten NCF. S&P Global Ratings' weighted average beginning LTV ratio is 102.3% for these loans, and we calculated a 1.82x DSC ratio using the respective loans' contract interest rates and S&P Global Ratings' NCF. Factors that contributed to NCF variances over 7.0%, positive NCF variances, or high S&P Global Ratings LTV ratios over 90.0% are outlined in table 11. (See Appendix I for S&P Global Ratings' NCF variance, LTV ratio, and DSC ratio for all of the loans in the transaction.)

Table 11

Loans 11-20

Property	Property type	% of pooled trust balance	S&P Global Ratings' trust DSC ratio (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV ratio (%)	S&P Global Ratings' value per unit/sq. ft. ($)	NCF variance/high S&P Global Ratings' LTV ratio drivers
U.S. Industrial Portfolio V	Industrial	3.1	2.12	(14.7)	8.00	98.0	37	Vacancy, TI/LC, and CapEx
Capitol Commons	Office	3.1	1.27	(20.5)	8.50	95.6	183	Vacancy
Powered Shell Portfolio - Manassas	Other	3.0	2.10	(19.6)	8.25	102.0	113	Vacancy, management fee, and TI/LC
Millennium Park Plaza	Multifamily	2.8	1.73	(13.7)	6.79	105.5	355	Vacancy, management fee, TI/LC, and CapEx
Pharr Town Center	Retail Anchored	2.8	1.27	(6.6)	8.04	104.8	153	Vacancy, TI/LC, and CapEx
Powered Shell Portfolio - Ashburn	Other	2.7	2.10	(18.9)	8.25	102.7	152	Vacancy, management fee, and TI/LC
Cross Bay Plaza	Retail Anchored	2.7	1.62	(16.2)	7.50	109.7	532	Vacancy, management fee, and TI/LC

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Table 11

Loans 11-20 (cont.)

Property	Property type	% of pooled trust balance	S&P Global Ratings' trust DSC ratio (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV ratio (%)	S&P Global Ratings' value per unit/sq. ft. ($)	NCF variance/high S&P Global Ratings' LTV ratio drivers
Prairie Center	Retail Anchored	2.7	2.68	(11.3)	9.25	96.5	125	Vacancy and TI/LC
Agora at Port Richey	Multifamily	2.3	1.83	(7.6)	7.25	98.2	84,873	Vacancy, TI/LC, and CapEx
Holiday Inn Express & Suites San Diego Mission Valley	Lodging	2.3	1.47	(15.2)	9.75	111.9	206,193	RevPar and Proposition 13 adjustment
Total/weighted average	-	27.5	1.82	(14.6)	8.14	102.3	-	

(i)Calculated based on S&P Global Ratings' NCF and the fixed loan interest rate. (ii)The difference between S&P Global Ratings' estimated NCF and the underwriter's estimated NCF as a percentage of the underwriter's estimated NCF only. For pari passu loans, S&P Global Ratings' DSC and LTV are based on the trust and pari passu balance. DSC--Debt service coverage. NCF--Net cash flow. LTV--Loan-to-value. CapEx--Capital expenditure. TI/LC--Tenant improvements and leasing commissions. GPI—Gross potential income. RevPar--Revenue per available room. N/A--Not applicable.

Loan-level credit enhancement

We used each loan's S&P Global Ratings DSC and LTV ratios to calculate its respective stand-alone credit enhancement (SCE) and diversified credit enhancement (DCE) at the various rating categories. These calculations included adjustments to reflect the various loans' amortization terms and the presence of any subordinated additional debt. (See Appendix II for a list of each loan's SCE and DCE.)

Pool diversity

Overall transaction credit enhancement levels at each rating category are directly affected by the loan pool's diversity, a function of the transaction's effective loan count. The effective loan count, which is measured by the Herfindahl-Hirschman Index, accounts for the relative size of the loans in the pool by normalizing a transaction's loan count to account for unevenly sized loans. This transaction has an effective loan count of 26.6, which we consider to be well-diversified, resulting in a concentration coefficient of 66.4%.

We also considered the loan pool's geographic makeup in our overall transaction-level analysis. This loan pool is geographically diverse and is located primarily within primary markets (52.9%) and secondary markets (32.0%).

Transaction-level credit enhancement

We establish transaction-level credit enhancement levels using the concentration coefficient (a function of a pool's effective loan count) to interpolate between the weighted average SCE and DCE at each rating category, subject to applicable floors and any adjustment for overall transaction-level considerations.

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Scenario Analysis

We performed several 'AAA' stress scenario analyses to determine how sensitive the certificates are to a downgrade over the loan term.

Effect of declining NCF

A decline in NCF may constrain cash flows available for debt service. A decline in cash flows may occur due to falling rental rates and occupancy levels, changes to operating expenses, or other factors that may decrease a property's net income. To analyze the effect of a decline in cash flows on our ratings, we have developed scenarios whereby the NCF from the portfolio decreases by 10%-40% from our current cash flow, which is 17.6% lower than the issuer's underwritten NCF. (See table 12 for the potential effect on S&P Global Ratings' 'AAA' rating under these scenarios, holding constant S&P Global Ratings' overall capitalization rate of 7.82%.)

Table 12

Effect Of Declining NCF On S&P Global Ratings

Change in S&P Global Ratings' NCF (%)	0.00	(10.00)	(20.00)	(30.00)	(40.00)
Potential 'AAA' rating migration	AAA	A+	B-	CCC-	CCC-

NCF--Net cash flow.

Top 10 Loans

1. Moffett Towers II--Buildings 3 & 4

Table 12

Credit Profile

Loan no.	1	Property type	Office
Loan name	Moffett Towers II Buildings 3 & 4	Subproperty type	General Suburban
Pooled trust loan balance ($)	65,550,000	Property sq. ft./no. of units	701,266
% of total pooled trust balance (%)	6.2	Year built/renovated	2019
City	Sunnyvale	Sponsor	Jay Paul Company
State	CA	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	5,960,000	S&P Global Ratings' subordinate debt category	Unsecured debt (S&P LTV ratio >= 90%)
S&P Global Ratings' NCF variance (%)	(31.15)	S&P Global Ratings' subordinate debt adjustment	(2.50)

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Table 12

Credit Profile (cont.)

S&P Global Ratings' cap rate (%)	7.25	S&P Global Ratings' LTV ratio (%)	89.1
S&P Global Ratings' value (mil. $)	73.6	S&P Global Ratings' DSC ratio (x)	2.38
S&P Global Ratings' value variance (%)	(45.9)	'AAA' SCE (%)	52.3
S&P Global Ratings' value per sq. ft./unit ($)	560	'AAA' DCE (%)	12.3

(i)Pari passu adjusted. (ii)The loan is pari passu. LTV and DSC ratios are calculated based on the $350.0 million pari passu companion loan and the $65.6 million trust loan balance. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The loan is secured by two newly constructed class A office buildings totaling 701,266 sq. ft. located within the Moffett Towers II campus in Sunnyvale, Calif. The buildings are LEED Platinum certified, constructed with contemporary, high-quality finishes, and are well located near strong transit linkages to the rest of the San Francisco Bay Area.
- The senior loan component has a strong DSC ratio of 2.38x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 31.1% lower than the issuer's NCF, primarily due to a higher vacancy assumption and the removal of straight line rent credit. The properties are 100% leased to Facebook. Facebook, which is headquartered in Menlo Park, Calif., 10 miles northwest of the property, is the world's largest social media company. The company's lease at the property extends for 15 years and expires in May 2034. Facebook also signed a lease in the adjacent building, V, for a total commitment of over one million sq. ft. in Moffett Towers II campus.
- Sunnyvale is a suburb of San Jose, Calif., and is part of Silicon Valley, a prosperous region located south of San Francisco that is well known for its high concentration of technology firms. We consider Sunnyvale to be a primary market. CBRE-EA considers the property to be part of the Sunnyvale submarket, which exhibited a 5.3% overall vacancy and had net asking rents of $69.91 per sq. ft. as of fourth-quarter 2018. Based on Facebook's current net rent of $53.77 per sq. ft., the property is leased below market rates.
- The loan is structured with a hard lockbox and in-place cash management. A cash flow trigger event would occur and result in a cash flow sweep upon the mortgage loan remaining outstanding past its anticipated repayment date of July 2029, an event of default under the mortgage loan or mezzanine loan, a DSC ratio of less than 1.90x on the mortgage loan or 1.50x on the combined mortgage loan and mezzanine loan, or a lease sweep period. A lease sweep period, if triggered, will result in cash flow sweep. The lease sweep period will occur if Facebook or a replacement tenant cancels or terminates its lease, ceases operation in its space, experiences an event of default under the lease, or is subject to insolvency proceeding or if Facebook is downgraded to speculative grade after being rated.
- The loan also has upfront reserves for all outstanding tenant improvements/leasing commissions (TI/LCs) and free rent totaling approximately $39.3 million.
- The loan agreement also calls for monthly escrow equal to one-12th of the annual tax and insurance liability, although the insurance escrow may be waived if the property is covered by a

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blanket policy.

- The loan benefits from the Jay Paul Cos.' experienced sponsorship. Jay Paul is a privately held real estate firm based in San Francisco, which concentrates on the acquisition, development, and management of commercial properties throughout California with a specific focus on technology firms. Jay Paul has closed equity and debt financings in excess of $13 billion since 2000 and has successfully developed or acquired over 11.0 million sq. ft. of institutional quality space.
- The loan has an ARD of July 6, 2029, and a final maturity date of June 6, 2034. In the event the borrower is unable to pay off the loan in full at the ARD, the coupon of the loan will increase by at least 1.5% and excess cash flow from the property will be held by the lender as additional collateral for the loan and to fund various reserve accounts. A failure to repay the loan in full at the ARD will not constitute a default.
- We visited the Moffett Towers II campus in February 2019 and found it to be well-maintained. Facebook had taken possession of building V, and buildings III and IV were in the final stages of completion. Since our visit, Facebook has taken possession of building III (June 2019) and building IV (May 2019). Facebook employees will have access to the amenities building, which is also located within the Moffett Towers II campus. The amenities building has a gym, exercise rooms, a basketball court, and locker rooms. In addition, there is a space expected to be leased out to a restaurant tenant. Adjacent to the amenities building is an Olympic-size swimming pool. Overall, the campus offers a good location and design element.

