Presale:

Benchmark 2021-B24 Mortgage Trust

March 1, 2021

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Preliminary Ratings

Class(i)	Preliminary rating	Preliminary amount ($)	Credit enhancement (%)
A-1	AAA (sf)	11,152,000	30.000
A-2	AAA (sf)	73,848,000	30.000
A-3	AAA (sf)	81,111,000	30.000
A-4	AAA (sf)	270,000,000(ii)	30.000
A-5	AAA (sf)	309,281,000(ii)	30.000
A-SB	AAA (sf)	25,562,000	30.000
X-A(iii)	AA+ (sf)	857,686,000(iii)	N/A
X-B(iii)	NR	99,123,000(iii)	N/A
A-S	AA+ (sf)	86,732,000	22.125
B	NR	49,562,000	17.625
C	NR	49,561,000	13.125
X-D(iii)(iv)	NR	57,822,000(iii)	N/A
X-F(iii)(iv)	NR	28,910,000(iii)	N/A
X-G(iii)(iv)	NR	12,391,000(iii)	N/A
X-NR(iii)(iv)	NR	45,431,418(iii)	N/A
D(iv)	NR	31,664,000	10.250
E(iv)	NR	26,158,000	7.875
F(iv)	NR	28,910,000	5.250
G(iv)	NR	12,391,000	4.125
NR(iv)	NR	45,431,418	0.000
RR interest(v)	NR	37,106,641	N/A

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Preliminary Ratings (cont.)

Class(i)	Preliminary rating	Preliminary amount ($)	Credit enhancement (%)
RR certificates(v)	NR	20,859,855	N/A

Note: This presale report is based on information as of March 1, 2021. The ratings shown are preliminary. This report does not constitute a recommendation to buy, hold, or sell securities. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings. (i)The non-offered 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-4 and A-5 certificates will be determined at final pricing. The certificates in aggregate will have a total balance of $579.281 million. (iii)Notional balance. The notional amount of the X-A certificates will be equal to the aggregate certificate balance of the class A-1, A-2, A-3, A-4, A-5, A-SB, and A-S. The notional amount of the X-B certificates will be equal to the aggregate balance of the class B and C certificates. The notional amount of the X-D certificates will be equal to the aggregate balance of the class D and E certificates. The notional amount of the X-F certificates will be equal to the aggregate balance of the class F certificates. The notional amount of the X-G certificates will be equal to the aggregate balance of the class G certificates. The notional amount of the X-NR certificates will be equal to the aggregate balance of the class NR certificates. (iv)Non-offered certificates. (v)Non-offered RR certificates. RR--Risk retention. NR--Not rated. TBD--To be determined. N/A--Not applicable.

Profile

Expected closing date	March 24, 2021.
Collateral	Forty commercial mortgage loans with an aggregate principal balance of $1.159 billion ($958.809 million of offered certificates), secured by the fee interests in 71 properties across 30 states.
S&P Global Ratings' pooled trust LTV	99.4% (based on S&P Global Ratings' NCF and weighted average capitalization rate of 8.10%).
S&P Global Ratings' pooled trust DSC	2.44x (based on S&P Global Ratings' NCF and the actual debt service payable on the mortgage loans and, for the partial-term interest-only loans, the debt service due when the interest-only period expires).
S&P Global Ratings' pooled trust debt yield	9.22% (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 residual interest, which includes the RR certificates. The RR interest and RR certificates provide 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 risk retention interest and the non-RR 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-4, A-5, A-AB, X-A, X-B, X-D, X-F, X-G, and X-H certificates, pro rata, based on their respective entitlements to interest for that distribution date, and then to the class A-S, then class B, then class C, then class D, then class E, then class F, then class G, and then class H until interest payable to each class is paid in full. Principal payments on the certificates will be distributed to the class A-SB certificates until their balance is reduced to the scheduled principal balance for that distribution date, and then sequentially to the class A-1, A-2, A-3, A-4, A-5, A-SB, A-S, B, C, D, E, F, G, and NR certificates until each class' balance is reduced to zero. If the class A-S through NR certificates' total balance has been reduced to zero, principal payments on the certificates will be distributed to the class A-1, A-2, A-3, A-4, A-5, and A-SB 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 NR certificates through and including the class A-S certificates, and then to the class A-1, A-2, A-3, A-4, A-5 and A-SB 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-3, A-4, A-5, A-SB, and A-S certificates. The class X-B certificates' notional amount will be equal to the aggregate certificate balance of the class 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. The class X-F, X-G, and X-NR certificates' notional amount will be equal to the certificate balance of class F, G, and NR, respectively.
Depositor	J.P. Morgan Chase Commercial Mortgage Securities Corp.

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Profile (cont.)

Mortgage loan sellers and sponsors	JPMorgan Chase Bank N.A., German American Capital Corp. Citi Real Estate Funding Inc., and Goldman Sachs Mortgage Co.
Master servicer	Midland Loan Services, a division of PNC Bank N.A.
Special servicer	Greystone Servicing Company LLC.
Trustee and certificate administrator	Wells Fargo Bank N.A.

LTV--Loan-to-value ratio, which is based on S&P Global Ratings' values. DSC--Debt service coverage. NCF--Net cash flow. RR--Risk retention.

Rationale

The preliminary ratings assigned to the Benchmark 2021-B24 Mortgage Trust'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) of 2.44x and beginning and ending loan-to-value (LTV) ratios of 99.4% and 96.4%, respectively, based on our values.

S&P Global Ratings believes there remains high, albeit moderating, uncertainty about the evolution of the coronavirus pandemic and its economic effects. Vaccine production is ramping up and rollouts are gathering pace around the world. Widespread immunization, which will help pave the way for a return to more normal levels of social and economic activity, looks to be achievable by most developed economies by the end of the third quarter. However, some emerging markets may only be able to achieve widespread immunization by year-end or later. We use these assumptions about vaccine timing in assessing the economic and credit implications associated with the pandemic (see our research at www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

Transaction Overview

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

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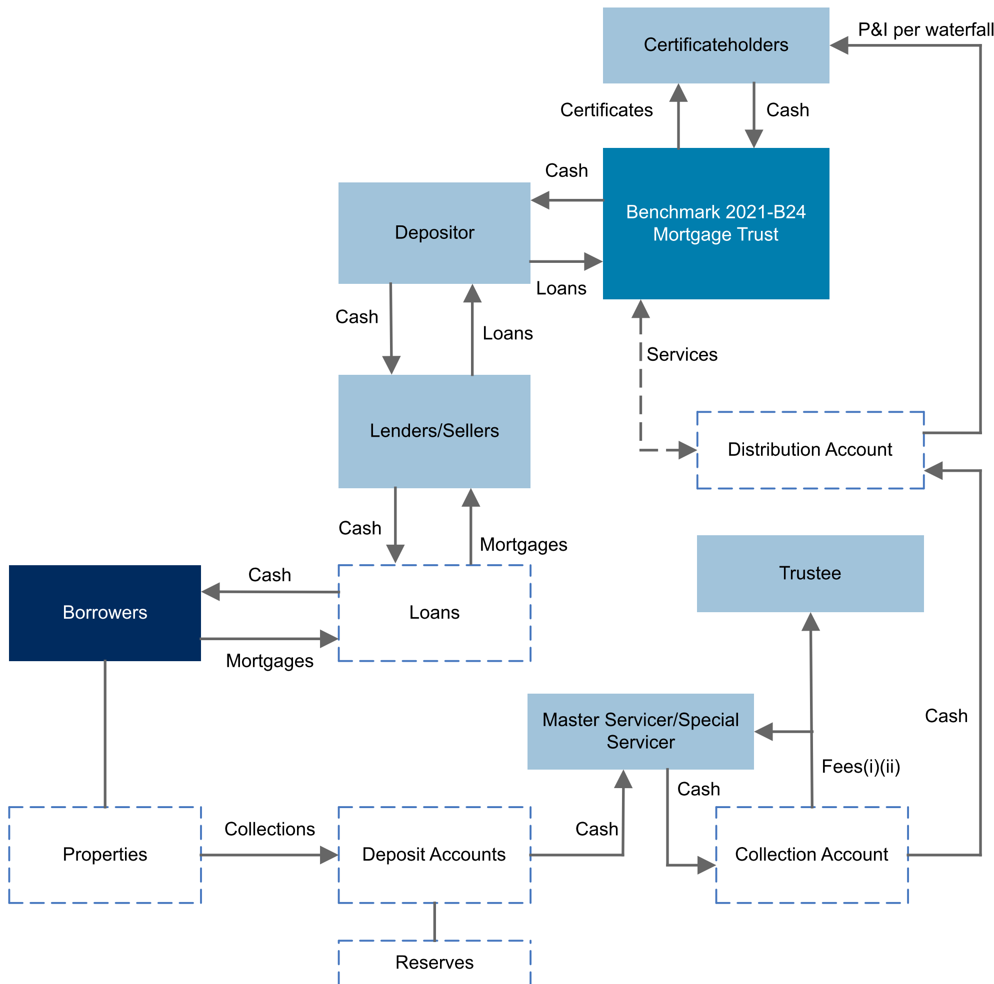
Chart 1

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 transaction has a high weighted average S&P Global Ratings' DSC of 2.44x 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, and any increase in interest rates could affect the loans' ability to refinance at maturity. Our DSCs for the pool range from 0.92x-7.54x.
- The pool is geographically diverse, with 71 properties spread across 30 states. The largest concentration is in New York (nine properties; 22.7% of the pooled trust balance), followed by Florida (eight properties; 17.3%) and Tennessee (three properties; 8.6%). No other state accounts for more than 7.1% of the pooled trust balance.

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- The transaction has a strong concentration of properties in primary markets, specifically within relatively strong metropolitan statistical areas (MSAs), including New York, West Palm Beach, Fla., and Nashville, Tenn. Of the pooled trust balance, 50.4% is located in primary markets (as defined by S&P Global Ratings) and 25.3% is in secondary markets. The remaining properties (24.3%) are located in tertiary markets.
- All the loans have borrowers that are structured as special-purpose entities (SPEs). Twenty-one loans (83.8%) provided lenders with non-consolidation opinions, including all top 10 loans. Twenty-five loans (85.3%) have borrowers that are structured with at least one independent director.
- All the loans have some form of lockbox: 22 loans (76.1%) are structured with a hard lockbox, 14 loans (20.6%) with springing lockboxes, three loans (2.7%) with soft lockboxes, and one loan (0.6%) has a combination of a hard and soft lockbox. Thirty-eight loans (91.3%) are structured with springing cash management and two loans (8.7%) have in-place cash management.
- Eighteen loans (51.7% 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 52.7%, reflecting an average equity contribution of 47.3% for these loans.
- Six loans (23.6% of the pooled trust balance) are secured by multiple properties, ranging from two to 15 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, five of these loans (18.0%) allow for property releases, subject to various conditions, which may reduce the diversity benefit from these loans.

Risk Considerations

We considered these risks when analyzing this transaction:

- U.S. CMBS delinquencies may increase in the coming months due to the economic slowdown resulting from the COVID-19 pandemic and the associated containment efforts, including social distancing, restrictions on travel, and government-mandated closures of certain businesses. Many lodging assets are closed or operating at very low occupancy levels, and certain tenants within retail assets have stopped paying rent or requested rent relief due to closure or demand reductions. The COVID-19 pandemic and the responses to it have led to an increase in unemployment levels and a reduction in consumer spending, which is expected to also adversely impact multifamily, office, self-storage, and industrial properties. Multifamily and self-storage properties may be negatively impacted if unemployment rates rise and disposable income levels fall, or if there is a moratorium on evictions. Office properties may experience fluctuations in occupancy as businesses adjust their plans in response to government actions or if employers permit enhanced flexible work arrangements. This transaction's exposure to lodging includes three loans (10.5% of the pooled trust balance). The largest is the MGM Grand and Mandalay Bay loan, which comprises 6.9% of the pooled trust balance, and the collateral properties are located on the Las Vegas Strip. The remaining two properties are the JW Marriott Nashville (3.0%), a 533-guestroom full-service hotel in Nashville, and the Holiday Inn Philadelphia South (0.5%) a 161-guestroom full-service hotel in Swedesboro, New Jersey. The trust's exposure to retail is through six loans accounting for 10.8% of the pooled trust balance. The largest retail loan is Dawson Marketplace (3.8%), an anchored property located in Dawsonville, Ga. The property is shadow-anchored by a Kroger grocery store, and its top five

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tenants include One Life Fitness, Restoration Hardware Outlet, Burlington, Hobby Lobby, and Marshalls. According to the issuer, all of the loans in the transaction whose first payment date has already occurred, are current on their debt service obligations. Eight loans (18.5%) are structured with upfront cash debt service reserves covering debt service payments ranging from three- to 18-months. In some cases, borrowers are in discussion with tenants that have requested lease modifications or rent relief. We selectively increased our vacancy and/or capitalization rate assumptions on certain properties that we deemed to have a higher risk for cash flow disruption.