The loan exhibits the following concerns and mitigating factors:

- The senior loan component has moderately high leverage, with an S&P Global Ratings' LTV ratio of 89.1%, based on S&P Global Ratings' valuation. Our estimate of long-term sustainable value is 45.9% lower than the appraiser's valuation.
- In addition to the senior loan component totaling $350.0 million and the junior non-trust notes totaling $155.0 million, there is an $85.0 million mezzanine loan. The mortgage and mezzanine loans have a combined S&P Global Ratings' LTV ratio of 150.1%. The comparably weaker credit metrics for the combined debt exposes the trust loan to a higher default risk. We therefore applied a negative 2.50% LTV threshold adjustment at each rating level to account for this risk.
- The loan is interest-only for its entire 10-year loan term, and there will be no scheduled amortization during the loan term. Compared with an amortizing loan, an interest-only loan bears a higher refinance risk because of the higher loan balance at maturity. We accounted for this lack of amortization by applying a negative 2.5% LTV threshold adjustment across the capital structure.
- The current mortgage and mezzanine loans will return $114.3 million of equity to the sponsor. However, it will also fund TI/LCs and free rent totaling approximately $39.3 million as well as paying off a $408.9 million mortgage.
- The performance of the loan is highly dependent on Facebook's business prospects, as it leases 100% of the property's total square footage under a 15-year lease expiring May 2034. The triple-net (NNN) lease includes annual base rent increases of 3.0%, two extension options for seven years each, and no early termination rights.
- During alterations to the property, the loan documents leave to the lender's discretion the decision of whether to require collateral for alterations that exceed a certain cost threshold. This structure potentially exposes the loan to risks associated with additional leverage beyond a de minimis amount and to additional liens, such as mechanic's liens, some of which may have

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priority over the mortgage lien.

- There is no warm-body carve-out guarantor. In our view, this limitation generally lessens the disincentive provided by a full nonrecourse carve-out related to "bad boy" acts or voluntary bankruptcy.

2. Northpoint Tower

Table 13

Credit Profile

Loan no.	2	Property type	Office
Loan name	Northpoint Tower	Subproperty type	CBD
Pooled trust loan balance ($)	65,500,000	Property sq. ft./no. of units	873,335
% of total pooled trust balance (%)	6.2	Year built/renovated	1985/2017-2019
City	Cleveland	Sponsor	William Z. Hertz, Isaac Hertz, and Sarah Hertz
State	OH	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Secondary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	6,450,000	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(11.13)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	8.25	S&P Global Ratings' LTV ratio (%)	93.9
S&P Global Ratings' value (mil. $)	69.8	S&P Global Ratings' DSC ratio (x)	2.94
S&P Global Ratings' value variance (%)	(33.7)	'AAA' SCE (%)	52.1
S&P Global Ratings' value per sq. ft./unit ($)	110	'AAA' DCE (%)	13.0

(i)The trust loan is pari passu; LTV and DSC ratios calculated based on the $90.5 million mortgage loan balance ($65.5 million trust loan plus the $25.0 pari passu portion). (ii)Pari passu adjusted. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The $65.5 million trust loan represents a pari passu portion within a larger $90.5 million mortgage loan. The mortgage loan is secured by the fee and leasehold interests in Northpoint Tower, an 855,416-sq.-ft. class A office property. The subject is located at the corner of Lakeside Avenue and E. 9th Street on the north side of Cleveland's central business district (CBD). The property benefits from its proximity to Route 2, located 0.3 miles north of the subject, which provides easy access to Cleveland's major arteries. The property's amenities include 1,074 parking spaces, a fully equipped fitness center, a 90-seat auditorium, a 40-seat conference center, and David's Grill, a full-service restaurant and bar.

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- The property's in-place gross rents of $23.57 per sq. ft. (as calculated by S&P Global Ratings) are near the Cleveland CBD submarket average, according to CBRE-EA, which concluded second-quarter 2019 Class A gross rents of $22.20 per sq. ft. However, the property's vacancy rate, at 21.5%, is performing below the submarket average rate of 11.5%.
- The loan benefits from the strong sponsorship of Isaac, Sarah, and William Hertz of the Hertz Investment Group. The company currently owns and manages approximately 21 million sq. ft. of office properties located primarily in CBDs across the U.S. The sponsorship has a combined net worth in excess of $530 million and has invested approximately $5.8 million in building improvements since acquisition in 2017.
- The mortgage loan benefits from a $10.5 million upfront reserve for future TI/LCs. If the balance falls below $5.0 million, then funds will be collected monthly at $0.10 per sq. ft. ($90,972).
- The Loan Agreement provides for a hard in-place lockbox with in-place cash management. A trigger period is defined as an event of default, a DSC ratio less than 1.20x for one quarter (cured when a DSC ratio greater than 1.20x for one full quarter is achieved), if Jones Day lease is in jeopardy (terminates/cancels, defaults, goes into bankruptcy, goes dark, or fails to renew in a timely manner).

The loan exhibits the following concerns and mitigating factors:

- The $60.5 million loan has high leverage, with an S&P Global Ratings' LTV ratio of 94.4%, based on our valuation. The LTV ratio based on the appraiser's valuation is 62.6%. Our estimate of long-term sustainable value is 33.7% lower than the appraiser's valuation.
- The loan is interest-only for its entire five-year term, meaning there will be no scheduled amortization during the loan term. We accounted for this risk by reducing the LTV recovery thresholds at each rating category.
- The loan is exposed to a concentrated rent roll through the tenancy of Jones Day (342,641 sq. ft., 39.1% of the net rentable area (NRA), and 55.1% of the gross rents). However, Jones Day is one of the 10 largest law firms in the country and has performed a gut renovation of every floor it occupies, spending approximately $16.0 million ($46 per sq. ft.) of their own capital, in addition to the $6.0 million for TI they received from their last extension, which was used to upgrade the lobby and first-floor conference room and modernize the elevators.
- The property has exhibited low historical occupancy of 78.3%, 72.0%, and 79.5% as of year-end 2017 and 2018 and the July 2019 rent roll, respectively. We underwrote to the in-place occupancy of 21.5%.
- The parking garage is subject to a ground lease with the City of Cleveland, with a base ground rent of $120,000. Also, the ground lease requires a percentage of gross rent receipts above $1.6 million; however gross receipts are approximately $1.2 million. Additionally, there is no fair market value reset for the ground lease.
- Although the SPE borrower is structured with a non-consolidation opinion and one independent director, the independent director can be removed without cause with the earlier of five days' or three business days' notice.
- Although the borrower must provide the lender with quarterly and annual financial statements, they are not required to be audited. We believe audited financial statements are more conclusive and reliable than unaudited statements.

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3. 2 Cooper

Table 14

Credit Profile

Loan no.	3	Property type	Multifamily
Loan name	2 Cooper	Subproperty type	High-rise
Pooled trust loan balance ($)	65,000,000	Property sq. ft./no. of units	143
% of total pooled trust balance (%)	6.1	Year built/renovated	2010
City	New York	Sponsor	Isaac Kassirer and David Werner
State	NY	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	4,590,000	S&P Global Ratings' subordinate debt category	Unsecured debt (S&P LTV ratio >= 90%)
S&P Global Ratings' NCF variance (%)	(24.87)	S&P Global Ratings' subordinate debt adjustment	(2.50)
S&P Global Ratings' cap rate (%)	6.54	S&P Global Ratings' LTV ratio (%)	101.7
S&P Global Ratings' value (mil. $)	63.9	S&P Global Ratings' DSC ratio (x)	1.71
S&P Global Ratings' value variance (%)	(49.6)	'AAA' SCE (%)	55.8
S&P Global Ratings' value per sq. ft./unit ($)	446,872	'AAA' DCE (%)	22.1

NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The loan is secured by a 143-unit class A multifamily property located in the NoHo neighborhood of New York City. The property consists of a 133-unit, 15-story tower as well as a four-story town house with 10 units. Amenities at the property include a rooftop swimming pool, a fitness center, interactive arcade games, a private screening room, a resident lounge, and a 24-hour attended lobby. The collateral also includes 21,848 sq. ft. of commercial space on the ground floor that is 100% leased to Crunch Fitness. The commercial space comprises 13.4% of the underwritten base rent (as calculated by S&P Global Ratings).
- The property is located in a primary market. Primary markets generally have higher barriers to entry than secondary and tertiary markets. According to CBRE-EA, the property is located within the West Village/Downtown submarket, which has a market vacancy rate of 2.3%, with gross asking rents of $4,235 per unit as of the second-quarter 2019. The multifamily portion of the property is currently 95.1% occupied, and the units have a weighted average in-place rent of $6,049 per unit.
- The loan is acquisition financing, and the sponsor contributed approximately $27.3 million of

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equity as part of the $102.3 million all-in acquisition costs (26.7% of the acquisition costs).

- We visited the property on Aug. 29, 2019, and found that it was well-maintained and well-situated with multiple public transport options within a 10 minute walk. The units feature stainless steel appliances and Caesarstone kitchen countertops. The pool deck benefits from having unobstructed views of the Lower Manhattan skyline. We noted that this was one of the few new multifamily completions in the immediate area. We observed a steady stream of customers at Crunch Fitness.
- The loan is structured with a soft lockbox and springing cash management. A cash management trigger period will commence upon the DSC ratio dropping below 1.70x (cured when the DSC ratios is above 1.70x for two consecutive quarters). Additionally, there are monthly reserves for real estate taxes, insurance, and replacement reserves along with an upfront reserve for deferred maintenance.