- The transaction has high leverage, with a weighted average LTV ratio of 99.4% based on S&P Global Ratings' values. While the top 10 loans have a weighted average S&P Global Ratings' LTV ratio of 93.4%, loans 11-20 are more highly leveraged, with a weighted average S&P Global Ratings' LTV of 111.1%. The LTV was one of the primary factors in S&P Global Ratings' derivation of credit enhancement levels for this transaction.
- The transaction is moderately diversified by loan balance, with an effective loan count (as measured by the Herfindahl-Hirschman Index) of 24.1. The 10 largest loans represent 55.7% 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 transaction is somewhat concentrated by property type. Of the pooled trust balance, 39.6% is backed by office properties, 3.7% by medical office properties, 16.3% by mixed-use properties, 13.2% by industrial properties, 10.5% by lodging properties, 9.1% by retail properties, 3.8% by multifamily properties, 2.2% by self-storage properties, and 1.7% by single-tenant retail properties as calculated by S&P Global Ratings.
- The trust has high exposure to office collateral (11 loans; 43.3% of the pooled trust balance). Seven loans (33.1%) are secured by central business district (CBD) office properties, and two loans (4.4%) are backed by suburban office properties, which is a property type that has exhibited higher default and loss rates relative to CBD office properties. However, the suburban office properties in this transaction are generally well-located in suburbs of secondary cities (Seattle and Detroit). The remaining two office loans are secured by one medical office (3.7%) and one office/industrial flex park (2.1%).
- Six loans (10.8% of the pooled trust balance) are secured by retail assets. Four (9.1%) of the six retails loans are anchored properties that are either anchored or shadow-anchored by strong retailers (Kroger, Whole Foods, Target, or CVS). The remaining two (1.7%) loans are single tenant retail: one is a portfolio of 19 Dollar General stores located in 11 states and the other is a CVS in Valley Stream, N.Y. The largest retail loan is Dawson Marketplace (3.8%), an anchored property located in Dawsonville that was built in stages between 2017-2019. The property is currently open and operating with all tenants open after some closed temporarily at the onset of the COVID-19 pandemic. A total of 15 tenants negotiated lease modifications with the landlord, which contained only rent deferrals and no rent forgiveness. 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. We believe the "non-essential" store closures and social distancing measures currently being implemented to counter the outbreak of the COVID-19 virus will impair brick-and-mortar retail businesses, which may cause cash flow disruptions at retail properties and potentially elevated loan delinquencies in the coming months.

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- Three loans (10.5% 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 structures change daily, they have a significant underlying operating business, and they have a higher expense ratio relative to other property types. However, the lodging properties in this transaction have a low S&P Global Ratings weighted average LTV ratio of 73.7%, which is driven by the low S&P Global Ratings' LTV ratio for the senior trust portion of MGM Grand and Mandalay Bay loan of 41.5%. The remaining two lodging loans have S&P Global Ratings' LTV ratios of 141.0% (JW Marriott Nashville) and 107.8% (Holiday Inn Philadelphia South).
- Twenty-seven loans (76.2% of the pooled trust balance) are interest-only for their entire loan terms, including eight of the top 10 loans. The interest-only loans have a high weighted average S&P Global Ratings' LTV ratio of 99.3%, and 13 loans (44.8% of the pooled trust balance) have LTV ratios over 100%. Ten loans (16.8%) have a partial interest-only period, including one of the top 10 loans, and three loans in the pool (7.0%) are structured as amortizing loans. The transaction is scheduled to amortize 3.5% through maturity. S&P Global Ratings considered loan amortization characteristics when assigning credit enhancement levels to the individual loans and the transaction.
- Thirty properties (17.3% of the pooled trust balance) are within seven loans that are leased to a single tenant. These properties can be susceptible to cash flow disruption if the tenant's business operations are adversely impacted or if the tenant fails to renew its lease. However, of the 30 properties, 25 (6.4%) are within two loan portfolios that have multiple single-tenanted properties. Also, 16 properties (1.7%) are leased to tenants that have investment grade ratings by S&P Global Ratings. The largest single-tenant property is Gestamp Automocion SLB (4.3%), a Nashville industrial property, which is 100% leased to Gestamp Automocion through December 2040. Twenty-two of the single-tenant properties (12.4%) have lease terms that exceed the loan maturity date, while the remainder (eight; 4.9%) expire before loan maturity.
- Fourteen loans (54.1% of the pooled trust balance) do not have warm-body carve-out guarantors. In our view, this limitation generally lessens the disincentive provided by a typical nonrecourse carve-out related to "bad boy" acts or voluntary bankruptcy.
- Fourteen loans in the pool (63.2% of the pooled trust balance) have a pari passu component; two loans (13.8%) have a subordinated first-mortgage loan component in addition to senior trust and pari passu loan components (which were securitized in separate stand-alone transactions); one loan (5.7%) has a subordinate mortgage; and three loans (15.1%) have mezzanine debt. In addition, eight loans (29.3%) 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 option.

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Pool Characteristics

Collateral description

The pool contains 40 loans that are secured by first-mortgage liens on the fee interests in 71 properties. The top five and 10 loan concentrations represent 32.4% and 55.7% 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 account for 43.3% of the pooled trust balance, and mixed-use, which accounts for 16.3% (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 (%)	Weighted average S&P DSC (x)
Office	10	459.0	39.6	97.8	2.17
Mixed-use	8	188.8	16.3	110.6	1.91
Industrial	6	152.7	13.2	104.5	1.70
Lodging	3	121.3	10.5	73.7	5.70
Retail-anchored	4	105.3	9.1	94.6	2.54
Multifamily	3	44.6	3.8	93.5	2.13
Medical office	1	42.5	3.7	136.0	1.69
Self-storage	3	25.2	2.2	103.3	1.86
Single tenant--retail	2	20.0	1.7	101.1	2.13
Total	40	1159.3	100.0	99.4	2.44

(i)Based on S&P Global Ratings' classification.

Geographic distribution

The pool consists of properties that are located in 30 states. Of these properties, 48.6% (by pooled trust balance) are located in three states: New York, Florida, and Tennessee. The top five states represent 62.6% 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 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.)

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Table 2

Geographic Concentrations

			Market type (%)		
State	Pooled trust balance (mil. $)	No. of properties	Primary	Secondary	Tertiary
New York	263.7	9	99.7	--	0.3
Florida	200.1	8	70.9	29.1	--
Tennessee	100.2	3	--	34.9	65.1
Texas	81.8	5	96.2	--	3.8
Nevada	80.0	2	--	100.0	--
Oregon	71.5	2	--	92.3	7.7
California	58.6	3	88.7	--	11.3
Georgia	56.6	2	22.7	--	77.3
Washington	47.4	2	57.0	--	43.0
Michigan	37.9	4	--	64.2	35.8
Other states--20	161.6	31	5.9	18.5	75.6
Total	1159.3	71	50.4	25.3	24.3

Borrower concentration

The largest borrower sponsors in the pool are 601W Tenth Owner LLC (one loan; 6.9% of the pooled trust balance); MGM Grand PropCo LLC and Mandalay PropCo LLC (one loan; 6.9%); 777 South Flagler Assocs. LLC (one loan; 6.5%); 141 Livingston Owner LLC (one loan; 6.5%) and 1547 CSR--Pittock Block LLC (one loan; 5.7%).

Two groups of loans have related borrower-sponsors:

- Anthony Kassis, Gary Shahid, and Blevins Family Properties LLC is the sponsor for Camellia Trace and Bristol Park, which account for 2.1% of the pooled trust balance combined; and
- George Thacker, Lawrence Charles Kaplan, and Richard Schontz are the sponsors for the The Cove Storage Portfolio and Scotsman Self Storage, which account for 0.7% of the pooled trust balance combined.

Single-tenant properties

- Thirty properties (17.3% of the pooled trust balance) are within seven loans that are leased to a single tenant. Twenty-two of the single-tenant properties (12.4%) have lease terms that exceed the loan maturity date, while the remainder (eight; 4.9%) expire before loan maturity (see table 3).

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Table 3

Single-Tenant Properties

Property	Tenant	Tenant S&P Global Ratings rating	Pooled trust balance (mil. $)	% of pooled trust balance	Lease expiration date
Gestamp Automocion SLB	Gestamp Automocion	BB-/Stable	49.5	4.3	Dec. 31, 2040
30 Hudson Yards 67	Related Cos. L.P.	NR	45.0	3.9	Feb. 28, 2039
Advanced Energy	Advanced Energy Industries Inc.	NR	18.4	1.6	Dec. 31, 2035
True Value	True Value	NR	16.0	1.4	Feb. 28, 2029
Belnick	Belnick	NR	12.8	1.1	June 1, 2029
6450 Industrial	Mack Trucks	NR	7.6	0.7	Aug. 31, 2024
Tufco--3161 South Ridge Road	Tufco	NR	6.6	0.6	July 21, 2037
CVS Valley Stream	CVS Pharmacy	BBB/Stable	6.2	0.5	Jan. 31, 2031
Pro Con--109 Maplewood Drive	Pro Con	NR	5.7	0.5	Dec. 30, 2030
Total Logistics	Total Logistics	NR	4.7	0.4	Aug. 31, 2032
Pro Con--2441 East Glendale Avenue	Pro Con	NR	4.1	0.4	Dec. 30, 2030
Amaray	Amaray	NR	4.0	0.3	Oct. 31, 2033
Pro Con--2430 East Glendale Avenue	Pro Con	NR	3.0	0.3	Dec. 30, 2030
Tufco--1205 Burris Road	Tufco	NR	1.6	0.1	Currently Dark
Tufco--1055 Parkview Road	Tufco	NR	1.3	0.1	July 21, 2037
Robinsonville	Dollar General	BBB/Stable	1.1	0.1	May 31, 2035
Saint Mary's	Dollar General	BBB/Stable	1.0	0.1	Dec. 13, 2035
Alexandria (Carlos)	Dollar General	BBB/Stable	1.0	0.1	Oct. 31, 2035
St. Martinville	Dollar General	BBB/Stable	0.9	0.1	April 30, 2035
Fife Lake	Dollar General	BBB/Stable	0.9	0.1	Oct. 31, 2035
Waubun	Dollar General	BBB/Stable	0.9	0.1	Nov. 30, 2035
Lake Village	Dollar General	BBB/Stable	0.9	0.1	Oct. 31, 2035
New Era	Dollar General	BBB/Stable	0.9	0.1	Nov. 30, 2035
Mooers	Dollar General	BBB/Stable	0.9	0.1	April 30, 2035
Center	Dollar General	BBB/Stable	0.9	0.1	Dec. 31, 2035
Hinckley	Dollar General	BBB/Stable	0.9	0.1	Nov. 30, 2035
Lepanto	Dollar General	BBB/Stable	0.9	0.1	Nov. 30, 2035
Edgemont	Dollar General	BBB/Stable	0.9	0.1	Oct. 31, 2034
Louisa	Dollar General	BBB/Stable	0.8	0.1	Nov. 30, 2034
Prue	Dollar General	BBB/Stable	0.8	0.1	Jan. 31, 2035

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Table 3

Single-Tenant Properties (cont.)

Property	Tenant	Tenant S&P Global Ratings rating	Pooled trust balance (mil. $)	% of pooled trust balance	Lease expiration date
Total	--	--	200.6	17.3	Dec. 31, 2040

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 October 2018 and February 2021. The weighted average loan interest rate is 3.54%.

The original loan terms range from 60 to 120 months, with a weighted average original loan term of 113.5 months. The weighted average remaining loan term is 110.8 months.

Twenty-seven loans (76.2% of the pooled trust balance) are interest-only for the entire loan term, one loan of the 27 (6.9%) is interest-only followed by an anticipated repayment date (ARD), and 10 loans (16.8% of pooled trust balance) 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 24 to 60 months. Three loans (7.0%) have no interest-only periods, and amortize on a 360-month schedule. S&P Global Ratings adjusted its analysis to reflect the various amortization terms and loan structures (see table 4).

Table 4

Loan Amortization

Loan type	No. of loans	% of pool balance	S&P Global Ratings' DSC (x)	S&P Global Ratings' weighted average LTV ratio (x)
Interest-only	27	76.2	2.74	99.3
Partial interest-only	10	16.8	1.48	103.4
Amortizing balloon	3	7.0	1.53	91.0
Fully amortizing	--	--	--	--

LTV--Loan to value.

Subordinated debt

Fourteen loans in the pool (63.2% of the pooled trust balance) have a pari passu component; two loans (13.8%) have a subordinated first-mortgage loan component in addition to senior trust and pari passu loan components (which were securitized in separate stand-alone transactions); one loan (5.7%) has a subordinate mortgage; and three loans (15.1%) have mezzanine debt. In addition, eight loans (29.3%) permit the borrower to incur future mezzanine debt. (See table 5.)

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Table 5

Loans With Existing Additional Debt

Property	Pooled trust balance (mil. $)	% of pooled trust balance	Pari passu debt (mil. $)	Junior non-trust note (mil. $)	B-note balance (mil. $)	Mezzanine balance (mil. $)	Total debt (mil. $)
410 Tenth Avenue	80.0	6.9	300.0	185.0	--	140.0	705.0
MGM Grand and Mandalay Bay	80.0	6.9	1554.2	1365.8	--	--	3000.0
141 Livingston	75.0	6.5	25.0	--	--	--	100.0
Phillips Point	75.0	6.5	123.5	--	--	30.5	229.1
Pittock Block	66.0	5.7	75.0	--	22.5	--	163.5
The Galleria Office Towers	65.0	5.6	25.0	--	--	--	90.0
U.S. Industrial Portfolio VI	60.0	5.2	21.0	--	--	--	81.0
Boca Office Portfolio	50.0	4.3	49.0	--	--	--	99.0
30 Hudson Yards 67	45.0	3.9	26.0	--	--	--	71.0
JW Marriott Nashville	35.0	3.0	150.0	--	--	--	185.0
The Village at Meridian	31.0	2.7	35.0	--	--	--	66.0
Millennium Corporate Park	27.0	2.3	105.0	--	--	--	132.0
711 Fifth Avenue	26.5	2.3	518.5	--	--	--	545.0
Woodbury Crossing Phase II	20.4	1.8	--	--	--	3.1	23.5
Willoughby Commons	17.0	1.5	20.0	--	--	--	37.0

Cross-collateralized and portfolio loans

Six loans (23.6% of the pooled trust balance) are secured by portfolios with multiple properties. The largest are MGM Grand and Mandalay Bay (6.9%; two lodging properties in Las Vegas); The Galleria Office Towers (5.6%; three office buildings in Houston); U.S. Industrial Portfolio VI (5.2%; 10 industrial buildings in seven states) There are no cross-collateralized and cross-defaulted loans in the pool.

Third-Party Review

We reviewed appraisal, environmental, engineering, and seismic reports on the properties we analyzed, where applicable. The majority of the 71 reports were completed within the past 13 months, but three (5.8%) of the appraisal, environmental, and engineering reports are older than 13 months and were completed between September 2018 and December 2019.

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Eight properties (15.4% of the pooled trust balance) are located in seismic zones 3 or 4. The loan with the highest overall probable maximum loss (PML) of 17% is 8670 Wilshire (3.7%). The remaining properties are in seismic zones 3 or 4 and had PMLs of 16% or lower. None of the 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 13 months	68	94.2
Environmental review within the past 13 months	68	94.2
Engineering review within the past 13 months	68	94.2
Seismic review for properties in zones 3 or 4	8	15.4

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, as well as all loans with a balance over $20.0 million. We note the structural matters, if any, that we factored into our analyses of these loans in the Top 10 Loans section below.

S&P Global Ratings' Credit Evaluation

Our analysis of the pool included the following:

- We derived an S&P Global Ratings NCF for 26 of the 40 loans in the pool (89.1% 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 12 properties across seven loans (44.2% of the pooled trust balance) including six of the top 10 loans.
- 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, as well as for loans with a balance over $20.0 million.

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

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assessments of the various properties' competitive positions. On a pool-wide basis, our weighted average NCF was 17.3% 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

We calculated the pool's 2.44x DSC 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 range (x)	No. of loans	Loan balance (mil. $)	% of pooled trust balance
Less than 1.00	1	26.5	2.3
1.00–1.10	--	--	--
1.10–1.20	1	17.0	1.5
1.20–1.30	-	--	--
1.30–1.40	4	85.2	7.3
1.40–1.50	4	76.0	6.6
1.50–1.60	1	65.0	5.6
1.60–1.70	3	82.7	7.1
1.70–1.80	6	86.3	7.4
1.80–1.90	--	--	--
1.90–2.00	2	21.3	1.8
Greater than 2.00	18	699.4	60.3

DSC--Debt service coverage.

S&P Global Ratings' LTV

Based on our analysis, S&P Global Ratings' weighted average beginning LTV ratio is 99.4% and its ending LTV ratio is 96.4%, which reflects the 8.10% weighted average S&P Global Ratings capitalization rate (see table 8).

Table 8

S&P Global Ratings' LTV Ratios

LTV ratio range (%)	No. of loans	Loan balance (mil. $)	% of pooled trust balance
Less than 50	1	80.0	6.9
50–55	--	--	--
55–60	1	31.0	2.7
60–65	--	--	--
65–70	1	80.0	6.9
70–75	--	--	--
75–80	--	--	--

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Table 8

S&P Global Ratings' LTV Ratios (cont.)

LTV ratio range (%)	No. of loans	Loan balance (mil. $)	% of pooled trust balance
80–85	1	7.6	0.7
85–90	3	89.2	7.7
90–95	3	43.1	3.7
95–100	8	149.7	12.9
100–105	10	219.2	18.9
105–110	7	293.6	25.3
Greater than 110	5	166.0	14.3

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.

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	39.6	2.17	(18.1)	7.47	97.8	469
Mixed-use	16.3	1.91	(18.5)	7.93	110.6	363,356 (iii)/422 (iv)
Industrial	13.2	1.70	(15.6)	8.13	104.5	59
Lodging	10.5	5.70	(20.2)	10.88	73.7	339,377
Retail-anchored	9.1	2.54	(17.4)	8.24	94.6	165
Multifamily	3.8	2.13	(7.5)	7.61	93.5	149,772
Medical office	3.7	1.69	(15.1)	8.25	136.0	618
Self-storage	2.2	1.86	(9.8)	7.94	103.3	111
Single tenant retail	1.7	2.13	(16.5)	7.30	101.1	229
Total/weighted average	100.0	2.44	(17.3)	8.10	99.4	--

(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. (iii)Value per unit on the mixed-use loans that are measured in units. (iv)Value per sq. ft. for the mixed-use loans that are measured in sq. ft. 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.

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Table 10

Top 10 Loans

Property	Property type	% of pooled trust balance	S&P Global Ratings' trust DSC (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV (%)	S&P Global Ratings' value per unit/sq. ft. ($)
410 Tenth Avenue	Office	6.9	3.53	(28.1)	6.45	68.3	881
MGM Grand and Mandalay Bay	Lodging	6.9	7.54	(8.7)	11.25	41.5	404,024
141 Livingston	Office	6.5	2.09	(16.9)	7.25	106.4	440
Phillips Point	Office	6.5	2.31	(16.8)	8.00	106.2	416
Pittock Block	Mixed-use	5.7	2.18	(8.6)	8.25	107.3	441
The Galleria Office Towers	Office	5.6	1.56	(8.9)	7.80	88.8	95
U.S. Industrial Portfolio VI	Industrial	5.2	2.01	(21.4)	8.25	108.8	25
Boca Office Portfolio	Mixed-use	4.3	2.11	(14.2)	8.25	99.4	193
Gestamp Automocion SLB	Industrial	4.3	1.31	(13.5)	7.50	104.7	74
30 Hudson Yards 67	Office	3.9	1.44	(25.0)	6.75	134.1	1,177
Total/weighted average	--	55.7	2.81	(16.1)	8.05	93.4	--

(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 23.0% lower than the issuer's underwritten NCF. S&P Global Ratings' weighted average beginning LTV ratio is 111.1% for these loans, and we calculated a 2.07x DSC 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 (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV (%)	S&P Global Ratings' value per unit/sq. ft. ($)	NCF variance/high S&P Global Ratings' LTV drivers
Dawson Marketplace	Retail-anchored	3.8	2.19	(15.1)	8.25	104.8	119	Vacancy, management fee, capex.

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Table 11

Loans 11-20 (cont.)

Property	Property type	% of pooled trust balance	S&P Global Ratings' trust DSC (x)(i)	% NCF diff.(ii)	S&P Global Ratings' cap rate (%)	S&P Global Ratings' LTV (%)	S&P Global Ratings' value per unit/sq. ft. ($)	NCF variance/high S&P Global Ratings' LTV drivers
8670 Wilshire	Medical office	3.7	1.69	(15.1)	8.25	136.0	618	Vacancy, other income, IG rent step credit.
JW Marriott Nashville	Lodging	3.0	2.28	(45.3)	10.25	141.0	246,099	RevPAR, franchise fee.
Morgan Stanley Tower	Office	2.9	1.61	(12.3)	8.25	97.3	186	GPR, vacancy, Taxes, capex.
The Village at Meridian	Retail-anchored	2.7	4.13	(17.9)	8.75	59.6	131	Vacancy, other income, management fee, TI/LC, capex.
Millennium Corporate Park	Office	2.3	2.62	(16.4)	7.50	91.4	269	Vacancy, management fee, TI/LC, capex.
711 Fifth Avenue	Mixed-use	2.3	0.92	(68.1)	7.02	163.7	979	Rent steps, insurance expenses, TI/LC
Oakland Commons I and II	Office	2.1	1.39	(15.1)	8.50	104.2	74	Extrapolated.
Orlando Technology Park	Office	2.1	1.72	(19.2)	8.50	101.1	80	Vacancy, management fee, TI/LC.
Woodbury Crossing Phase II	Multifamily	1.8	1.80	(8.5)	7.75	99.7	227,062	Vacancy, management fee, real estate taxes, TI/LC.
Total/weighted average	--	26.6	2.07	(23.0)	8.36	111.1	--	--

(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. CapEx--Capital expenditure. TI/LC--Tenant improvements and leasing commissions. GPR--Gross potential revenue. RevPar--Revenue per available room. IG--Investment Grade N/A--Not applicable.

Loan-level credit enhancement

We used each loan's S&P Global Ratings' DSC and LTV 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).

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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 24.1, which we consider to be moderately diversified, resulting in a concentration coefficient of 60.2%.

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 (50.4%) and secondary markets (25.3%).

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.

We believe this transaction's high percentage of full-term, interest-only loans warranted an additional negative qualitative adjustment beyond that produced from our loan-level analysis and model results.

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 10.0%-40.0% from our current cash flow, which is 17.3% 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 8.10%.)

Table 12

Effect Of Declining NCF On S&P Global Ratings

Decline in S&P Global Ratings' NCF (%)	0	(10)	(20)	(30)	(40)
Potential 'AAA' rating migration	AAA	A-	B-	CCC-	CCC-

NCF--Net cash flow.

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Top 10 Loans

1. 410 Tenth Avenue

Table 13

Credit Profile

Loan no.	1	Property type	Office
Loan name	410 Tenth Avenue	Subproperty types	CBD
Pooled trust loan balance ($)	80,000,000	Property sq. ft./no. of units	631,944
% of total pooled trust balance (%)	6.9	Year built/ renovated	1927/2020
City	New York	Sponsors	Mark Karasick, Michael Silberberg
State	N.Y.	S&P Global Ratings amortization category	Interest only
S&P Global Ratings market type	Primary	S&P Global Ratings amortization adjustment (%)	(2.50)
S&P Global Ratings NCF ($)	7,420,000(i)	S&P Global Ratings subordinate debt category	Unsecured debt (S&P Global Ratings LTV >= 90%)
S&P Global Ratings NCF variance (%)	(28.07)	S&P Global Ratings subordinate debt adjustment	(2.50)
S&P Global Ratings cap rate (%)	6.45	S&P Global Ratings LTV (%)	68.3(ii)
S&P Global Ratings value (mil. $)	117.2(i)	S&P Global Ratings DSC (x)	3.53(ii)
S&P Global Ratings value variance (%)	(41.7)	'AAA' SCE (%)	37.8
S&P Global Ratings value per sq. ft./unit ($)	881	'AAA' DCE (%)	6.9

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $300.0 million pari passu companion loan and the $80.0 million trust loan balance (collectively, 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. CBD—Central business district.

Strengths And Concerns

This loan exhibits the following strengths:

- The $80.0 million trust loan represents a senior pari passu portion within a larger $565.0 million whole loan. The senior loan component has low leverage, with an S&P Global Ratings' LTV ratio of 68.3% based on our valuation. The LTV ratio based on the appraiser's "as-is" valuation is 39.8%. Our estimate of long-term sustainable value is 41.7% lower than appraiser's "as-is" valuation.
- The whole loan has a strong DSC of 2.37x. The senior loan component has a strong DSC of 3.53x, calculated using the fixed interest rate and our NCF for the property, which is 28.1% lower than the issuer's NCF and is driven mainly by our assumptions on real estate taxes and tenant improvements and leasing commissions (TI/LCs).

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- The loan is secured by the fee-simple interest in a 20-story, 631,944-sq.-ft., class-A office building on Tenth Avenue between 33rd and 34th Streets. Formerly the historic Master Printers Building, the property was built in 1927 and was fully renovated by SL Green, the seller, in 2020. The property is prominently located within the Hudson Yards Development in Manhattan, N.Y. with access to various neighborhood amenities, including the Shops and Restaurants at Hudson Yards, the Vessel, The Shed, the High Line, and other retail options and attractions.
- The property benefits from a recently completed $145.5 million ($230.24 per sq. ft.) renovation executed by SL Green. In addition, $57.6 million ($91.15 per sq. ft.) was spent on tenant improvements and tenant funded investments. The redevelopment created new retail storefronts on 10th Avenue and 33rd Street, replaced existing windows with larger 10' tall windows, moved the lobby to 33rd Street across from the Manhattan West amenities, and created a studio and multiple rooftop terraces, some of which provide uninterrupted views south of Downtown and the harbor. The new lobby features floor to ceiling glass, a café, a dedicated Amazon desk, and reclaimed wood floors. Tenant spaces have a desirable industrial aesthetic with exposed columns, polished cement floors, restored brick, high-performance loft windows, and 13.5' slab-to-slab ceiling heights.
- The property benefits from the investment grade tenancy of Amazon ('AA-/Stable'; 335,408 sq. ft.; 53.1% of net rentable area [NRA]; LXD: 2037), which accounts for 55.4% of the in-place gross rental income, as calculated by S&P Global Ratings, and First Republic Bank ('A-/Stable'; 211,521 sq. ft.; 33.5% of NRA; LXD: 2036), which accounts for 36.4% of the in-place gross rental income. The third largest tenant is Related Cos. L.P. (11.2% of NRA; 70,852 sq. ft.; LXD: 2045), which accounts for 7.1% of the in-place gross rental income. The remaining space at the property is leased to retail tenants.
- The property is in a primary market, within the Penn Plaza/Garment submarket of New York City, the second-largest office submarket in the U.S., according to CoStar. As of year-end 2020, the five-star office submarket vacancy rate was 11.5%, with an average gross rental rate of $90.91 per sq. ft. The buildings located within the Hudson Yards development: 10 Hudson Yards, 55 Hudson Yards, 30 Hudson Yards, and 50 Hudson Yards (nearing completion), exhibited an average vacancy rate of roughly 9.0%, with an average gross rental rate of $105 per sq. ft., as of February 2021, according to CoStar. We assumed a 4.8% weighted average vacancy rate given the strong investment grade tenant profile and long-term leases. The average in place gross rental rate at the property is $96.14, as calculated by S&P Global Ratings.
- The loan benefits from the property's location within the Hudson Yards/Manhattan West area, which has experienced over $40 billion of investment in recent years. Upon completion, the development is expected to include nearly 13 million sq. ft. of space leased to commercial tenants, along with 22,000 residential units.
- The loan represents acquisition financing of the property and the sponsor contributed $265.8 million of equity as part of the $970.8 million all-in acquisition costs (27.4% of the acquisition costs). The borrower deposited $92.9 million in upfront reserve accounts related to outstanding TI/LC ($35.2 million) obligations and gap/free rent ($57.7 million).
- The loan is structured with a hard in-place lockbox and in-place cash management, as determined by S&P Global Ratings. A cash sweep event occurs one month prior to the ARD in January 2028, upon an event of default (EOD), upon a mezzanine loan EOD, if the DSC falls below 1.65x, if the borrower or manager declares bankruptcy, or if one of the major tenants declares bankruptcy, fails to timely renew, or reduces its square footage beyond certain minimum thresholds. There are also ongoing reserves for taxes, insurance, and capital expenditures.