The loan exhibits the following concerns and mitigating factors:

- The trust loan has high leverage with a 101.7% LTV ratio, based on S&P Global Ratings' valuation. Our long-term sustainable value estimate is 49.6% lower than the appraiser's value. In addition to the mortgage loan, there is $10.0 million in mezzanine loans. When including the mortgage and mezzanine loans, the S&P Global Ratings' LTV ratio increases to 117.4% from 101.7%. We reduced our LTV recovery thresholds at each rating category to account for the existing preferred equity.
- The loan is interest-only for its entire 10-year term, meaning there will be no scheduled amortization during the loan term. We accounted for this lack of amortization by applying a negative LTV threshold adjustment across the capital structure.
- The main tower of the property is in the seventh year of a 10-year 421-a tax exemption under the affordable New York Program Option C through 2022. Under the program, the property received a 100% exemption for the first two years on any assessment, with the exception declining by 20% intervals until fully phased out by the end of 2022. In return, the 133 units in the main tower are subject to rent stabilization during the 10-year period, which will expire in 2022 and then go to market rates. The real estate tax expense for 2019/2020 was at $1,897,193, compared to the full, unabated tax of $3,620,279. We accounted for this abatement by using the unabated taxes to derive our long-term sustainable NCF and added the present value of the tax savings to our value. It is important to note that the tax savings are a "wasting asset," and its present value will decline with each passing year as the property moves closer to the end of the exemption period. If rental income does not increase, other expenses decrease, or cap rates decline in such a way as to offset the loss of yearly tax savings, the overall value will continue to decline.
- During alterations to the property, the loan documents leave to the servicer's discretion the decision of whether to require collateral for alterations that exceed a certain cost threshold. Additionally, this collateral, if required, may not be rated by S&P Global Ratings. This structure potentially exposes the transaction to risks associated with additional leverage beyond a de minimis amount and potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

4. 19100 Ridgewood

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Table 15

Credit Profile

Loan no.	4	Property type	Office
Loan name	19100 Ridgewood	Subproperty type	General suburban
Pooled trust loan balance ($)	55,000,000	Property sq. ft./no. of units	618,017
% of total pooled trust balance (%)	5.2	Year built/renovated	2009
City	San Antonio	Sponsor	USRA Institutional Net Lease Fund III LLC
State	TX	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Secondary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	3,860,000	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(21.77)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	8.00	S&P Global Ratings' LTV ratio (%)	109.6
S&P Global Ratings' value (mil. $)	50.2	S&P Global Ratings' DSC ratio (x)	1.90
S&P Global Ratings' value variance (%)	(36.3)	'AAA' SCE (%)	58.9
S&P Global Ratings' value per sq. ft./unit ($)	207	'AAA' DCE (%)	20.2

(i)Pari passu adjusted. (ii)The loan is pari passu. LTV and DSC ratios are calculated based on the $85.0 million pari passu companion loan and the $55.0 million trust loan balance. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The $55.0 million trust loan represents a pari passu portion within a larger $140.0 million mortgage loan. The mortgage is secured by a 618,017 sq. ft. class A office property located in San Antonio, Texas. The building consists of a 14-story tower connected by an atrium to a second six-story tower. The property is 100% leased to Andeavor, a subsidiary of Marathon Petroleum Corporation (MPC; 'BBB/Stable'), on a NNN basis. MPC acquired Andeavor in October 2018 to improve their transportation and gathering infrastructure. This acquisition created the largest refinery by capacity in the U.S. Andeavor has been in the property since 2009, and the property houses what has been described as mission-critical operations for the company's west coast business.
- The whole loan has a moderately high DSC ratio of 1.90x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 21.8% lower than the issuer's NCF.
- The loan is acquisition financing, and the sponsor contributed $58.6 million of equity as part of the $198.6 million all-in acquisition cost (29.5% of the acquisition costs).
- The loan benefits from U.S. Realty Advisors (USRA) experienced sponsorship. USRA was founded in 1989 with a focus on single tenant real estate investments and management. The principals have acquired over $3.0 billion in single tenant assets, and USRA owns and manages

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more than 1,500 properties.

- The loan is structured with a hard lockbox and springing cash management. A cash management trigger period will commence upon an event of default by the borrower under the Marathon lease; if Marathon declares bankruptcy, vacates 50% of their space, or is downgraded below investment grade; on Dec. 1, 2027(cured when Marathon renews or the space is released); or if the net operating income (NOI) falls below 85% of the closing data NOI for one quarter (cured when NOI is greater than 85% for two consecutive quarters).

The loan exhibits the following concerns and mitigating factors:

- The whole loan has high leverage with a 109.6% LTV ratio, based on S&P Global Ratings' valuation. Our long-term sustainable value estimate is 36.3% lower than the appraiser's valuation.
- The loan is interest-only for its entire 10-year term. We accounted for the lack of amortization by applying a negative LTV threshold adjustment across the capital structure.
- According to CBRE-EA, the property is located in the North Central submarket, which had a high vacancy rate of 13.9% for class A office properties as of second-quarter 2019. However, this property has been 100% occupied for the past 10 years and has seen the NCF increase to $13.2 million as of the TTM ended June 2019 from $12.8 million in 2016.
- The loan is exposed to single-tenant risk with 100% roll during the loan term since the property is leased only to Andeavor (with a lease expiration of May 2029). However, the tenant is investment-grade rated, the lease is NNN with 1.25% annual escalations, and there are no early termination or contraction options. We accounted for the rollover risk by increasing our cap rate.
- MPC only occupies floors LL-9 in Building I (470,722 sq. ft.). Building II, which makes up 23.8% of the square feet, has been subleased to EOG Resources (EOG; 'A-/Stable') since 2011. EOG pays a gross rent of $30.00 per sq. ft., which is the same as the contractual rate for Andeavor. Also EOG has a recognition agreement with the landlord, recognizing them as a direct tenant in the event of a default under the Andeavor lease. MPC has also started to vacate the top three floors in Building 1 but continues to pay rent while they seek one or more subtenants to occupy this space. To account for this risk, we assumed a 10.0% vacancy.
- The loan does not have a warm body carve-out guarantor. In our view, this limitation generally lessens the disincentive provided by a full nonrecourse carve-out related to "bad boy" acts or voluntary bankruptcy.
- Although the borrower must provide the lender with quarterly and annual financial statements, they are not required to be audited. We believe audited financial statements are more conclusive and reliable than unaudited statements.
- During alterations to the property, the loan documents leave to the servicer's discretion the decision of whether to require collateral for alterations that exceed a certain cost threshold. Additionally, this collateral, if required, may not be rated by S&P Global Ratings. This structure potentially exposes the transaction to risks associated with additional leverage beyond a de minimis amount and potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

5. NJ Center of Excellence

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Table 16

Credit Profile

Loan no.	5	Property type	Office
Loan name	New Jersey Center of Excellence	Subproperty type	General suburban
Pooled trust loan balance ($)	54,720,000	Property sq. ft./no. of units	785,598
% of total pooled trust balance (%)	5.2	Year built	1970-2005
City	Bridgewater	Sponsor	Joseph J. Sitt
State	NJ	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	4,270,000	S&P Global Ratings' subordinate debt category	Unsecured debt (S&P LTV ratio >= 90%)
S&P Global Ratings' NCF variance (%)	(36.31)	S&P Global Ratings' subordinate debt adjustment (%)	(2.50)
S&P Global Ratings' cap rate (%)	8.50	S&P Global Ratings' LTV ratio (%)	106.9
S&P Global Ratings' value (mil. $)	51.2	S&P Global Ratings' DSC ratio (x)	2.07
S&P Global Ratings' value variance (%)	(44.3)	'AAA' SCE (%)	60.3
S&P Global Ratings' value per sq. ft./unit ($)	109	'AAA' DCE (%)	17.6

(i)Pari passu adjusted; (ii) The loan is pari passu; LTV and DSC ratios calculated based on the $36.48 million pari passu companion loan and the $54.72 million trust loan balance. NCF--Net cash flow. LTV--Loan to value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement.

Strengths and concerns This loan exhibits the following strengths:

- The property is an eight-building suburban office and R&D campus located in Bridgewater, N.J., approximately 30 miles southwest of New York City. The property was originally constructed in 1970 as the global headquarters for Sanofi ('AA') at a reported cost of more than $700 million. In 2012 and 2013, it was redeveloped into a multitenant property featuring advanced mechanical systems, including an onsite central utility plant, which both reduces costs and offers a redundant power source.
- The whole loan has strong DSC ratio of 2.07x, calculated using the 3.73% fixed mortgage interest rate and our in-place NCF for the portfolio, which is 36.3% lower than the issuer's NCF.
- The property benefits from a roster of large, institutional life sciences tenants, the largest of which are Ashland Inc. (20.1% of gross rent), Nestle Health Science ('AA-', 18.8%), and PTC Therapeutics Inc. (NR, 14.0%), as calculated by S&P Global Ratings. The weighted average remaining lease term is over 8.5 years. The Nestle space is considered to be mission-critical.
- The loan is acquisition financing, and the sponsor contributed $62.6 million of equity as part of the $155.1 million all-in acquisition cost (40.4% of the acquisition costs).
- The property is located in a primary market. Primary markets generally have higher barriers to

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entry than secondary and tertiary markets. According to CBRE-EA, the property is located within the Route 22 West submarket, which had a submarket vacancy rate of 14.7% as of second-quarter 2019. Although the property is 92.3% occupied, we underwrote to the submarket vacancy level of 14.7%.

- We visited the property on May 30, 2019, and were given a tour by members of the sponsor. The property was found to be well-maintained, and the recent tenant buildouts were modern and attractive. It should be noted that planning is underway for a major mixed-use development on parcels adjacent to the property. The development will add new multifamily, retail, and lodging properties that are expected to further enhance the immediate area.
- The loan is structured with a hard lockbox and springing cash management. During a trigger period, funds in the cash management account will be deposited into various reserves in the priority outlined in the loan agreement. A trigger period occurs upon if the debt yield falls below 6.0% or upon an event of default. There are ongoing monthly reserves for taxes, insurance, capital expenditures, and TI/LCs.

This loan exhibits the following concerns and mitigating factors:

- The whole loan balance has high leverage, with a 106.9% S&P Global Ratings LTV ratio based on our valuation and the pooled trust loan balance. The LTV based on the appraiser's "as-is" valuation is 59.6%. Our estimate of long-term sustainable value is 44.3% lower than the appraiser's "as-is" valuation.
- The loan is interest-only for its entire 10-year term, meaning there will be no scheduled amortization during the loan term. We accounted for this lack of amortization by using lower LTV recovery thresholds at each rating category.
- In addition to the first-mortgage loan, the borrower can obtain future mezzanine debt. The mezzanine loan can be made in an amount resulting in a minimum DSC ratio of 2.50x, minimum debt yield of 10%, and rating agency consent. We reduced the LTV recovery thresholds at each rating category to account for future permitted mezzanine debt.
- The property is primarily composed of highly specialized R&D and laboratory space that is only be applicable to a small subset of prospective users. Additionally, this type of space can be costly to convert to more traditional office space should a tenant vacate.
- The property is subject to a condominium structure in which the borrower does not hold a majority interest. The management and operation of a condominium is generally controlled by a condominium board representing the owners of the individual condominium units, subject to the terms of the related condominium rules or by laws. Since the borrower does not have control over decisions made by the related board of managers or directors, this could adversely affect the management and operation of the property.
- The borrower is permitted to release a non-income producing parcel subject to a debt yield test of 12.0% and a DSC test of 3.27x. However the appraisal did not attribute any value to this land and any release would be subject to rating agency consent.
- Although the borrower must provide the lender with quarterly and annual financial statements, they are not required to be audited. We believe audited financial statements are more conclusive and reliable than unaudited statements.
- Although the SPE borrower is structured with a non-consolidation opinion and one independent director, the independent director can be removed without cause with the earlier of five days or three business days' notice.

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6. The Woodlands Mall

Table 17

Credit Profile

Loan number	6	Property type	Retail
Loan name	Woodlands Mall	Subproperty type	Super regional mall
Pooled trust loan balance ($)	50,000,000	Property sq. ft./no. of units	758,231
% of total pooled trust balance (%)	4.7	Year built	1994
City	Woodlands	Sponsors	Brookfield Property REIT Inc., Brookfield Property Partners L.P., and Brookfield Asset Management Inc.
State	TX	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	7,220,000	S&P Global Ratings' subordinate debt category	Unsecured debt (S&P LTV ratio >= 90%)
S&P Global Ratings' NCF variance (%)	(15.28)	S&P Global Ratings' subordinate debt adjustment	(2.50)
S&P Global Ratings' cap rate (%)	6.50	S&P Global Ratings' LTV ratio (%)	45.0
S&P Global Ratings' value (mil. $)	111.1	S&P Global Ratings' DSC ratio (x)	3.35
S&P Global Ratings' value variance (%)	(42.3)	'AAA' SCE (%)	5.5
S&P Global Ratings' value per sq. ft./unit ($)	726	'AAA' DCE (%)	0.8

(i)Pari passu adjusted. (ii)The loan is pari passu. LTV and DSC ratios are calculated based on the $197.6 million pari passu companion loan and the $50.0 million trust loan balance (together, the senior loan component). NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement.

Strengths and concerns The loan exhibits the following strengths:

- The $247.6 million senior loan component has low leverage, with an S&P Global Ratings' LTV ratio of 45.0%, based on our valuation. The LTV ratio based on the appraiser's as-is valuation is 26.0%. Our estimate of long-term sustainable value is 42.3% lower than the appraiser's as-is valuation.
- The senior loan component has a strong DSC ratio of 3.35x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 15.3% lower than the issuer's NCF.
- The loan is secured by the fee simple interest in the Woodlands Mall located in Woodlands, Texas, approximately 30 miles north of downtown Houston. The property is a two-level enclosed super-regional mall that contains approximately 1.4 million sq. ft. of gross leasable area (GLA), of which approximately 755,000 sq. ft. serves as collateral for the loan. The four anchor tenants--Dillard's, Macy's, JCPenney, and Nordstrom--all separately own their improvements

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and underlying land and, as such, are excluded from the loan's collateral. The property is also junior anchored by Dick's Sporting Goods and Forever 21 (both part of the loan collateral).

- The property is very well-located, with frontage along four primary roadways. The recently completed extension of the Grand Parkway, the outermost loop around Houston, has substantially improved access to the area from the east and west. The property borders The Woodlands, an affluent master-planned residential community. The area served by the mall has above-average population growth (3.1% since 2000 within a five-mile radius versus 0.83% for the U.S.) and above-average household income levels ($131,439 within a five-mile radius versus $84,609 for the U.S.). The Woodlands is home to nearly 112,000 residents and over 900 businesses employing an estimated 40,638 people, according to Cushman & Wakefield. Single- and multi-family home development totals over 26,000 homes with over five million sq. ft. of retail/general commercial space and seven million sq. ft. of office and industrial space. Exxon Mobile Corp., the fifth-largest employer in the area, has a headquarters facility in Spring, Texas, just south of The Woodlands. For the 15-mile trade area defined by the appraiser, household income levels are $105,339, which is higher than the state or CBSA averages and significantly above national levels. In addition, Houston's traffic patterns make it less likely for the served market to visit any of the other competitive malls.
- The mall is 95.2% leased (as calculated by S&P Global Ratings) with approximately 158 tenants, including numerous popular national and regional tenants such as Apple, Athleta, Coach, Microsoft, and The Cheesecake Factory. The collateral occupancy has ranged from 87.9% to 97.6% since 2015. NCF at the property has increased consistently since 2015, to $43.7 million as of the TTM ended May 2019 from $36.9 million. We calculated inline sales for the TTM ended March 2019 to be $566 per sq. ft., excluding Apple (and $704 per sq. ft. including Apple)--a strong sales level reflected in our capitalization rate of 6.50%. The Apple store is expanding its footprint at the property to 8,409 sq. ft. from the current 6,311 sq. ft., and it is expected to be completed in December 2019.
- We visited the property on June 28, 2019, where we walked the inline space and visited all of the anchor tenants at the property. The property was well-maintained, with good curb appeal and clean interior spaces. Additionally, there were several tenant stores that were under construction to fit incoming tenants. While the mall itself is almost wholly enclosed, which is a drawback during the more temperate spring and fall, the mall benefits from being adjacent to the popular Woodlands Waterway, which serves as a lifestyle destination for North Houston residents. The Woodlands Waterway features mid-range to upscale bars and dining destinations as well as a large concert venue in the Cynthia Woods Mitchell Pavilion. The property also benefits from its direct access to Interstate 45, Houston's primary north/south highway, which provides direct access to downtown and other central destinations. The anchor stores and inline spaces were well-stocked and trafficked.
- The mortgage loan benefits from Brookfield Properties REIT Inc.'s (BPR) experienced sponsorship. BPR ranks among the largest retail real estate companies in the U.S. The company's portfolio of mall properties spans the nation, comprising 163 locations across 42 states and over 146 million sq. ft. of retail space. Brookfield Properties Retail Group is headquartered in Chicago and owned by affiliates of Brookfield Asset Management.
- The mortgage loan is structured with a hard lockbox and springing cash management. A cash sweep event occurs upon an event of default or if the DSC ratio falls below 1.45x. There are also ongoing reserves for taxes and insurance, while capital expenditures are triggered by a cash sweep event.

The loan exhibits the following concerns and mitigating factors:

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- The $50.0 million pooled trust loan, along with the $197.6 million pari passu portion held outside the trust, represents a total $247.6 million senior note balance of a larger $425.0 million whole loan. The remaining $177.4 million subordinate B-notes support loan-specific rake bonds, which are the controlling piece of the whole loan. Including the additional B-note debt, our LTV ratio increases to 77.2% from 44.7%.
- In addition to the mortgage loan, there is a $40.0 million mezzanine loan. The mortgage and mezzanine loans have a combined S&P Global Ratings' LTV ratio of 84.5%. The comparably weaker credit metrics for the combined debt exposes the trust loan to a higher default risk. We reduced our LTV recovery thresholds at each rating category to account for this additional debt.
- The trust loan is interest-only for its entire 10-year term. We reduced our LTV recovery thresholds at each rating category to account for the increased refinancing risk at loan maturity.
- The mortgage loan is a refinancing, and the loan proceeds returned approximately $136.1 million (29.3% of the financing, including mezzanine debt) of equity to the sponsor. The Woodlands Mall was originally constructed in 1994 by Homart Development Co., which was subsequently acquired by General Growth Properties (GGP) in 1995, which was itself acquired by BPR in 2018. Based upon BPR/GGP's combined length of ownership, it is likely that the sponsors have no remaining equity in the property. However, BPR has continued to invest significantly in the property: in 2016, a built-to-suit Dick's Sporting Goods store was added to the mall on the southeast side of the property at a cost of $10.6 million, and ownership is in the process of implementing a $5.0 million exterior courtyard project at the south entrance of the mall.
- We estimated the 16.9% occupancy cost for inline tenants (excluding Apple) at the mall to be above the range that we believe can be supported by regional malls with inline sales in the mid $500s per sq. ft. We applied a mark-to-market adjustment to the property's cash flow to derive a sustainable occupancy cost of 15.0%. This mark to market lowered our long-term sustainable value by an additional 7.6%.
- We considered the possibility that Forever 21 undergoes some form of corporate restructuring in the coming months or years, given recent reports that the tenant is exploring debtor-in-possession financing, engaging restructuring advisors, and contacting landlords (including the sponsor) for investment in the company. At 85,150 sq. ft., Forever 21's two-story box is more than double the company's average store size, and the store's $7.6 million in sales translates to $89 per sq. ft. We adjusted our valuation by assuming the tenant will eventually downsize its square footage by half and adjusting its rent to a more sustainable level.
- While the four major anchor tenants (Dillard's, Macy's, JCPenney, and Nordstrom) have 2018 sales estimates of $41.0 million, $73.0 million, $15.0 million, and $34.3 million, respectively, JCPenney ($102 per sq. ft. versus $122 per sq. ft.) and Nordstrom ($248 per sq. ft. versus $337 per sq. ft.) have reported per-sq.-ft. sales below their respective chain averages and are on a downward trajectory. However, the mall's sales as a whole are estimated to be approximately $487.1 million, a strong sales level.
- Although the SPE borrower is structured with a nonconsolidation opinion and two independent directors, there is no warm-body carve-out guarantor for acts such as fraud or voluntary bankruptcy. Instead, the guarantor for the mortgage loan is an entity that may have limited assets from which to satisfy any obligations that may arise under the guarantee. We believe, in some cases, institutional long-term sponsorship such as that offered by BPR benefits certain assets because these sponsors have a greater depth of experience and more resources to maintain quality control standards relative to less experienced sponsors.