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- The loan benefits from 601W Cos.' experienced sponsorship. The 601W Cos. is a leading private real estate firm with acquisition, ownership, development, and management expertise. Over the past 25 years, 601W Cos. has acquired 45 million sq. ft. of commercial space throughout the U.S., with an aggregate value in excess of $12.0 billion. The sponsor's investment profile focuses on core plus assets with potential for value creation.
- We visited the property on Feb.16, 2021, accompanied by representatives of the issuer and sponsor. The new 33rd Street lobby is a large and open modern space, with floor to ceiling windows and an attractively designed cafe. We toured several floors and observed high ceilings and oversized windows that allow for ample sunlight to enter despite scaffolding on the building's facade. Amazon's 12th and 15th floor spaces are complete in "white box delivery status," while the majority of the other floors we observed, including First Republic's space, were still under renovation. Several floors feature terraces with impressive downtown views. The roof deck features approximately 3,000 sq. ft. of indoor space and 5,000 sq. ft. of outdoor space and will be utilized as event space. Related Cos. L.P. was the only office tenant in the building because the other tenants have not yet taken occupancy, and the retail space is not yet complete. An electrical overhaul of the property is complete, and elevators are in the process of being modernized. Transit access is excellent due to the property is next to an M34 bus stop, one block from Moynihan Train Hall, and two blocks from Penn Station.

This loan exhibits the following concerns:

- The $80.0 million pooled trust loan, along with the $300.0 million pari passu portion held outside the trust, represents a $380.0 million senior loan component of a $565.0 million whole loan. The remaining $185.0 million junior non-trust controlling note is held outside the trust and increases our LTV ratio from 68.3% to 101.5%.
- In addition to the first mortgage loan, there is a $140.0 million mezzanine loan. When including the whole loan and mezzanine loan, the S&P Global Ratings' LTV ratio increases to 126.7%. We reduced our LTV recovery thresholds at each rating category to account for the existing mezzanine loan.
- The loan is interest-only for its entire seven-year term, and there will be no scheduled amortization during the loan term. To account for this lack of amortization, we applied negative LTV threshold adjustments across the capital structure.
- The leases for Amazon and First Republic Bank have not yet commenced. The borrower provided Amazon with a 60-day notice on Jan. 22, 2021, stating that they expect construction will be complete for all but the 15th floor (35,202 sq. ft.; 5.6% of NRA) on March 25, 2021. Amazon's anticipated lease commencement date is in late March 2021, with an expected rent commencement date in June 2022, except for the 15th floor, which has an anticipated lease commencement date in June 2021 and rent commencement date in August 2022. First Republic Bank has accepted the premises for three of its seven floors, and the buildout on the remainder of the tenant's space is largely complete. First Republic Bank's rent is expected to commence between August 2021 and May 2022: 18.0% of NRA in August 2021, 2.8% of NRA in September 2021, 12.0% of NRA in October 2021, and 0.7% of NRA in May 2022. The estimated gap rent and free rent until the rent commencement dates for these two tenants is $52.5 million. However, there is an upfront reserve for $57.7 million resulting in approximately $5.0 million of excess reserves in the event of delays. In addition, there is a $35.2 million upfront reserve for all outstanding TI/LCs at the property.
- As a result of the ongoing large-scale renovations at the property, the sponsor has completed its applications for a tax abatement as part of the Industrial and Commercial Abatement Program (ICAP). Approval of the abatement for a qualifying property is subject only to the timely

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completion of the application process, which the sponsor has done. The 10-year ICAP tax abatement is projected to commence in 2024 and expires in 2034, with a 20.0% per year phase-out in years six through 10. We assumed the fully assessed unabated real estate taxes after the projected abatement expiration in our derivation of long-term NCF and added back the net present value of the savings over the ICAP abatement's remaining term to our value. However, the tax savings are a "wasting asset" and the present value will decline with each passing year. If rental income does not increase, or if other expenses increase or capitalization rates increase in such a way as to offset the loss of yearly tax savings, our overall value will continue to decline.

- Amazon has a termination option for up to 335,408 sq. ft., which is its entire space, on the tenth anniversary of the rent commencement date, with 600 days' notice, subject to a termination fee of $37.0 million ($58.55 per sq. ft.). In addition, Related Cos. L.P. has a termination option for up to 70,852 sq. ft. (7.1% of in-place gross rent) on Oct. 31, 2030, Oct. 31, 2035, or Oct. 31, 2040, with 18 months' notice, subject to no termination fee.
- 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 (a) additional leverage beyond a de minimis amount and (b) potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.
- The borrowers are structured as six tenants-in-common (TIC). If multiple TIC borrowers for a loan declare bankruptcy, it may delay the liquidation and recovery timeframe and result in higher losses to the loan. However, the TIC agreement is subordinate to the loan agreement and the TIC have waived their rights to partition, which decreases the risk of serial bankruptcy filings or litigation among these borrowers.
- Although the SPE borrower is structured with a non-consolidation opinion and two independent directors, the independent directors can be removed without cause with five days' notice.

2. MGM Grand and Mandalay Bay

Table 14

Credit Profile

Loan no.	2	Property type	Lodging
Loan name	MGM Grand and Mandalay Bay	Subproperty type	Full service
Pooled trust loan balance ($)	79,985,667	Property sq. ft./no. of units	9,748
% of total pooled trust balance (%)	6.9	Year built	Various
City	Las Vegas	Sponsors	BREIT Operating Partnership L.P. and MGM Growth Properties Operating Partnership L.P.
State	Nev.	S&P Global Ratings' amortization category	Interest only
S&P Global Ratings' market type	Secondary	S&P Global Ratings' amortization adjustment (%)	(2.50)

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Table 14

Credit Profile (cont.)

S&P Global Ratings' NCF ($)	21,760,000(i)	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(8.75)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	11.25	S&P Global Ratings' LTV (%)	41.5(ii)
S&P Global Ratings' value (mil. $)	192.8(i)	S&P Global Ratings' DSC (x)	7.54(ii)
S&P Global Ratings' value variance (%)	(46.8)	'AAA' SCE (%)	11.4
S&P Global Ratings' value per sq. ft./unit ($)	404,024	'AAA' DCE (%)	1.5

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC are calculated based on the $1.554 billion pari passu companion loan and the $79.99 million pooled trust loan balance (collectively, the senior loan component). LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. N/A--Not applicable.

Strengths and concerns

The loan exhibits the following strengths:

- The $79.99 million trust loan represents a senior pari passu portion within a larger $3.0 billion whole loan. The senior loan component has low leverage, with an S&P Global Ratings' LTV ratio of 41.5%, based on our valuation. The LTV ratio on the senior loan component is 35.5%, which is based on the appraiser's "as-is" valuation on the real estate properties and excluding the personal and intangible properties. Our estimate of long-term sustainable value is 14.4% lower than the appraiser's "as-is" valuation on the real estate properties excluding the personal and intangible properties, and 46.8% lower than the appraiser's "as-is" valuation on the real estate properties including personal and intangible properties.
- The whole loan has a strong DSC of 4.11x, calculated using the 3.6% fixed interest rate and our NCF for the property, which is 8.7% lower than the issuer's NCF. The senior loan component has a strong DSC of 7.54x. The DSC based on the MGM Grand and Mandalay Bay Resorts and Casinos' year-one lease payment of $292.0 million and the whole loan's fixed interest rate is 2.70x.
- The collateral for the whole loan consists of two properties: MGM Grand, and Mandalay Bay Resorts and Casinos. MGM Grand is a AAA, four-diamond, 4,998-guestroom mega-resort and casino on 101.9 acres in the heart of the Las Vegas strip and in close proximity to the McCarran International Airport. MGM Grand, which opened in 1993, was originally themed after the "Wizard of Oz" and offers various amenities, including 748,000 sq. ft. of meeting space, more than 15 food and beverage outlets, 41,800 sq. ft. of rentable retail space, a 22,858-sq.-ft. spa, four swimming pools, 177,268 sq. ft. of casino space (featuring 1,553 slot machines, 128 table games, and 60 television screens for streaming sports activities), as well as an entertainment venue that is home to Cirque du Soleil's "Ka" production, The MGM Grand Garden Arena, David Copperfield Theatre, and Brad Garrett's Comedy Club.
- The other property, Mandalay Bay, which opened in 1999, is a AAA, four-diamond, mega-resort and casino on 124.1 acres. It is located across from the MGM Grand and immediately across

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I-15 from Allegiant Stadium, the new home of the National Football League's (NFL's) Raiders, which was substantially completed in July 2020 and was utilized starting in September 2020, but remained closed to fans for the season due to the COVID-19 pandemic. Mandalay Bay has 4,750 guestrooms in two towers. One tower is the 1,117-guestroom, all-suite Delano hotel. The main Mandalay Bay tower also includes the independently operated 424-guestroom Four Seasons Hotel Las Vegas, which occupies floors 35-39 of the main hotel building. They are all part of the collateral and are operated as three separate independent hotels, each with its own entrance, lobby, spa, fitness center, and food and beverage outlets. The main Mandalay Bay tower is operated by a wholly owned subsidiary of MGM Resorts International (MGM or the MGM tenant); the Delano hotel is operated by the MGM tenant under a license agreement with The Morgan Group; and the Four Seasons Hotel is operated by Four Seasons Hotels and Resorts under a management agreement that expires in 2039. Mandalay Bay offers various amenities, including 152,159 sq. ft. of casino space (featuring 1,232 slot machines and 71 gaming tables), more than 25 restaurants, a 30,000-sq.-ft. spa, 2.2 million sq. ft. of meeting space (the fifth-largest convention center in the U.S.), 10 swimming pools, 54,000 sq. ft. of rentable retail space, as well as an entertainment venue that is home to Cirque du Soleil's Michael Jackson "One" production, Shark Reef Aquarium, the House of Blues, and a 12,000-seat special events arena. However, the Cirque du Soleil performances have been suspended until further notice due to the COVID-19 pandemic. The $3.0 billion whole loan was used to finance the $4.6 billion acquisition of the fee interests in the MGM Grand and Mandalay Bay resort properties by a newly formed joint venture between an affiliate of Blackstone Real Estate Income Trust Inc. (BREIT) Operating Partnership L.P. and MGM Growth Properties (MGP) Operating Partnership L.P., a wholly owned subsidiary of MGM (BB-/Watch Neg/--). The sponsor, BREIT, is a non-traded real estate investment trust (REIT) that invests in commercial real estate properties in diversified sectors. BREIT is managed by an external advisor that is an affiliate of The Blackstone Group Inc. The Blackstone Group Inc. had real estate assets under management totaling $174.0 billion as of Sept. 30, 2020, including The Cosmopolitan and Bellagio in Las Vegas. The other sponsor, MGP, is a publicly traded REIT engaged in the acquisition, ownership, and leasing of destination entertainment and leisure resorts. MGP's current portfolio consists of 13 destination resorts across the U.S. totaling approximately 27,400 guestrooms. The sponsors contributed about $1.6 billion in equity toward the acquisition cost.

- Upon the acquisition of MGM Grand (from MGM) and Mandalay Bay (from MGP), the MGM tenant leased back and operates the properties subject to a 30-year triple-net (NNN) lease with two 10-year renewal options. The lease will have a fixed payment of $292.0 million with annual increases of 2.0% for the first 15 years. In years 16-30, rent will increase at the greater of 2.0% or the consumer price index value (capped at 3.0%). At the beginning of each renewal period, the rent is set to the greater of the prior rent or the fair-market rent at that time. MGM provided a guarantee for shortfalls, as well as the payment and performance of all monetary obligations under the lease. The lease is structured with a capital expenditure requirement of 3.5% of net revenues per year (in addition to a 1.5% of net revenue FF&E reserve). Based on the reported 2019 NCF, the ratio of NCF to rent was strong at 1.78x. The coverage is 1.52x, based on our NCF and the year-one rent payment. We applied a positive LTV adjustment to our capital structure for this loan to account for the fact that the borrower is receiving a fixed rental payment under a long-term lease from the MGM tenant, which somewhat enhances the stability of the cash flow received by the borrower relative to the underlying NCF of the properties, which could fluctuate with operational risks and changes in the economy.

- Las Vegas has long been a premier domestic and international tourist destination. Las Vegas visitation levels rebounded from the recession in 2009 when visitation dropped to 36.4 million, reaching a high of approximately 42.9 million visitors in 2016 before tapering slightly to

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approximately 42.1 million visitors in 2018. The casino industry remains a primary demand driver, but Las Vegas has continued to diversify. The NFL's Oakland Raiders announced their relocation to Las Vegas, started the 2020 football season at the Allegiant Stadium, and hosted games, but the stadium remained closed to fans for the season due to the COVID-19 pandemic. The National Hockey League's Las Vegas Golden Knights began playing in Las Vegas in 2017-2018. Las Vegas is also a major convention city and hosts approximately six million attendees per year. The 1.9 million-sq.-ft. Las Vegas Convention Center is currently being renovated and expanded with an additional building and exhibition hall.

- Historically, the Las Vegas lodging market has enjoyed very strong occupancy levels, which averaged 85.5% over the past 10 years, with a high of 89.1% in 2016 and a low of 80.4% in 2010. With approximately 147,000 guestrooms in 2018, Las Vegas fills more rooms per night on average than any other destination in North America, partially because hotels offer rooms at attractive price points to bring guests to the casinos and provide discounts and promotions for other revenue-generating components. Favorably, hotel supply in Las Vegas has remained relatively flat for the last decade. MGM Grand and Mandalay Bay each have maintained an occupancy rate over 90.0% in each of the past five years.
- MGM Grand and Mandalay Bay have a more diversified revenue stream than many gaming-oriented casino hotels and also relative to traditional resort hotels due to their vast array of amenities. In 2019, reported combined gaming revenues accounted for 18.0% of total revenue, while the remaining revenues were predominately generated by hotel rooms (30.2%), food and beverage (29.9%), and other (21.9%). Gaming revenues and expenses are subject to volatility and, since the gaming revenue still represents a substantial portion of the revenue, we used an 11.25% capitalization rate in our analysis.
- On a combined basis, revenue per available room (RevPAR) at the two properties has increased over the last five years, with more moderate gains experienced recently. RevPAR increased to $180.94 as of year-end 2019 from $165.56 in 2015, an increase of 9.3%, with gains of 1.9% in 2017, a decline of 0.1% in 2018, and a gain of 2.6% in 2019. The properties' net operating income (NOI) increased in 2016, 2017, and 2018 to $617.4 million in 2018 from $485.3 million in 2015. However, NOI fell 15.8% in 2019, mainly due to the fallout from the Oct. 1, 2017, incident at the Mandalay Bay property. The hotel experienced a large number of corporate event cancellations that affected the 2018 and 2019 performance; however, it is our understanding that the hotel is now past the impact from this event.
- MGM Grand and Mandalay Bay's main competitors are The Mirage, New York New York, Luxor, Caesars Palace, Planet Hollywood, and Venetian/Palazzo hotels. According to the appraisals, MGM Grand has a RevPAR penetration rate (which measures the RevPAR of the hotel relative to their competitors, with 100.0% indicating parity with competitors) of 97.3% (where both occupancy and ADR penetrations are also slightly under 100.0%), which is consistent with 2018 at 97.6%, and slightly down from 2017 at 100.3%. The RevPAR penetration for Mandalay Bay was 105.1%, consistent with 2018 at 106.4%, and slightly down from 2017 at 110.9%. The market leader for the last three years (at well over 100.0% RevPAR penetration) is Venetian/Palazzo.
- The whole loan is structured with an in-place hard lockbox and springing cash management, which allows the borrower to control funds: until an EOD; if the DSC falls below 2.50x for two consecutive calendar quarters; if the MGM tenant files for bankruptcy; if certain control conditions are met while there is an EOD under the lease; or if the loan is not repaid in full by the ARD. At that point, the borrower will be required to maintain monthly tax and insurance escrows and replacement reserves. During a cash trap event, all excess cash flow will be deposited into a lender-controlled account. However, in lieu of any requirement for funds to be

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held in a cash collateral account during a trigger period (and as long as no EOD has occurred and the ARD has not passed), the guarantor or sponsor can provide a guarantee equal to the amount that would have been deposited into the cash collateral account. If this amount exceeds 15.0% of the then-outstanding principal amount of the loan, an additional insolvency opinion must be provided. Under the loan agreement, there are no ongoing reserves for taxes, insurance, or replacements as long as the property is subject to the lease.

The loan exhibits the following concerns and mitigating factors:

- The $79.99 million pooled trust loan, along with the $1.554 billion pari passu portion held outside the trust, represents a total $1.63 billion senior loan component of a $3.0 billion whole loan. The remaining $1.37 billion junior non-trust note is held outside the trust, is the controlling piece of the whole loan, and increases our LTV ratio to 76.2% from 41.5%.
- The trust loan has a 12-year term (final maturity on March 5, 2032) with a 10-year ARD of March 5, 2030. The loan is interest-only for its entire term. After the ARD, excess cash flow will be swept and used to hyper-amortize the loan and the interest rate (currently 3.6%) will increase by at least 2.0%. 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 LTV threshold adjustment across the capital structure.
- The borrower is permitted to incur additional future debt in the form of a mezzanine loan. However, the mezzanine loan amount is limited to a total debt LTV ratio no greater than 67.0% and a DSC not less than the current DSC of 4.81x.
- The loan permits the release of the MGM Grand or Mandalay Bay, subject to a release premium equal to 105.0% of the allocated loan balance ($1.64 billion for MGM Grand and $1.36 billion for Mandalay Bay) until the loan balance is reduced to $2.25 billion and thereafter, the release premium increases to 110.0% of the allocated loan amount (ALA). In addition, the release is subject to a DSC test where the DSC after release must be equal to or greater than 4.81x.
- The loan agreement allows for property insurance coverage from providers that are not rated by S&P Global Ratings and are 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.
- The Phase I environmental site assessment report identified a 30,000-gallon underground storage tank (UST) that was installed in May 1993 containing diesel fuel that is used to fuel emergency generators as a business environmental risk. The assessor recommended environmental insurance and/or contractual obligations to participate in a state UST cleanup trust fund. An environmental insurance policy with limits of $25.0 million per each pollution condition and $25.0 million in the aggregate, subject to a $50,000 deductible except $1.0 million for mold, is currently in place. The policy covers legal liability and cleanup costs for new and pre-existing conditions and includes business interruption. The loan agreement requires the borrower to maintain the coverage during loan term.
- MGM Grand and Mandalay Bay were built in 1993 and 1999, respectively, and have been renovated in stages over the last several years. Approximately $480.0 million has been spent on capital improvements for the MGM Grand since 2010, including $144.0 million ($28,812 per guestroom) on a full guestroom renovation from 2010 to 2013, and approximately $118.9 million was spent in December 2018 on an expansion and renovation of the convention center. Mandalay Bay has benefitted from over $510.6 million of capital improvements since 2010, including $159.7 million (approximately $35,150 per guestroom) in guestroom renovations from 2012 to 2016. Nevertheless, based on our visit to the properties in January 2020, the

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guestrooms at MGM Grand are somewhat dated in appearance and are in need of an upgrade. Under the terms of the lease, the MGM tenant is required to spend at minimum, 3.5% of actual net revenues (about $74.0 million or $14,806 per guestroom) on capital expenditures during every five-year period and reserve 1.5% of net revenues. The Mandalay Bay property's rooms were last renovated between 2012 and 2016 for approximately $159.7 million (approximately $35,150 per guestroom), and we observed that they were generally in good condition. Since the loan agreement did not provide for an upfront renovation reserve, we deducted $10,000 per guestroom for the MGM Grand property (excluding the 82 Skyloft and mansion rooms) less two years of the furniture, fixtures, and equipment (FF&E) reserve at 1.5% of net revenues as required by the lease from our valuation of the property.

- The appraiser identified two significant new casino resorts planned for Las Vegas: Resorts World Las Vegas and The Drew Las Vegas, which are expected to add significant supply to the market in 2020. Resorts World Las Vegas is expected to add 3,500 guestrooms to the market in a Chinese-themed resort, and The Drew Las Vegas will offer an additional 4,000 guestrooms. Several existing properties are also adding significant amounts of meeting/convention space, including Caesars Forum (550,000 sq. ft.) and ARIA (200,000 sq. ft.).
- There is no warm body carve-out guarantor and the carve-out guarantee is capped at only 10.0% of the loan amount. We believe these limitations generally lessen the disincentive provided by a full non-recourse carve-out related to "bad acts" or voluntary bankruptcy. There is also a no recourse carve-out for borrowers that fail to maintain their status as a special-purpose bankruptcy remote entity. We believe this omission lessens the incentive to adhere to these covenants, weakening the asset isolation and substantive consolidation assumptions underpinning our analysis.
- CMBS delinquencies, particularly on lodging-backed loans, have increased in recent months due to the economic slowdown resulting from the COVID-19 pandemic. The pandemic and responses to it have led to an increase in unemployment levels and a reduction in consumer spending, which has adversely impacted lodging properties. The pandemic has brought about unprecedented curtailment measures, which are resulting in a significant decline in demand from corporate, leisure, and group travelers. Since the outbreak, there has been a dramatic decline in airline passenger miles stemming from governmental restrictions on international travel and a major drop in domestic travel. In an effort to curtail the spread of the virus, many group meetings, both corporate and social, have been cancelled, corporate transient travel has been restricted, and leisure travel has slowed due to fear of travel and the closure of demand generators, such as amusement parks and casinos, and the cancellation of concerts and sporting events. MGM Grand and Mandalay Bay (including Delano) reopened on June 4, 2020, and July 1, 2020, respectively, with limited amenities and certain COVID-19 mitigation procedures, after temporarily closing on March 17, 2020, following the COVID-19 outbreak. In addition, as of September 2020, the Four Seasons Hotel had reopened. While the stay-at-home directive was lifted in Nevada, including Las Vegas on May 15, 2020, casinos are operating at limited capacity with limited amenities. We expect travel will remain tempered for several quarters. Effective as of Nov. 30, 2020, MGM has temporarily closed the hotel tower operations at Mandalay Bay from Monday through (and including) Wednesday each week. The restaurants, casino, and other amenities remain open throughout the week. MGM does not expect the temporary closure to continue past February 2021. As of Feb. 1, 2021, the property continues to operate subject to the restrictions noted above. The loan is current through its January 2021 payment date and the borrower has not requested forbearance or modification. In addition, the master lease payments have been made as of February 2021 and the MGM tenant has not reached out for a lease modification. Given the high degree of uncertainty around the timeframe of when the properties' operations will rebound, we believe the risk of the borrower

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requesting forbearance is elevated. However, the loan benefits from fixed rental payments under its lease agreement. The MGM tenant has been current on its rent payments and is well-capitalized. It had $4.6 billion in cash and cash equivalents as of Sept. 30, 2020. In addition to the $750.0 million of senior notes offering in May 2020, the MGM tenant issued an additional $750.0 million in senior notes in October 2020.

3. Phillips Point

Table 15

Credit Profile

Loan no.	3	Property type	Office
Loan name	Phillips Point	Subproperty type	CBD
Pooled trust loan balance ($)	75,000,000	Property sq. ft./no. of units	448,885
% of total pooled trust balance (%)	6.5	Year built	1988
City	West Palm Beach	Sponsor	The Related Cos. Inc.
State	Fla.	S&P Global Ratings' amortization category	Interest only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	5,870,000(i)	S&P Global Ratings' subordinate debt category	Unsecured Debt (S&P Global Ratings LTV >= 90%)
S&P Global Ratings' NCF variance (%)	(16.76)	S&P Global Ratings' subordinate debt adjustment	(2.50)
S&P Global Ratings' cap rate (%)	8.00	S&P Global Ratings' LTV (%)	106.2(ii)
S&P Global Ratings' value (mil. $)	70.6(i)	S&P Global Ratings' DSC (x)	2.31(ii)
S&P Global Ratings' value variance (%)	(35.3)	'AAA' SCE (%)	60.9
S&P Global Ratings' value per sq. ft./unit ($)	416	'AAA' DCE (%)	17.6

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $123.5 million pari passu companion loan and the $75.0 million pooled trust loan balance (collectively, the whole loan).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.

Strengths and concerns

The loan exhibits the following strengths:

- The $75.0 million trust loan represents a pari passu portion within a larger $198.5 million mortgage whole loan. The whole loan is secured by the borrower's fee simple interest in Phillips Point, which consists of two office towers totaling 448,885 sq. ft. on 4.25 acres in West Palm Beach, Fla. The 13-story, 218,014-sq.-ft., 1985-built, east office tower and the 19-story, 177,198-sq.-ft., 1988-built, west office tower includes ground floor retail spaces totaling, in aggregate, 53,498 sq. ft. and parking garages totaling 1,162 spaces. The property is situated at the entrance of the Royal Palm Bridge, which provides access to the Town of Palm Beach.