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7. Diamondback Industrial Portfolio 1

Table 18

Credit Profile

Loan no.	7	Property type	Industrial
Loan name	Diamondback Industrial Portfolio 1	Subproperty type	Warehouse/distribution
Pooled trust loan balance ($)	50,000,000	Property sq. ft./no. of units	2,234,598
% of total pooled trust balance (%)	4.7	Year built/renovated	
City	Various	Sponsor	VEREIT Real Estate L.P.
State	Various	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type		S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	7,170,000	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(10.45)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	7.75	S&P Global Ratings' LTV ratio (%)	51.6
S&P Global Ratings' value (mil. $)	97.0	S&P Global Ratings' DSC ratio (x)	3.97
S&P Global Ratings' value variance (%)	(33.8)	'AAA' SCE (%)	12.7
S&P Global Ratings' value per sq. ft./unit ($)	61	'AAA' DCE (%)	1.9

(i)The trust loan is pari passu; LTV and DSC ratios calculated based on the $70.0 million mortgage loan balance ($50.0 million trust loan plus the $20.0 pari passu portion). (ii)Pari passu adjusted. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The trust mortgage balance has a strong DSC ratio of 3.97x, calculated using the loan's fixed interest rate of 3.565% and S&P Global Ratings' NCF for the property, which is 10.5% lower than the issuer's NCF.
- The $50.0 million trust mortgage balance has low leverage, with an S&P Global Ratings' LTV ratio of 51.6%, based on our valuation of the property. In addition to the trust mortgage loan, there is also $20.0 million of pari passu debt. The LTV ratio based on the appraiser's "as-is" valuation is 34.1%. Our estimate of long-term sustainable value is 33.8% lower than the appraiser's "as-is" valuation.
- The loan is secured by the fee-simple interests in three single-tenant industrial properties totaling approximately 2.2 million sq. ft. located in West Columbia, S.C., Menomonee Falls, Wis., and Philadelphia. The properties were built in 2012, 2015, and 2001, respectively, and serve as distribution and logistics hubs for their respective tenants. All of the properties have ceiling heights ranging from 32 ft. to 35 ft. as well as varying numbers of dock doors. The TJ Maxx

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property in Philadelphia has 134 dock doors, the Amazon property in West Columbia has 65 dock doors, and the FedEx property in Menomonee Falls has 58 dock doors.

- The portfolio has a strong tenant roster and is 100% leased to three investment-grade tenants: Amazon ('AA-/Stable'; 45.5% of NRA; 41.0% of total rent), TJ Maxx ('A+/Stable'; 45.4%; 46.8%); and FedEx Ground ('BBB/Stable'; 9.1%; 12.2%).
- None of the leases expire during the loan's five-year term (June 2024 maturity date) except for Amazon's lease, which expires in September 2026. However, the property in West Columbia was built-to-suit for Amazon, which has been at the property since 2012 and operates an auto-sort facility that fulfills internet orders at this location. The leases to the other tenants, TJ Maxx and FedEx Ground, expire in Dec. 2034 and July 2030, respectively.
- The portfolio's in-place average rent is $5.10 per sq. ft. as of August 2019 and is generally in line with submarket levels, according to the appraisal. The portfolio's NCF has increased by 4.5% to $11.5 million as of year-end 2018 from $11.0 million as of year-end 2016. The leases for Amazon and TJ Maxx include annual rent escalation of approximately 2.0% and 1.5%, respectively, while FedEx Ground's rent will increase from the current $6.96 per sq. ft. to $7.45 per sq. ft. in August 2025.
- The loan provides acquisition/recapitalization financing to a Korean investment trust that is purchasing the properties for $197.6 million ($206.2 million, including closing costs and upfront reserves), equating to an equity contribution of approximately $75.9 million (36.8% of total cost) to facilitate the recapitalization. Following the recapitalization, the borrowers are indirectly owned 20% by VEREIT Operating Partnership L.P. and 80% by the Korean investment trust.
- The loan benefits from experienced sponsorship. VEREIT, which retained a 20% ownership interest, is a publicly traded company listed on the New York Stock Exchange and is a full-service real estate operating company with a total asset book value of $14.0 billion, including approximately 4,000 properties and 95.0 million sq. ft. A subsidiary of VEREIT will manage the properties.
- The loan is structured with a hard lockbox and in-place cash management. A NCF sweep is triggered if there is an event of default, the amortizing DSC ratio falls below 1.10x, or a lease sweep period occurs. A lease sweep period will occur if Amazon, TJ Maxx, FedEx Ground, or any successor tenant fails to renew, surrenders, cancels, or terminates the lease before expiration, defaults on the lease, files for bankruptcy, or is not rated investment grade or goes dark. There are springing monthly reserves for taxes, insurance, TI/LCs, and capital expenditures, which are required during an event of default or cash management trigger period.

The loan exhibits the following concerns and mitigating factors:

- In addition to the $50.0 million trust mortgage loan and pari passu loan of $20.0 million, there is additional debt in the form of $60.25 million subordinate B-notes that support loan specific rake bonds in GSMS 2019-GC40, which are the controlling piece for the whole loan. Including the additional debt, our LTV ratio increases to 51.6% from 95.9%.
- The loan is interest-only for its entire five-year term. We reduced our LTV recovery thresholds at each rating category to account for the interest-only loan structure.
- The portfolio is exposed to single-tenant risk at each of the three properties. However, each tenant maintains an investment-grade rating by S&P Global Ratings, and the portfolio is 100% leased to three tenants, each of which has a lease expiration beyond the loan's maturity date. We applied an overall vacancy rate of 5.0% in our derivation of NCF for the portfolio.

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- The loan permits individual properties to be released upon a release premium payment of 110% of the original asset liquidation agreement (ALA) for the first release and 115% of the original ALA for the second release. There is a DSC test whereby the DSC ratio after the release must be greater than 1.40x or the DSC ratio immediately prior to release, and an LTV test where the LTV ratio must be equal to the lesser of 65% or the LTV ratio immediately prior to release to ensure that the credit characteristics do not deteriorate as a result of releases.
- With the exception of the TJ Maxx's property in northeast Philadelphia, the other properties are located in what we consider to be tertiary markets. Generally, these markets have exhibited higher default and loss rates relative to primary markets. However, the properties are located in proximity to interstate highways and serve major population centers in their respective areas. Surrounding metropolitan areas include Chicago, Milwaukee, Charlotte, Philadelphia, and New York. The properties' submarket vacancies are 3.7% for the Philadelphia County submarket, 4.5% for the Cayce/West Columbia submarket, and 1.5% for the Menomonee Falls submarket.
- Amazon, the tenant occupying the West Columbia property, entered into a fee in lieu of taxes agreement (FILOT) with the county. The agreement provides for tax incentives in connection with the property development. According to the appraiser, the estimated tax liability without the FILOT agreement would have been approximately 25% higher. Amazon is obligated to pay all taxes under the agreement. We accounted for the potential increase in real estate tax by assuming a higher expense ratio.
- Although the SPE borrower is structured with a non-consolidation opinion and two independent directors, the loan does not have any entity named as a carve-out guarantor for acts such as fraud or voluntary bankruptcy. In our view, this limitation generally lessens the disincentive provided by a full nonrecourse carve-out related to "bad boy" acts or voluntary bankruptcy.
- During alterations to the property, the loan documents do not require the borrower to post collateral for alterations that exceed a certain cost threshold. This structure potentially exposes the transaction to risks associated with additional leverage beyond a de minimis amount and potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

8. 105 East 17th Street

Table 19

Credit Profile

Loan no.	8	Property type	Office
Loan name	105 East 17th Street	Subproperty type	CBD
Pooled trust loan balance ($)	49,500,000	Property sq. ft./no. of units	125,000
% of total pooled trust balance (%)	4.7	Year built/renovated	1960
City		Sponsor	The Related Companies L.P.
State	NY	S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)

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Table 19

Credit Profile (cont.)