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- The property benefits from extensive renovation work totaling $15.7 million since 2018, which included replacing the exterior facades, elevator modernization, and cooling tower replacement. In 2020, the seller spent approximately $6.2 million on renovating the lobby for both towers and the plaza.
- The whole loan has a strong DSC of 2.31x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 16.8% lower than the issuer's NCF. The variance is primarily driven by our higher vacancy rate and TI/LC assumptions and the exclusion of straight-line rent income. We considered future investment-grade tenant rent steps in our analysis via an addition to our capitalized value.
- The loan proceeds financed the sponsor's acquisition of the property for a purchase price of $281.9 million. The sponsor contributed $62.7 million of equity as part of the $291.7 million all-in acquisition costs (21.5% of the acquisition costs).
- The property benefits from a granular tenant roster and was 90.5% leased, as of the Dec. 1, 2020, rent roll, to over 30 distinct tenants in the legal, distribution, technology, or financial industries. In addition, approximately 28.0% of NRA and 29.4% of in-place gross rent, as calculated by S&P Global Ratings, is leased to investment-grade rated tenants. The three largest tenants at the property are: Gunster, Yoakley, and Valdes-Fauli (11.3% of NRA; 10.7% of in-place gross rent as calculated by S&P Global Ratings; August 2024 expiration); Akerman, Senterfitt, and Eidson (10.8%; 10.5%; September 2028 expiration); and Affiliated Managers Group (8.6%; 9.4%; March 2026 expiration). No other tenant comprises greater than 6.7% of the property's NRA or 7.6% of in-place gross rent.
- We visited the property on Jan. 8, 2021, with the property manager and found it to be in good condition. The property benefits from its location, which is immediately off the Royal Park Bridge, making it a convenient office location for those that live in the residential neighborhoods of Palm Beach and is one of the most accessible office buildings in West Palm Beach. Based on our observations, the property offers extensive ocean views and the suites have been tailored to the tenants' needs with modern finishes, which we considered to be in line with class-A designation. We also noted that, in general, Palm Beach is surrounded by residential buildings, shopping centers, and resorts.
- The whole loan benefits from The Related Cos. Inc.'s experienced sponsorship. The sponsor, founded in 1972, is a privately owned real estate firm and has over 8,000 residential units under ownership and manages approximately $4.0 billion of equity capital.
- The whole loan is structured with a hard in-place lockbox and springing cash management, which allows the borrower to control funds until an EOD has occurred or a debt yield ratio of 5.75% is breached for one quarter. At that point, the borrower will be required to maintain monthly tax and insurance escrows. During a trigger period, or at the lender's sole discretion during an EOD, 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 an S&P Global Ratings' LTV ratio of 106.2% based on our valuation and the whole loan balance. The LTV ratio based on the appraiser's "hypothetical as-is" valuation (which included the hypothetical condition that an additional $6.65 million would be reserved by the borrower for future TI/LC) is 68.7%. Our estimate of long-term sustainable value is 35.3% lower than the appraiser's hypothetical as-is valuation, a variance driven primarily by our higher capitalization rate of 8.0% compared to the appraiser's capitalization rate of 6.0%.
- In addition to the whole loan, there is a $30.5 million mezzanine loan. The mortgage and

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mezzanine loans have a combined S&P Global Ratings' LTV ratio of 122.5%. The comparably weaker credit metrics for the combined debt exposes the trust loan to a higher default risk. Therefore, we applied a negative LTV threshold adjustment at each rating level to account for this risk.

- The whole loan is interest-only for its entire 10-year term, and 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 property faces considerable tenant rollover risk, with 84.4% of leased NRA and 89.6% of in-place gross rent, as calculated by S&P Global Ratings, expiring during the loan term. The rollover is concentrated between 2024 and 2028 when between 13.1% and 19.7% of NRA and between 13.6% and 18.9% of in-place gross rent, as calculated by S&P Global Ratings, expires. Specifically, the three largest tenants' leases expire between 2024 and 2028. However, the loan is structured with an upfront TI/LC reserve of $6.7 million ($14.81 per sq. ft.). We accounted for this risk by applying higher vacancy and capitalization rates in our analysis.
- Although the property is positioned in a primary market, the submarket vacancy rates are above 10.0%. According to CoStar, the property is in the West Palm Beach CBD office submarket, and the fourth-quarter 2020 submarket average vacancy rates were 15.2%, 17.0% for three-to-five star properties, and 11.3% over the last five years. This compares to a current 90.5% occupancy rate at the property and a historical occupancy rate, which, on average, was 90.1% since 2017. Nevertheless, we applied a 12.5% vacancy rate in our analysis.
- The tenants at the property are paying above market rent. According to CoStar, the fourth-quarter 2020 West Palm Beach CBD office submarket average gross asking rent was $43.71 per sq. ft. and $47.05 per sq. ft. for three-to-five star office properties. This compares to an in-place gross rent of $63.87 per sq. ft. at the property, as calculated by S&P Global Ratings. However, CoStar noted that the higher rent appears to be in line with its peers, which had a reported average gross rent of $63.55 per sq. ft. The appraiser concluded a $41.00 per sq. ft. office market rent on a net basis for units over 10,000 sq. ft. and $45.00 per sq. ft. for units under 10,000 sq. ft. This compares to the in-place net rent of $43.15 per sq. ft. at the property, as calculated by S&P Global Ratings.
- The Phase I environmental site assessment report identified a recognized environmental condition at the property relating to an exploded Florida Power and Light Co. (FPL) transformer, which may have impacted surficial soil and groundwater. However, the environmental consultant determined that any remediation of environmental impacts to the property due to the transformer explosion is the responsibility of FPL, which has already been out to the site to test samples of the surrounding soil.
- 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 (a) additional leverage beyond a de minimis amount and (b) potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.
- 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 acts" or voluntary bankruptcy.
- The issuer's exceptions to the representations and warranties noted that the property is located within 25 miles of the Atlantic Coast of Florida, but the borrower maintains insurance with a named storm sublimit of $125.0 million, which is less than the whole loan balance and the full insurable value. We accounted for this by applying a negative LTV threshold adjustment

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across the capital structure.

- As of Feb. 22, 2021, the property is open and operating; however, we noted during our property site visit that several tenants were working remotely. Approximately 99.0% of tenants made their November 2020 rent payments,100% made their December 2020 payments, and 100% made their January 2021 payments. The sponsor has not reached out for any modification or forbearance requests.

4. 141 Livingston

Table 16

Credit Profile

Loan no.	4	Property type	Office
Loan name	141 Livingston	Subproperty type	CBD
Pooled trust loan balance ($)	75,000,000	Property sq. ft./no. of units	213,745
% of total pooled trust balance (%)	6.5	Year built/renovated	1959/2015
City	Brooklyn	Sponsors	Clipper Realty Inc. and Clipper Realty L.P.
State	N.Y.	S&P Global Ratings' amortization category	Interest only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	5,110,000(i)	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(16.93)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	7.25	S&P Global Ratings' LTV (%)	106.4(ii)
S&P Global Ratings' value (mil. $)	70.5(i)	S&P Global Ratings' DSC (x)	2.09(ii)
S&P Global Ratings' value variance (%)	(48.4)	'AAA' SCE (%)	57.7
S&P Global Ratings' value per sq. ft./unit ($)	440	'AAA' DCE (%)	16.6

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC are calculated based on the $25.0 million pari passu companion loan and the $75.0 million pooled trust loan balance (collectively, the whole loan. 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 whole loan has a strong DSC ratio of 2.09x, calculated using the loan's fixed interest rate and S&P Global Ratings' NCF for the property, which is 16.9% lower than the issuer's NCF.
- The $100.0 million whole loan is secured by the borrower's fee-simple interest in a class-B,

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15-story, 213,745-sq.-ft. office building, including a lower-level, 80-space parking garage. Built in 1959 and renovated in 2000 and 2015, the property is located in downtown Brooklyn, N.Y., which is one of the most densely populated areas of the U.S. The property benefits from many nearby public transportation options, with frequent MTA bus (B57, B61, and B65) and subway services (A, C, F, G, R, 2, and 3 lines) that provide convenient access to Manhattan's downtown and midtown business districts.

- The majority of the property's NRA (96.4%) is comprised of office (206,084 sq. ft.), with the remainder consisting of a below-grade and outdoor parking garage (7,568 sq. ft.) and a small retail space (93 sq. ft.). The office portion is 100% leased to the City of New York ('AA/Negative') Department of Citywide Administrative Services (DCAS) until December 2025, with no termination or contraction options remaining. The city initially leased the property in 2003 and has renewed its lease at higher rents several times since then. The Kings County court system (Brooklyn's civil court) occupies all floors, and the property serves as a mission critical location for Kings County. The parking garage portion is leased to an affiliate of ICON Parking through June 2027 with no options remaining and the small retail/lobby newsstand space is currently vacant. As of the February 2021 rent roll, the property was 99.9% occupied. There are no common areas at the property because the Kings County court system occupies 100% of the interior building area on the ground floor through the 15th floor. All interior finishes are maintained and replaced by the tenant.
- The property was extensively redeveloped from 2000 to 2001, when approximately $5.0 million ($23.00 per sq. ft.) was spent to renovate the property, including updates to the heating, ventilation, and air conditioning system, elevators, lobby, and restrooms. In addition, in 2014/2015, as part of DCAS 10-year lease extension, an additional $8.0 million (approximately $37.00 per sq. ft.) was spent in capital improvements, including new boilers, new elevators, a new chilling tower, new sprinkler system, and some façade refurbishment.
- Downtown Brooklyn is the largest office submarket in Brooklyn and has largely benefitted as a spillover market for financial, insurance, and real estate tenants. In addition, a significant portion of the office space within the submarket is primarily leased to the City of New York, due to the proximity to the courthouses and Borough Hall (Brooklyn's oldest public building). Furthermore, as tenants reimagine their office requirements and are priced out of the Manhattan office market, downtown Brooklyn serves as an alternative, given its proximity to downtown and midtown Manhattan, driven by the submarket's accessibility to several public transit options.
- The mortgage loan is structured with a hard springing lockbox and springing cash management that spring into existence upon the first occurrence of an EOD, if the debt yield falls below 7.00%, or if the sole tenant has terminated or elected to terminate its space, declared bankruptcy, failed to timely renew (triggers cash management only), or reduced its square footage beyond certain minimum thresholds. At that point, the borrower will be required to maintain monthly replacement reserves and, if the trigger is related to the tenant's failure to timely renew its lease, TI/LC deposits. During a trigger period, all excess cash flow will be deposited into a lender-controlled account. There are also ongoing reserves for taxes and insurance.
- We visited the property on Feb. 17, 2021, with a building management representative. Overall, the property is in good condition and merits a class-B designation. During our tour, construction was underway throughout the building, specifically including a conversion to gas from oil in the sub-basement, full replacement of the roof, and façade work in relation to the New York City Ordinance 11. Since the onset of the COVID-19 pandemic, the building has remained open while the Brooklyn civil courts reopened June 2020, albeit, at a reduced staff

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capacity and has transitioned to conducting virtual hearings instead. The Brooklyn civil courts have protocols in place to ensure safety including temperature checks, health screening, metal detectors in the building's lobby, and many court cases are processed directly in the lobby at this time. Due to COVID-19 restrictions and safety protocols, on average the building is approximately 20.0% physically occupied. During our visit, we observed that the parking garage was closed for business.

The loan exhibits the following concerns and mitigating factors:

- The $75.0 million pooled trust loan, along with the $25.0 million pari passu companion loan held outside the trust, has high leverage, with an S&P Global Ratings' LTV ratio of 106.4% based on our valuation and the whole loan balance. The LTV ratio based on the appraiser's "as-is" valuation is 54.9%. Our estimate of long-term sustainable value is 48.4% lower than the appraiser's as-is valuation, a variance driven primarily by our assumption on vacancy, capital expenses, and our 7.25% capitalization rate compared to the appraiser's 4.75% going-in capitalization rate.
- The whole loan is interest-only for its entire 10-year term, and there will be no scheduled amortization during the loan term. We reduced our LTV recovery thresholds across the capital structure to account for the higher refinancing risk at loan maturity.
- Although the property has maintained 100% occupancy from 2017 through TTM ended Sept. 30, 2020, and has had increasing effective gross income (EGI) since 2018, the property's NOI declined to $8.2 million in 2020 from $8.6 million in 2017, primarily driven by a 34.3% increase in operating expenses for the same time period. The increases are largely driven by significant increases in real estate taxes to approximately $1.9 million in 2020 from approximately $1.1 million in 2017 and in insurance expense to $586,664 in 2020, from $129,447 in 2017.
- The property faces concentrated rollover risk, with 96.4% of leased NRA and 99.9% of in-place gross rent when the DCAS lease expires in December 2025, with no remaining extension options available. Although, DCAS has leased the property since 2003 and has renewed its lease several times at higher rents, according to management, the city publicly indicated several years ago a business plan to relocate the Kings County civil courts system to a nearby city-owned building. However, according to management, it would take several years and a significant investment in excess of $100.0 million in order to effectuate this move. Further, the appraiser noted that there are fewer contiguous blocks of space over 200,000 sq. ft. in the market; hence, there is a strong likelihood that DCAS may renegotiate a new long-term lease prior to its December 2025 lease expiration. To partially mitigate the rollover risk, if DCAS fails to renew its lease 18 months prior to expiration, the borrower is required to deposit $555,555 per month for each of the 18 months prior to lease expiration or deposit $10.0 million ($48.52 per sq. ft.) in cash or post a letter of credit in lieu of the monthly deposits. Lastly, the property is zoned for as-of-right residential use. Given the property's location and similar nearby development projects, this may be an existing alternative for the sponsor. We assumed an 12.0% vacancy rate in our analysis to derive our long-term sustainable NCF.
- Although the property is in downtown Brooklyn, which we consider a primary market, the submarket vacancy rates are above 10.0%. According to CoStar, the property is in the downtown Brooklyn submarket. As of the full-year 2020, the submarket vacancy rate, availability rate, and asking base rent, according to CoStar, were 11.9%, 15.3%, and $48.77 per sq. ft., respectively. The submarket's historical five-year and 10-year average vacancy rates were 8.4% and 7.4%, respectively, with a 13.2% five-year forecasted vacancy rate. As of the February 2021 rent roll, the property's office in-place base rent, and parking base rent were $50.00 per sq. ft. and $46.65 per sq. ft., respectively, as calculated by S&P Global Ratings. The

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appraiser noted that the office comparables' asking rent averaged $50.08 per sq. ft., ranging from $43.62 per sq. ft. to $59.47 per sq. ft. The appraiser assumed a market office and parking asking base rent of $55.00 per sq. ft. and $47.57 per sq. ft., respectively, with a total vacancy & collection loss of 3.0%. We assumed an overall property vacancy rate of 12.0% in our derivation of long-term sustainable NCF, and a 7.25% capitalization rate in our valuation of the property.

- The whole loan proceeds were used to refinance approximately $75.8 million, fund closing costs ($552,819) and upfront reserves ($70,582) before returning approximately $23.6 million (23.6% of total financing) 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 acts" or voluntary bankruptcy.
- 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.
- As of Feb. 6, 2021, the property is open and operating, with most tenants operating in limited capacity. The parking garage is closed for business and is expected to reopen in May 2021, at the same timeline when the Brooklyn civil court is expected to increase their physical occupancy at the property. There has been no rent relief requested and all tenants are current on their contractual rent obligations.

5. Pittock Block

Table 17

Credit Profile

Loan no.	5	Property type	Mixed-use
Loan name	Pittock Block	Subproperty type	Various
Pooled trust loan balance ($)	66,000,000	Property sq. ft./no. of units	297,698
% of total pooled trust balance (%)	5.7	Year built/renovated	1913/2001
City	Portland	Sponsor	1547 Data Center Real Estate Fund II L.P.
State	Ore.	S&P Global Ratings' amortization category	Interest only
S&P Global Ratings' market type	Secondary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	4,800,000(i)	S&P Global Ratings' subordinate debt category	Additional secured and unsecured debt (S&P Global Ratings LTV >= 90%)
S&P Global Ratings' NCF variance (%)	(8.55)	S&P Global Ratings' subordinate debt adjustment	(5.00)
S&P Global Ratings' cap rate (%)	8.25	S&P Global Ratings' LTV (%)	107.3(ii)

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Table 17

Credit Profile (cont.)

S&P Global Ratings' value (mil. $)	61.5(i)	S&P Global Ratings' DSC (x)	2.18(ii)
S&P Global Ratings' value variance (%)	(60.1)	'AAA' SCE (%)	62.7
S&P Global Ratings' value per sq. ft./unit ($)	441	'AAA' DCE (%)	18.4

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $75.0 million pari passu companion loan and the $66.0 million pooled trust loan balance (collectively, the whole loan). 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 $66.0 million trust loan represents a pari passu portion within a larger $141.0 million mortgage whole loan. The whole loan is secured by the borrower's fee simple interest in Pittock Block, a 297,698-sq.-ft., eight-story, mixed-use (office, retail, co-location, data center, storage, and antenna) building in downtown Portland, Ore. The property's NRA comprises 64.3% of office space, 27.5% of co-location and data center space, 6.7% of retail space, and 1.5% of storage and antenna space.
- Built in 1913 and renovated in 2001, the property, which derived approximately 74.1% of its EGI, as calculated by S&P Global Ratings, from its co-location/data center space, is considered the premier telecommunications internet exchange for the West Coast region and is one of 11 comparable assets in the U.S. due to its proximity to dense fiber optic conduit entries. This space at the property acts as a carrier hotel where multiple telecommunications networks or internet service providers connect to one another's networks with the goal of data and information sharing. The property, one of only two primary internet exchanges for the Northwest, is home to Portland's internet exchange point hosting various companies. The property contains 16 fiber optic carriers and 179 other service providers exchanging data in meet-me-rooms.
- The seller recently invested over $4.5 million into the co-location/data center space, and tenant, Facebook, also invested its own money to expand into 70 state-of-the-art cabinets. While the co-location cabinets are similar to cabinets in traditional data centers where tenants can house servers, routers, networking, and other equipment, the property is different from a traditional data center because it includes substantial office space. The building also features unique power capacity in the form of onsite oil reserve tanks and generators in case of power supply issues.
- A significant portion of the property's revenue stream benefits from high barriers to entry due to cost, proximity to dense fiber optic cables, and low competition. The co-location/data center space generates revenue from several sources from a vast tenant base: co-location power usage income (50.8% of EGI as calculated by S&P Global Ratings), cross-connection income from bandwidth usage that travels to and from other data centers through the U.S. and most Asian markets (16.2%), and fixed connection and circuit fee incomes from using connection ports and circuits at the property (7.1%). Given the investments and infrastructure in place, the property is positioned to benefit from the expansion of data center industry due to increased data and cloud services demand from companies and individuals.

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- The senior loan component has a strong DSC of 2.18x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 8.6% lower than the issuer's NCF.
- The loan proceeds financed the sponsor's acquisition of the property for a purchase price of $326.0 million. The sponsor contributed $175.8 million of equity as part of the $339.3 million all-in acquisition costs (51.8% of the acquisition costs).
- The co-location/data center tenants at the property are paying below market rent. According to the appraiser, the $292 kilowatt hours charged at the property is lower than other West Coast properties, which generally charge between $350 and $380 kilowatt hours. In addition to Facebook expanding into 70 cabinets (with opportunity to expand into an additional 20 cabinets), a Fortune 10 technology company recently signed a license agreement for 31 co-location cabinets at the property. Since this lease was not included in the December 2020 rent roll that we used for our analysis we did not include the rent from the potential new license agreement in our analysis, we calculated our LTV ratio based on the net loan proceeds (excluding the holdback reserve) and added the difference in our capitalized value.
- We visited the property on Jan. 8, 2021, with the property manager and found the property to be in good condition with the vacant office space comparable to urban office space in the Portland area. The property's competitive advantage is that it was home to Pacific Telecom, the first telecom provider to reach Alaska and Japan through subsea fiber optic cables built in the early 1980s. These fiber optic cables (accessed through the property) became the main point of contact to the Asian Markets in the internet age, with the property acting as the main access point for web traffic between the U.S. and Asia. The property manager also mentioned that the property has not needed to spend money on marketing due to the network availability, low network cost, and lowest latency when accessing the Asian markets.
- The whole loan benefits from experienced sponsorship. The sponsor is a joint venture between Harrison Street Real Estate Capital LLC (Harrison Street) and 1547 Critical Systems Realty. Harrison Street, founded in 2005, is a real estate investment management firm. It has invested approximately $36.3 billion in alternative real assets and recently closed on approximately $600.0 million of data center assets. 1547 Critical Systems Realty, founded in 2011, is a leading developer and operator of custom-designed data center totaling 1.3 billion sq. ft.
- The mortgage loan is structured with a hard in-place lockbox and springing cash management, which allows the borrower to control funds until an EOD has occurred or a DSC ratio of 1.50x is breached for a single quarter. At that point, the borrower will be required to maintain monthly replacement reserves and TI/LC deposits. 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 senior loan component has high leverage, with an S&P Global Ratings' LTV ratio of 107.3%, based on our valuation. The LTV ratio based on the appraiser's valuation is 42.9%. Our estimate of long-term sustainable value is 60.1% lower than the appraiser's valuation, a variance primarily driven by our higher capitalization rate of 8.25%.
- In addition to the senior loan component, there is a $22.5 million subordinate secured B-note, which increases our LTV ratio to 124.4% from 107.3%. The comparably weaker credit metrics for the total debt exposes the trust loan to higher default risk. We reduced our LTV recovery thresholds at each rating category to account for this risk.
- The loan documents permit the borrower to incur additional mezzanine financing if the combined DSC equals or exceeds 1.96x and the combined LTV is equal to or less than 51.0%.

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- The whole loan is interest-only for its entire 10-year term, and there will be no scheduled amortization during the loan term. To account for this lack of amortization, we applied a negative LTV threshold adjustment across the capital structure.
- The property is exposed to month-to-month or short-term leases/agreements. The co-location income comprising 50.8% of EGI, as calculated by S&P Global Ratings, is mostly generated from month-to-month licensing agreements instead of longer term leases, which, according to the appraiser, is atypical for this category of user. However, the sponsor intends to migrate these licensing agreements closer to market length agreements. We accounted for this risk by applying a higher capitalization rate of 8.25% in our analysis compared to the appraiser's 4.75% capitalization rate.
- The office/retail component comprising 71.0% of the property's NRA is 71.4% occupied as of the Dec. 21, 2020, rent roll. The property is in downtown Portland, which we consider a secondary market. According to CoStar, the property is located in the Portland CBD office submarket, which had an average vacancy rate of 15.6% and gross asking rent of $32.31 per sq. ft. as of fourth-quarter 2020. This compares to $22.09 per sq. ft. gross rent at the property, as calculated by S&P Global Ratings. However, this component only represents about 25.9% of EGI, as calculated by S&P Global Ratings, while the majority of the property's revenue is derived from its co-location/data center space, which is expected to continue to grow.
- The property is outfitted for certain specialized uses. Approximately 27.5% of NRA is currently being utilized as a carrier hotel via its co-location/data center space, which relies on costly fiber optic cable connections as a low latency way to route traffic. As data storage needs continue to expand exponentially, new solutions may be needed to transfer large quantities of data at quicker speeds, which could lead to obsolescence or expensive upgrades for the space. In addition, repurposing the respective space to traditional office or alternative uses would be costly, and it is possible office or alternative-use space would garner lower rent than the property's in-place rent. We accounted for this risk by applying a higher capitalization rate.
- 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 potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.
- 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 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.
- As of Feb. 1, 2021, the property is open for business; however, most of the office tenants are working remotely. Eleven tenants comprising 8.9% of NRA have requested rent relief. The rent collection rate was 74.0% and 82.0% in November 2020 and December 2020, respectively. The sponsor has not reached out for any modification or forbearance requests. We accounted for the lower collection rates by applying a higher capitalization rate in our analysis.

6. The Galleria Office Towers

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Table 18

Credit Profile

Loan no.	6	Property type	Office
Loan name	The Galleria Office Towers	Subproperty type	CBD
Pooled trust loan balance ($)	65,000,000	Property sq. ft./no. of units	1,067,672
% of total pooled trust balance (%)	5.6	Year built	Various
City	Houston	Sponsor	Azrieli Group Ltd.
State	Texas	S&P Global Ratings' amortization category	Amortizing balloon
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	0.00
S&P Global Ratings' NCF ($)	6,140,000(i)	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(8.87)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	7.80	S&P Global Ratings' LTV (%)	88.8(ii)
S&P Global Ratings' value (mil. $)	73.2(i)	S&P Global Ratings' DSC (x)	1.56(ii)
S&P Global Ratings' value variance (%)	(45.2)	'AAA' SCE (%)	46.5
S&P Global Ratings' value per sq. ft./unit ($)	95	'AAA' DCE (%)	19.1

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $25.0 million pari passu companion loan and the $65.0 million pooled trust loan balance (collectively, the whole loan). 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 mortgage loan is secured by the borrower's fee simple interest in a three-building office complex totaling 1.1 million sq. ft. in Houston, Texas. The complex includes: Galleria Tower I (46.2% of the ALA), which is a 493,695-sq.-ft., 25-story building, built in 1974; Galleria Tower II (30.0% of the ALA), which is a 320,687-sq.-ft., 22-story building, built in 1970; and Galleria Financial Center (23.2% of the ALA), which is a 253,290-sq.-ft., seven-story building, built in 1977. The properties are located within the larger Houston Galleria development, which is home to the Houston Galleria Mall, as well as two Westin hotels.
- Since acquiring the portfolio in 2011, the sponsor has invested $79.3 million ($74.29 per sq. ft.) in tenant improvements and capital expenditures. Since 2017, renovations of the lobby, restrooms, and corridors; exterior restorations; replacement of building glass; roof replacement; and fire sprinkler repairs and upgrades have been completed. The engineering report found the property to be well-maintained with no immediate repairs noted.
- The property benefits from a granular rent roll because it is leased to over 60 unique tenants based on the January 2021 rent roll. The largest three in-place tenants are WeWork (9.4% of NRA; 10.2% of total in-place gross rent); Citigroup Technology (4.7%; 5.5%); and Quanta

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Services (5.3%; 5.1%). No other individual tenant accounts for more than 3.8% of the NRA or 3.6% of the in-place gross rent.

- The property benefits from sponsorship by a joint venture between Unilev Capital Corp. (Unilev Capital) and Azrieli Group. Unilev Capital is a privately held real estate investment organization that has a portfolio of over 6.5 million sq. ft. of commercial property space across California, Texas, Colorado, and Minnesota. The Azrieli Group is a publicly traded real estate company and is the largest real estate company in Israel, with a portfolio of over 13 million sq. ft. across the globe, including 6.2 million sq. ft. of office space.
- The loan is a refinancing, and the borrower contributed $28.2 million (23.9% of the $118.2 million financing) of fresh equity, to refinance the prior debt and pay closing costs. In addition, based on the cost basis of $255.3 million, approximately $165.0 million of equity will remain in the property at closing.
- We visited the property on Feb. 5, 2021, and found the property to be well-maintained with a class-B+ designation. Despite the building not having amenities, the three buildings are connected not only to each other, but also to the Galleria Mall via underground walkways allowing tenants to benefit from the restaurants and shopping in the mall. According to the property manager, due to the COVID-19 pandemic, not all tenants are currently working in the office and they estimate that about 50.0% of the space is actively being used at this time.
- The mortgage loan is structured with a hard in-place lockbox and in-place cash management. A cash sweep event occurs upon an EOD, if the DSC falls below 1.25x, or if one of the major tenants terminates or elects to terminate its lease, declares bankruptcy, defaults under its lease, fails to timely renew its lease, or reduces its square footage beyond certain minimum thresholds. There are ongoing reserves for taxes, insurance, capital expenditures, and leasing expenses.