S&P Global Ratings' NCF ($)	2,810,000	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(12.14)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	7.00	S&P Global Ratings' LTV ratio (%)	104.0
S&P Global Ratings' value (mil. $)	47.6	S&P Global Ratings' DSC ratio (x)	1.77
S&P Global Ratings' value variance (%)	(29.5)	'AAA' SCE (%)	56.7
S&P Global Ratings' value per sq. ft./unit ($)	846	'AAA' DCE (%)	21.4

(i)The trust loan is pari passu; LTV and DSC ratios are calculated based on the $110.0 million mortgage loan balance ($49.5 million trust loan plus the $60.5 pari passu portion). (ii)Pari passu adjusted. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The $49.5 million trust loan represents a pari passu portion within a larger $110.0 million mortgage loan. The mortgage loan is secured by the fee-simple interest in a 125,000-sq.-ft.office building leased to New York University (NYU) on a 32-year NNN basis located in the Union Square submarket of New York. The property sits in proximity to Union Square and has access to multiple subway and bus lines.
- The trust loan has a moderately high DSC ratio of 1.77x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 12.1% lower than the issuer's NCF.
- New York University ('AA-/Stable') uses this property to house various administrative functions, including its offices of comptroller and of human resources and scholarships. NYU has occupied 100% of the property since 2012 through a sublease from Zurich Capital Markets Inc., which is expiring in October 2019. The university has executed a 32-year NNN lease with the sponsor with annual rent escalations of 2%. The lease is set to expire in 2051 and includes one five-year extension option. NYU does not have any termination or contraction options in their lease.
- NYU is paying market rents of $51.65 per sq. ft. as calculated by S&P Global Ratings versus the Union Square submarket average of $56.08 per sq. ft. Also, the Union Square class-B office submarket is one of the strongest in the country with compound annual rent growth of 1.4% since 2014 and a 4.1% vacancy for the second-quarter 2019, according to CBRE-EA.
- We visited the property on Aug. 29, 2019, and found the building to be well-maintained, arranged in a traditional office format, and fully fitted out by NYU, which was in the process of moving more employees to the property.
- The mortgage loan benefits from the experienced sponsorship of The Related Companies (Related). Related owns 72.0% of the borrower and is the sponsor and non-recourse carve-out guarantor. The company owns and manages more than 30.0 million sq. ft. of commercial real estate valued at over $60.0 billion and has over 40 years of experience.

The loan exhibits the following concerns and mitigating factors:

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- The trust loan has high leverage with a 104.0% LTV ratio, based on S&P Global Ratings' valuation. Our long-term sustainable value estimate is 29.5% lower than the appraiser's valuation.
- The trust loan is interest-only for its entire 10-year term, and there will be no scheduled amortization during the loan term. Compared with an amortizing loan, an interest-only loan bears a higher refinance risk because of the higher loan balance at maturity. We accounted for this lack of amortization by applying a negative 2.5% LTV threshold adjustment across the capital structure.
- The property is subject to single-tenant exposure, which means any decision to vacate the premises could result in 100% vacancy at the property. However, NYU has signed a long-term lease through 2051 and is one of the largest universities in the tri-state area and has an investment-grade rating.
- The mortgage loan is a refinancing, and the loan proceeds returned approximately $72.3 million (65.7% of the financing) of equity to the sponsor.
- The loan does not have a warm body carve-out guarantor. In our view, this limitation generally lessens the disincentive provided by a full nonrecourse carve-out related to "bad boy" acts or voluntary bankruptcy.
- Although the SPE borrower is structured with a non-consolidation opinion and two independent directors, the independent directors can be removed without cause with 30 days' notice.
- During alterations to the property, the loan documents leave to the servicer's discretion the decision of whether to require collateral for alterations that exceed a certain cost threshold. Additionally, this collateral, if required, may not be rated by S&P Global Ratings. This structure potentially exposes the transaction to risks associated with additional leverage beyond a de minimis amount and potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

9. USAA Office Portfolio

Table 20

Credit Profile

Loan no.	9	Property type	Office
Loan name	USAA Office Portfolio	Subproperty type	General suburban
Pooled trust loan balance ($)	45,000,000	Property sq. ft./no. of units	881,490
% of total pooled trust balance (%)	4.2	Year built/renovated	
City	Various	Sponsor	JDM Real Estate Funds LLC
State		S&P Global Ratings' amortization category	Interest-only
S&P Global Ratings' market type		S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	3,150,000	S&P Global Ratings' subordinate debt category	N/A

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Table 20

Credit Profile (cont.)

S&P Global Ratings' NCF variance (%)	(27.75)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	7.52	S&P Global Ratings' LTV ratio (%)	97.1
S&P Global Ratings' value (mil. $)	46.3	S&P Global Ratings' DSC ratio (x)	2.05
S&P Global Ratings' value variance (%)	(34.3)	'AAA' SCE (%)	53.7
S&P Global Ratings' value per sq. ft./unit ($)	283	'AAA' DCE (%)	13.9

(i)Pari passu adjusted. (ii)The loan is pari passu. LTV and DSC ratios are calculated based on the $197.4 million pari passu companion loan and the $45.0 million trust loan balance. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The loan is secured by the fee-simple interest in five office properties totaling 881,490 sq. ft. located in Plano, Texas, and Tampa. The properties are 100% NNN leased to United Services Automobile Association (USAA; 'AA+/Stable'). Founded in 1922, USAA provides services, including property, casualty, and life insurance; banking; and investment and financial planning, to more than 12.4 million members. USAA employs approximately 30,000 employees and is currently ranked as the fifth-largest personal and automobile insurer in the U.S.
- The whole loan has a strong DSC ratio of 2.05x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 27.8% lower than the issuer's NCF. This is primarily driven by our treatment of investment-grade tenant rent steps.
- The properties are located in primary and secondary markets, which generally have higher barriers to entry than tertiary markets. Two of the five assets were constructed in 2019, given an increase in demand for space by USAA. Both assets feature standard amenities, such as a fitness center and a cafeteria, and offer attractive parking ratios and efficient floor plans that allow for flexible space planning and facilitate an open office environment.
- The loan is acquisition financing, and the sponsor contributed $135.0 million of equity as part of the $377.4 million all-in acquisition cost (36.0% of the acquisition costs).
- The loan benefits from JDM Partners' experienced sponsorship. The sponsor is a Phoenix-based full-service real estate firm engaged in the development and management of real estate properties in Arizona and Colorado. Currently, JDM Partners owns $2.3 billion in office, commercial, industrial, resort, and residential real estate assets across its investment funds in 17 states, totaling 8.5 million sq. ft.
- The loan is structured with a hard lockbox and springing cash management, which allows the borrower to control funds until an event of default has occurred or if USAA surrenders, cancels, terminates, or materially modifies its lease; goes dark; defaults under its lease; or goes bankrupt. During a cash sweep event, all excess cash flow will be deposited into a lender-controlled account.

The loan exhibits the following concerns and mitigating factors:

- The whole loan has high leverage with a 97.1% LTV ratio, based on S&P Global Ratings'

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valuation. Our long-term sustainable value estimate is 34.3% lower than the appraiser's valuation.

- The loan is interest-only for its entire 10-year term. We accounted for the lack of amortization by applying a negative LTV threshold adjustment across the capital structure.
- The loan is exposed to single-tenant risk as each of the five properties is leased to USAA. However, the tenant is rated 'AA+' by S&P Global Ratings, and the leases are NNN with 3% annual escalations. There are no termination or contraction options, and the portfolio has a weighted average remaining lease term of 12.4 years. Each of the leases has a lease expiration date that is after loan maturity.
- The Legacy Corporate Centre I-II and III (Plano properties) are, according to CBRE-EA, located within the Far North Dallas submarket, , which had a high vacancy rate of 18.0% for class A office properties as of first-quarter 2019. Legacy I-II were constructed in 1999, and a third building was constructed in 2019. These assets host one of USAA's mission-critical office spaces for software and technology innovation centers. Crosstown Center I & II (Tampa properties) are located within the East Tampa submarket, which had a vacancy rate of 6.4% for class A office properties as of first-quarter 2019, according to CBRE-EA. The Crosstown I property was built in 2015, and Crosstown II was built in 2019. Tampa serves as a strategic command center for USAA's customer services operations. We assumed a 5.0% vacancy rate in our analysis to acknowledge the potential risk of increased vacancy at the properties in light of the CBRE-EA submarket reported vacancies and the properties' suburban office market locations.
- The loan does not have a warm-body recourse carve-out guarantor for acts such as fraud or voluntary bankruptcy. Instead, the guarantor for the mortgage loan is an entity that may have limited assets from which to satisfy any obligations that may arise under the guarantee. We believe that, in some cases, institutional long-term sponsorship benefits certain assets because these sponsors have a greater depth of experience and more resources to maintain quality control standards relative to less experienced sponsors.
- During alterations to the property, the loan agreement does not require that all collateral posted by the borrower be rated by S&P Global Ratings. This structure potentially exposes the transaction to risks associated with additional leverage beyond a de minimis amount and to potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

10. Covington Portfolio

Table 21

Credit Profile

Loan no.	10	Property type	Industrial
Loan name	Covington Portfolio	Subproperty type	Warehouse/distribution
Pooled trust loan balance ($)	36,200,000	Property sq. ft./no. of units	1,206,288
% of total pooled trust balance (%)	3.4	Year built/renovated	
City	Various	Sponsor	Kenneth Sheer

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Table 21

Credit Profile (cont.)

State	VR	S&P Global Ratings' amortization category	Partial interest-only
S&P Global Ratings' market type		S&P Global Ratings' amortization adjustment (%)	(1.25)
S&P Global Ratings' NCF ($)	2,760,000	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(10.83)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	8.50	S&P Global Ratings' LTV ratio (%)	111.4
S&P Global Ratings' value (mil. $)	32.5	S&P Global Ratings' DSC ratio (x)	1.27
S&P Global Ratings' value variance (%)	(37.2)	'AAA' SCE (%)	59.4
S&P Global Ratings' value per sq. ft./unit ($)	27	'AAA' DCE (%)	44.4

NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CBD--Central business district. N/A--Not applicable.

Strengths and concerns The loan exhibits the following strengths:

- The loan is secured by the fee-simple and partial leasehold interest in 11 industrial properties built between 1969 and 1996 totaling 1,206,288 sq. ft. located in El Paso, Texas, Grenville, S.C., and Greer, S.C.
- The sponsor acquired the Greenville and Greer properties in June 2012 and the El Paso properties in February 2016 for a total combined purchase price of $15.50 million ($13 per sq. ft.). The sponsor has invested approximately $9.71 million ($8 per sq. ft.) in capital improvements and leasing costs since acquisition.
- The portfolio is currently 97.2% occupied and has seen strong leasing momentum since acquisition. The occupancy of the portfolio has increased to 95.9% for the TTM ended June 2019 from 67.6% in 2016. The NOI has also increased from $1.8 million to $3.2 million
- The portfolio benefits from a diverse tenant roster. There are 17 tenants occupying the 11 properties in the portfolio. The top three tenants at the property are Pratt Corrugated Holdings Inc. (14.1% of NRA; $3.44 per sq. ft. with the lease expiring Jan. 31, 2021), Tianhai Electric North America Inc.(10.1% of NRA; $3.81 per sq. ft. with the lease expiring Nov. 30, 2024), and Bunzl Retail Services LLC(9% of NRA; $3.50 per sq. ft. with the lease expiring Sept. 30, 2020). The average rent per sq. ft. for the portfolio is $3.77, which is lower than the average submarket rent of $4.43 based on the CoStar Q1 2019 report.
- The loan benefits from the experienced sponsorship of Kenneth Sheer (the principal of Covington Group). The Covington Group is an experienced real estate investment firm specializing in value-add industrial opportunities. It has acquired and redeveloped over 25.0 million sq. ft. of commercial space and 15,000 acres of land across the country, representing more than $750.0 million in total investment. The company is based in Dallas and currently manages over 8.0 million sq. ft. of commercial assets. The sponsor reports net worth and liquidity of $14.3 million and $760,000, respectively, with a clean borrowing history.

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- The mortgage loan is structured with a hard lockbox and springing cash management. A cash sweep will occur during a trigger period. A trigger period occurs if the DSC ratio, based on NOI, falls below 1.25x as of the end of any fiscal quarter and lasts until the DSC ratio exceeds 1.30x as of the end of two consecutive fiscal quarters. During any trigger period, the lender must reserve any excess cash flow after payment of operating expenses and capital expenditures (pursuant to an approved annual budget), debt service, and the reserves described above. The borrower will have the right to use excess reserves to pay TI/LC costs provided the borrower is not within an event of default.

The loan exhibits the following concerns and mitigating factors:

- The mortgage loan has high leverage with a 111.4% LTV ratio, based on S&P Global Ratings' valuation. Our long-term sustainable value estimate is 37.2% lower than the appraiser's valuation.
- The whole loan has a moderately low DSC ratio of 1.26x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 11.0% lower than the issuer's NCF.
- The trust loan is interest-only for the first five years of the 10-year term. A loan with an interest-only component bears a higher refinance risk than an amortizing loan due to a higher loan balance at maturity. We accounted for this lack of amortization by applying a negative 1.25% LTV threshold adjustment across the capital structure.
- The loan is subject to high lease rollover during the term as 100% of the leases roll over during the loan term. However, the loan is structured with an ongoing TI/LC reserve of 150,000 per annum, collected monthly and capped at $450,000 in a replenishing account if drawn upon.
- Six of the properties located in El Paso are subject to a ground lease. The ground lessor is the City of El Paso, with rent adjusted every five years based on increases in the Consumer Price Index. Additionally, there are no fair market value resets for any of the ground leases.
- The loan agreement allows for property insurance coverage from a provider that is not rated by S&P Global Ratings and is not required to be replaced with rated providers at the end of the current insurance term. We used lower LTV recovery thresholds at each rating category for this loan to account for this risk.
- Although the borrower must provide the lender with quarterly and annual financial statements, they are not required to be audited. We believe audited financial statements are more conclusive and reliable than unaudited statements.
- During alterations to the property, the loan documents leave to the servicer's discretion the decision of whether to require collateral for alterations that exceed a certain cost threshold. Additionally, this collateral, if required, may not be rated by S&P Global Ratings. This structure potentially exposes the transaction to risks associated with additional leverage beyond a de minimis amount and potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

Appendices

Our property evaluation results and loan-level credit enhancement for the full pool appear in Appendices 1 and 2 below.

The loan-level credit enhancement levels shown in Appendix 2 include the SCE and DCE for each loan at various rating categories. The SCE assumes the loan is part of an undiversified stand-alone

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transaction, while the DCE assumes the loan is part of a well-diversified transaction with an effective loan count of at least 30. To arrive at the transaction credit enhancement levels, we calculated the weighted average SCE and weighted average DCE at each rating category and used the transaction's effective loan count of 26.6 to ascertain the final transaction credit enhancement level at each rating category relative to the upper and lower ranges established by the weighted average SCE and DCE. These final transaction credit enhancement levels are subject to applicable floors, including a 1% floor at the 'B' rating category, and any adjustment for overall transaction-level considerations.

Appendix I

S&P Global Ratings' Property Evaluation Results(i)

Loan no.	Property name	Property type	Market type	Loan balance (mil. $)	% of pool	S&P Global Ratings' NCF (mil. $)	NCF variance	Cap rate (%)	S&P Global Ratings' value (mil. $)	Value variance (%)	LTV ratio (%)	DSC ratio (x)
1	Moffett Towers II Buildings 3 & 4	OF	P	65.550	6.2	5.961	(31.1)	7.25	73.607	(45.9)	89.1	2.38
2	Northpoint Tower	OF	S	65.500	6.2	6.454	(11.1)	8.25	69.758	(33.7)	93.9	2.94
3	2 Cooper	MF	P	65.000	6.1	4.595	(24.9)	6.54	63.903	(49.6)	101.7	1.71
4	19100 Ridgewood	OF	S	55.000	5.2	3.861	(21.8)	8.00	50.184	(36.3)	109.6	1.90
5	New Jersey Center of Excellence	OF	P	54.720	5.2	4.274	(36.3)	8.50	51.169	(44.3)	106.9	2.07
6	Woodlands Mall	RT	P	50.000	4.7	7.221	(15.3)	6.50	111.122	(42.3)	45.0	3.35
7	Diamondback Industrial Portfolio 1	IN	Var	50.000	4.7	7.167	(10.5)	7.75	96.986	(33.8)	51.6	3.97
8	105 East 17th Street	OF	P	49.500	4.7	2.810	(12.1)	7.00	47.576	(29.5)	104.0	1.77
9	USAA Office Portfolio	OF	Var	45.000	4.2	3.150	(27.7)	7.52	46.332	(34.3)	97.1	2.05
10	Covington Portfolio	IN	Var	36.200	3.4	2.762	(10.9)	8.50	32.493	(37.2)	111.4	1.27
11	U.S. Industrial Portfolio V	IN	Var	32.800	3.1	2.670	(14.7)	8.00	33.468	(34.3)	98.0	2.12
12	Capitol Commons	OF	T	32.500	3.1	2.763	(21.3)	8.50	33.981	(28.0)	95.6	1.27
13	Powered Shell Portfolio--Manassas	OT	P	32.250	3.0	2.500	(19.6)	8.25	31.606	(45.2)	102.0	2.10
14	Millennium Park Plaza	MF	P	30.000	2.8	1.929	(13.7)	6.79	28.424	(37.6)	105.5	1.73
15	Pharr Town Center	RT	T	30.000	2.8	2.298	(6.6)	8.04	28.620	(36.0)	104.8	1.27
16	Powered Shell Portfolio--Ashburn	OT	P	29.000	2.7	2.247	(18.9)	8.25	28.230	(43.4)	102.7	2.10
17	Cross Bay Plaza	RT	P	29.000	2.7	1.983	(16.2)	7.50	26.443	(44.9)	109.7	1.62
18	Prairie Center	RT	S	28.500	2.7	2.731	(11.3)	9.25	29.525	(32.3)	96.5	2.68
19	Agora at Port Richey	MF	S	24.000	2.3	1.772	(7.6)	7.25	24.443	(32.7)	98.2	1.83
20	Holiday Inn Express & Suites San Diego Mission Valley	LO	P	24.000	2.3	2.091	(15.2)	9.75	21.444	(38.0)	111.9	1.47
21	222 Kearny Street	OF	P	23.750	2.2	2.088	(19.0)	8.50	24.565	(34.3)	96.5	2.63

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Appendix I

S&P Global Ratings' Property Evaluation Results(i) (cont.)

Loan no.	Property name	Property type	Market type	Loan balance (mil. $)	% of pool	S&P Global Ratings' NCF (mil. $)	NCF variance	Cap rate (%)	S&P Global Ratings' value (mil. $)	Value variance (%)	LTV ratio (%)	DSC ratio (x)
22	Menifee Town Center and The Barn	RT	Var	21.700	2.0	2.133	(11.7)	8.40	25.392	(29.6)	85.5	2.51
23	30 Hudson Yards	OF	P	20.000	1.9	1.690	(22.3)	6.50	26.714	(32.0)	74.9	2.68
24	Grand Canal Shoppes	RT	S	20.000	1.9	1.701	(9.0)	6.25	27.214	(36.9)	73.5	2.24
25	Midland Office Portfolio	OF	T	20.000	1.9	2.089	(14.0)	8.75	23.335	(26.5)	85.7	1.81
26	Hampton Inn Clearwater	LO	S	19.900	1.9	1.978	(14.2)	10.00	19.782	(30.6)	101.8	1.66
27	Morada Ranch	RT	T	19.500	1.8	1.796	(11.7)	8.00	22.447	(25.2)	86.9	2.70
28	Team Tech Portfolio	IN	Var	17.182	1.6	1.507	(12.0)	8.21	18.353	(27.9)	93.6	1.58
29	18321 Ventura Boulevard	OF	P	15.400	1.5	1.247	(19.0)	8.00	15.584	(32.1)	98.6	2.17
30	Milestone Shopping Center	RT	S	15.000	1.4	1.375	(11.7)	7.75	17.743	(27.9)	84.5	2.44
31	1609 Avenue Y	RT	P	12.500	1.2	1.113	(11.7)	7.25	15.345	(28.3)	81.5	2.34
32	114 Fordham Road	RT	P	7.500	0.7	0.529	(11.7)	7.25	7.296	(41.2)	102.8	1.78
33	GA & KY Self Storage Portfolio	SS	Var	6.900	0.7	0.549	(9.6)	8.50	6.455	(33.1)	106.9	1.36
34	Parker Marketplace	RT	S	5.000	0.5	0.477	(11.7)	7.75	6.151	(26.3)	81.3	2.22
35	Fairfield Inn & Suites East Peoria	LO	T	4.600	0.4	0.548	(14.2)	11.50	4.764	(33.8)	97.7	1.97
36	Cypresswood Self Storage	SS	P	2.975	0.3	0.243	(9.6)	8.00	3.032	(30.3)	98.1	1.43
	Total/weighted average	-	-	1060.427	100.0	92.298	(17.6)	7.82	-	(36.8)	93.7	2.18

(i)Loan balances, net cash flows, and values refer to the trust portion of contributed loan (i.e., the pari passu amount). All LTV ratios, DSC ratios, debt yields, haircuts, and values refer to those generated by S&P Global Ratings, unless otherwise indicated. NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. IN--Industrial. LO--Lodging. MF--Multifamily. OF--Office. RT--Retail. SS--Self-storage. P--Primary. S--Secondary. T--Tertiary. VAR--Various.

Appendix II

S&P Global Ratings' Loan-Level Credit Enhancement Levels(i)

					AAA		AA		A	
Loan no.	Property name	Loan balance ($)	'AAA' DF	'BBB' DF	SCE	DCE	SCE	DCE	SCE	DCE
1	Moffett Towers II Buildings 3 & 4	65,550,000	23.6	18.5	52.3	12.3	43.9	9.6	35.4	7.2
2	Northpoint Tower	65,500,000	25.0	19.7	52.1	13.0	44.1	10.2	36.1	7.7
3	2 Cooper	65,000,000	39.7	31.4	55.8	22.1	47.4	17.5	39.0	13.3

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Appendix II

S&P Global Ratings' Loan-Level Credit Enhancement Levels(i) (cont.)

					AAA		AA		A	
Loan no.	Property name	Loan balance ($)	'AAA' DF	'BBB' DF	SCE	DCE	SCE	DCE	SCE	DCE
4	19100 Ridgewood	55,000,000	34.3	27.1	58.9	20.2	52.1	16.6	45.3	15.6
5	New Jersey Center of Excellence	54,720,000	29.2	23.0	60.3	17.6	53.2	15.8	46.2	15.8
6	Woodlands Mall	50,000,000	13.8	10.9	5.5	0.8	-	-	-	-
7	Diamondback Industrial Portfolio 1	50,000,000	15.1	11.8	12.7	1.9	-	-	-	-
8	105 East 17th Street	49,500,000	37.7	29.8	56.7	21.4	49.5	17.4	42.3	13.7
9	USAA Office Portfolio	45,000,000	25.9	20.4	53.7	13.9	45.9	11.0	38.2	8.5
10	Covington Portfolio	36,200,000	74.8	60.0	59.4	44.4	52.7	36.7	45.9	29.8
11	U.S. Industrial Portfolio V	32,800,000	26.2	20.6	54.1	14.2	46.4	11.3	38.8	8.7
12	Capitol Commons	32,500,000	63.4	50.7	49.3	31.3	41.4	24.5	33.6	18.5
13	Powered Shell Portfolio--Manassas	32,250,000	27.5	21.7	55.9	15.4	48.5	12.4	41.2	9.7
14	Millennium Park Plaza	30,000,000	40.5	32.1	55.0	22.3	46.9	17.7	38.9	13.6
15	Pharr Town Center	30,000,000	70.1	56.1	55.9	39.2	48.7	31.8	41.6	25.3
16	Powered Shell Portfolio--Ashburn	29,000,000	27.8	21.9	56.2	15.6	48.9	12.6	41.6	10.0
17	Cross Bay Plaza	29,000,000	48.6	38.6	61.2	29.8	54.4	24.6	47.6	20.0
18	Prairie Center	28,500,000	25.9	20.4	53.4	13.8	45.6	11.0	37.8	8.4
19	Agora at Port Richey	24,000,000	32.6	25.7	53.7	17.5	45.0	13.6	36.3	10.2
20	Holiday Inn Express & Suites San Diego Mission Valley	24,000,000	59.7	47.6	70.5	42.1	62.9	34.9	55.3	28.6
21	222 Kearny Street	23,750,000	25.9	20.4	53.4	13.8	45.6	10.9	37.8	8.4
22	Menifee Town Center and The Barn	21,700,000	22.5	17.6	49.7	11.2	40.9	8.5	32.1	6.2
23	30 Hudson Yards	20,000,000	19.9	15.6	39.9	7.9	29.9	5.5	19.9	3.4
24	Grand Canal Shoppes	20,000,000	19.4	15.3	45.6	8.9	35.4	6.4	25.2	4.2
25	Midland Office Portfolio	20,000,000	29.0	22.8	44.6	12.9	35.8	9.6	27.1	6.7
26	Hampton Inn Clearwater	19,900,000	42.2	33.4	65.6	27.7	57.3	22.4	48.9	17.8
27	Morada Ranch	19,500,000	23.0	18.1	48.2	11.1	39.6	8.4	30.9	6.1
28	Team Tech Portfolio	17,181,720	42.5	33.7	50.6	21.5	42.6	16.8	34.5	12.6
29	18321 Ventura Boulevard	15,400,000	26.5	20.9	54.4	14.4	46.8	11.5	39.2	8.9
30	Milestone Shopping Center	15,000,000	22.5	17.6	46.8	10.5	37.9	7.9	29.0	5.6
31	1609 Avenue Y	12,500,000	21.4	16.8	44.8	9.6	35.6	7.0	26.3	4.8
32	114 Fordham Road	7,500,000	36.8	29.1	56.2	20.7	48.9	16.7	41.6	13.2
33	GA & KY Self Storage Portfolio	6,900,000	64.4	51.4	56.7	36.5	49.7	29.8	42.7	23.8
34	Parker Marketplace	5,000,000	21.4	16.8	44.6	9.6	35.4	7.0	26.2	4.8

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Appendix II

S&P Global Ratings' Loan-Level Credit Enhancement Levels(i) (cont.)

					AAA		AA		A	
Loan no.	Property name	Loan balance ($)	'AAA' DF	'BBB' DF	SCE	DCE	SCE	DCE	SCE	DCE
35	Fairfield Inn & Suites East Peoria	4,600,000	27.3	21.5	66.7	18.2	58.0	14.6	49.3	11.5
36	Cypresswood Self Storage	2,975,000	53.5	42.6	52.9	28.3	45.2	22.5	37.6	17.4
	Total/weighted average	1,060,426,720	33.3	26.4	50.3	17.9	42.3	14.3	35.2	11.4

(i)Loan balances, net cash flows, and values refer to the trust portion of contributed loan (i.e., the pari passu amount). (ii)Ground lease.
DF--Diversity adjustment factor. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. CE--Credit enhancement.

Related Criteria

- Criteria | Structured Finance | Legal: U.S. Structured Finance Asset Isolation And Special-Purpose Entity Criteria, May 15, 2019
- General Criteria: U.S. Government Support In Structured Finance And Public Finance Ratings, Dec. 7, 2014
- Criteria | Structured Finance | CMBS: Insurance Criteria For U.S. And Canadian CMBS Transactions, June 13, 2013
- General Criteria: Methodology And Assumptions: Assigning Ratings To Bonds In The U.S. Based On Escrowed Collateral, Nov. 30, 2012
- Criteria | Structured Finance | CMBS: CMBS Global Property Evaluation Methodology, Sept. 5, 2012
- Criteria | Structured Finance | CMBS: Rating Methodology And Assumptions For U.S. And Canadian CMBS, Sept. 5, 2012
- Criteria - Structured Finance - General: Criteria Methodology Applied To Fees, Expenses, And Indemnifications, July 12, 2012
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- Criteria | Structured Finance | General: Global Methodology For Rating Interest-Only Securities, April 15, 2010
- Criteria | Structured Finance | General: Methodology For Servicer Risk Assessment, May 28, 2009

Related Research

- Global Structured Finance Outlook 2019: Securitization Continues To Be Energized With Potential $1 Trillion In Volume Expected Again, Jan. 7, 2019

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- Application Of CMBS Global Property Evaluation Methodology In U.S. And Canadian Transactions, Sept. 5, 2012
- U.S. And Canadian CMBS Diversity Adjustment Factor Matrices, Sept. 5, 2012

In addition to the criteria specific to this type of security (listed above), the following criteria articles, which are generally applicable to all ratings, may have affected this rating action: "Counterparty Risk Framework: Methodology And Assumptions," March 8, 2019; "Post-Default Ratings Methodology: When Does Standard & Poor's Raise A Rating From 'D' Or 'SD'?," March 23, 2015; "Global Framework For Assessing Operational Risk In Structured Finance Transactions," Oct. 9, 2014; "Methodology: Timeliness of Payments: Grace Periods, Guarantees, And Use of 'D' And 'SD' Ratings," Oct. 24, 2013; "Criteria For Assigning 'CCC+', 'CCC', 'CCC-', And 'CC' Ratings," Oct. 1, 2012; "Methodology: Credit Stability Criteria," May 3, 2010; and "Use of CreditWatch And Outlooks," Sept. 14, 2009.

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