The loan exhibits the following concerns and mitigating factors:

- The trust loan has moderately high leverage with an S&P Global Ratings' LTV ratio of 88.8% based on our valuation and the whole loan balance. The LTV ratio based on the appraiser's valuation is 48.7%. Our estimate of long-term sustainable value is 45.2% lower than the appraiser's valuation.
- Although the property is positioned in a primary market, the historic and current submarket vacancy rates are well above 15.0%. According to CoStar, the Galleria/Uptown office submarket, where the complex is located, had an average vacancy rate of 19.6% as of fourth-quarter 2020, with an average gross rent of $32.50 per sq. ft. The submarket vacancy has averaged 16.3% over the last five years. This compares to a current 31.9% vacancy rate at the property, and a historical average vacancy rate of 28.4% over the last five years. We applied a 35.2% vacancy in our analysis.
- The largest in-place tenant at the property is WeWork (100,141sq.ft.; 9.4% of NRA; 10.2% of in-place gross rent). WeWork has been a tenant since October 2017, when it signed a 60,111 sq. ft. lease, and subsequently expanded into an additional 40,030 sq. ft. in 2019. The lease expiration is November 2033, with one, five-year renewal option remaining and no termination options. WeWork currently pays in place base rent of $21.48-per-sq.-ft., which increases by $1.00 per sq. ft. annually. The We Co. has an S&P Global Rating of 'CCC+'/Negative. We believe WeWork's operating model faces added pressure given the uncertainty around the extent of the COVID-19 pandemic's impact on demand for co-working space. To account for this risk, we applied a 50.0% vacancy rate to the WeWork space. WeWork has remained current on rent throughout the COVID-19 pandemic. During our site visit the property manager noted that this

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location is one of WeWork's best performing locations in the Houston area and we witnessed several people entering the space.

- The property faces tenant rollover risk during the loan term, with 52.3% of the leased NRA and 55.7% of in-place gross rent expiring during the loan term. The rollover is heightened in 2022, when 17.8% of the NRA and 17.3% of in-place gross rent expires. There is a $6.0 million ($5.62 per sq. ft.) upfront TI/LC reserve, as well as an ongoing annual reserve of $1.00 per sq. ft. that is capped at a total of $8.0 million. Once this cap has been met, the borrower will not make further deposits until the balance falls below $8.0 million, unless the debt yield is greater than 11.0% and has occupancy over 90%, in which case, monthly deposits will resume after the balance falls below $6.0 million. We increased our capitalization rate to 7.8% to account for this rollover risk.
- Approximately 114,813 sq. ft. (10.8% of the NRA; 9.3% of the gross rent), is currently being subleased in Galleria II. The entire space is currently leased to Southern Union, who signed a lease in 2012 and has since been acquired by Panhandle Eastern Pipe Line Co., making its space in the building redundant. The space is currently being subleased to multiple tenants including Quanta Services. The sponsor is negotiating long term leases with the sublessees. Southern Union's contractual rent totals $3.1 million annually until its lease expiration in March 2022, while the subleases are paying a total of $3.3 million and have co-terminous lease terms ending in March 2022. We applied a 50.0% vacancy rate to the subleased space to account for the risk of these units vacating at the end of the sublet period.
- 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 acts" or voluntary bankruptcy.
- The property is part of a condominium structure in which the borrower does not hold a majority interest, with only a 14.3% 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.
- 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.
- As of Feb. 1 2021 the property is open and operating and has been since the onset of the COVID-19 pandemic. Collections have stayed above 96.4% since April of 2020. Six tenants requested COVID-19 rent relief but only one tenant, Fusion Learning, was granted a deferral of 50.0% base rent for April and May 2020. This deferral will be fully repaid by April 2021.

7. U.S. Industrial Portfolio VI

Table 19

Credit Profile

Loan no.	7	Property type	Industrial
Loan name	U.S. Industrial Portfolio VI	Subproperty type	Various
Pooled trust loan balance ($)	60,000,000	Property sq. ft./no. of units	2,981,955

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Table 19

Credit Profile (cont.)

% of total pooled trust balance (%)	5.2	Year built/renovated	Various
City	Various	Sponsor	BIG STNL II LLC
State	Various	S&P Global Ratings' amortization category	Interest only
S&P Global Ratings' market type	Tertiary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	4,550,000(i)	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(21.40)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	8.25	S&P Global Ratings' LTV (%)	108.8(ii)
S&P Global Ratings' value (mil. $)	55.2(i)	S&P Global Ratings' DSC (x)	2.01(ii)
S&P Global Ratings' value variance (%)	(45.4)	'AAA' SCE (%)	56.8
S&P Global Ratings' value per sq. ft./unit ($)	25	'AAA' DCE (%)	17.0

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $21.0 million pari passu companion loan and the $60.0 million pooled trust loan balance (collectively, the whole loan). NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. N/A--Not applicable.

Strengths and concerns

The loan exhibits the following strengths:

- The $60.0 million trust loan represents a pari passu portion within a larger $81.0 million mortgage loan. The whole loan is secured by the fee-simple interest in a portfolio of 10, single tenant, industrial properties totaling 3.0 million sq. ft. located in Illinois (26.7% of ALA), Wisconsin (25.0% of the ALA), Georgia (21.4% of the ALA); Pennsylvania (9.6% of the ALA), Minnesota (7.9% of the ALA), Kentucky (6.7% of the ALA), and North Carolina (2.6% of the ALA).
- The whole loan has a high DSC of 2.01x, calculated using the whole loan's fixed interest rate and our in-place NCF for the property, which is 21.4% lower than the issuer's NCF, with the variance primarily driven by our assumptions for operating expenses, vacancy, TI/LC's, and capital expenses.
- As of the February 2020 rent roll, the portfolio was 95.9% leased to six unique tenants, with the largest two tenants being True Value (44.7% of the NRA; 26.6% of the gross rent) and Progressive Converting, Inc.("Pro-Con") (16.8%; 21.5%), as calculated by S&P Global Ratings. True Value is a hardware and paint manufacturer that occupies a 1.3 million sq. ft. facility in Harvard, Ill. Pro Con is a paper converting and packaging company that leases two assets in Wisconsin and one in North Carolina. No lease in the portfolio is scheduled to expire prior to February 2029.
- The mortgage loan benefits from the experienced sponsorship of Brennan Investment Group and Arch Street Capital. Founded in 2010 by former executives of First Industrial Realty Trust, Brennan Investment Group is a private real estate investment company headquartered in Chicago, Ill. The company's current portfolio is over 99.0% occupied and has a market value of

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over $3 billion. Its holdings span 29 states and encompass over 44 million sq. ft. Arch Street Capital Advisors is a New York City-based, full service real estate investment and advisory firm that was founded in 2003 and has experience with over $8.5 billion in advisory assignments.

- The mortgage loan is structured with a hard in-place lockbox and springing cash management, which allows the borrower to control funds until April 2027 or until a major tenant's lease is in jeopardy. At that point, the borrower will be required to maintain monthly replacement reserves and TI/LC deposits. During a cash sweep event, all excess cash flow will be deposited into a lender-controlled account. The loan also requires springing ongoing reserves for taxes and insurance.
- As of Feb. 19, 2021, the borrower reported that the properties have remained open and 100% of tenants have made their January 2021 rent payments. As of Jan. 20, 2021, the U.S. Industrial Portfolio VI Whole Loan is not subject to any modification or forbearance requests.

The loan exhibits the following concerns and mitigating factors:

- The whole loan has high leverage with a 108.8% LTV ratio, based on S&P Global Ratings' valuation. The LTV ratio based on the appraiser's "as-is" valuation is 59.3%. Our long-term sustainable value estimate is 45.4% lower than the appraiser's as-is valuation.
- The mortgage loan is a refinancing and the loan proceeds returned approximately $32.2 million (39.8% of the financing) of equity to the sponsor. The sponsor acquired the properties for $109.0 million and thus retains $28.0 million of cash equity after giving effect to the transaction.
- The borrower is permitted to incur additional future debt in the form of a mezzanine loan. However, the mezzanine loan amount is limited to a total debt LTV ratio no greater than 95.0% of the LTV at closing and a DSCR and debt yield that are no less than 105% of the respective amounts at closing.
- Eight of the 10 properties, representing 70.7% of the total loan amount, are in tertiary markets. We consider tertiary markets riskier because they have lower barriers to entry when compared to primary and secondary markets. However, according to the appraiser, the weighted average submarket vacancy of the portfolio markets was 3.7% as of third-quarter 2020. Additionally, according to the appraiser the aggregate portfolio dark value is $91.7 million, which equates to an 88.4% loan-to-dark value ratio.
- Each individual property in the portfolio is exposed to single-tenant risk and the portfolio overall is exposed to tenant concentration risk as the top three tenants: True Value, Pro Con, and Belnick, generate 67.0% of the in-place base rent. Additionally, both the Belnick and True Value leases, which represent 45.4% of the in-place rent as calculated by S&P Global Ratings, expire in 2029. However, the loan is structured with a cash flow sweep commencing 12 months prior to any of the leases that expire during the loan term or up to six months after the loan matures. Nevertheless, to account for these risks, we have assigned a 10.0% vacancy rate in our analysis of the portfolio.
- Tufco (4.0% NRA; 4.1% in-place base rent as calculated by S&P Global Ratings)is no longer occupying its space at the Newton, N.C. property as a result of the sale of the tenant's division by the parent company prior to the COVID-19 pandemic. Although Tufco has gone dark in the Newton property, the tenant has been current on all payments and intends to pay the full rent until the end of its lease term in July 2037, according to the issuer.
- The loan permits individual property releases subject to a release price equal to 120.0% of the ALA for such property, provided that the DY after the release is less than the closing date DY or

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the DY immediately prior to such release.

- During alterations to the property, the loan documents leave to the servicer's discretion the decision whether to require collateral for alterations whose costs exceeds a certain 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 (a) additional leverage beyond a de minimis amount and (b) potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.

8. Boca Office Portfolio

Table 20

Credit Profile

Loan no.	8	Property type	Mixed-use
Loan name	Boca Office Portfolio	Subproperty type	Office/retail
Pooled trust loan balance ($)	50,000,000	Property sq. ft./no. of units	514,527
% of total pooled trust balance (%)	4.3	Year built/renovated	Various
City	Boca Raton	Sponsor	Carlos Ulloa, Debra Corchia, Daniel Statlander, and James Capirio
State	Fla.	S&P Global Ratings' amortization category	Interest only
S&P Global Ratings' market type	Primary	S&P Global Ratings' amortization adjustment (%)	(2.50)
S&P Global Ratings' NCF ($)	4,300,000(i)	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(14.20)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	8.25	S&P Global Ratings' LTV (%)	99.4(ii)
S&P Global Ratings' value (mil. $)	50.3(i)	S&P Global Ratings' DSC (x)	2.11(ii)
S&P Global Ratings' value variance (%)	(33.9)	'AAA' SCE (%)	54.7
S&P Global Ratings' value per sq. ft./unit ($)	193	'AAA' DCE (%)	14.5

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $49.0 million pari passu companion loan and the $50.0 million pooled trust loan balance (collectively, the whole loan). NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. N/A--Not applicable.

Strengths and concerns

The loan exhibits the following strengths:

- The $50.0 million trust loan represents a pari passu portion within a larger $99.0 million mortgage loan. The loan is secured by the fee-simple interest in Boca Office Portfolio, a

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four-property, 514,527-sq.-ft.,class-B suburban office and retail portfolio. With an average year built of 1985, the properties were recently renovated and repositioned by the sponsor and are all less than 10 minutes apart in Boca Raton, Fla., within the larger Palm Beach office market. The properties are leased to a granular mix of office and retail tenants and feature executive suites, which are micro-units managed and leased by the sponsor on a six- and 12-month basis mostly to sole practitioners in professional fields.

- The trust loan has a strong DSC of 2.11x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 14.2% lower than the issuer's NCF and is driven mainly by our assumptions on vacancy and real estate taxes.
- The loan proceeds were used to recapitalize the portfolio with the sponsor contributing $39.0 million of fresh equity as part of the $138.0 million all-in financing costs (28.3% of the acquisition costs). The sponsor is acquiring a 58.8% majority stake in the portfolio,
- The portfolio properties are 90.4% occupied by approximately 150 tenants across four separate properties: Fountain Center (36.7% NRA; 31.0% of in-place gross rent), Boardwalk at 18th (25.7% NRA; 28.3% gross rent), City National Plaza (25.7% NRA; 29.6% gross rent), and Grove Centre (12.0% NRA; 11.1% gross rent). Tenants are a mix of small office (82.9% by NRA) and retail (17.1%) tenants, with a weighted average lease term of 11.3 years. The largest tenants include Belux LLC (3.5% NRA; 3.6% of gross rent), Women's Health Partners LLC (3.2% NRA; 3.7% of gross rent), TDL Centers (2.7% NRA; 2.8% of gross rent), and University of Miami (2.5% NRA; 2.4% of gross rent).
- The sponsor acquired the properties individually between 2012 and 2016 for a total acquisition cost of $78.1 million ($151.69 per sq. ft.). At the time of acquisition, Fountain Grove was 30.0% occupied and in receivership, while the other properties suffered from minimal investment, low occupancy, and low quality tenancy. The sponsor implemented a repositioning strategy by investing $52.5 million ($102.05 per sq. ft.) into renovations, extending leases, building a boardwalk, demolishing existing buildings, constructing a restaurant building, and adding 26,000 sq. ft. of new office space. Occupancy has improved to 90.4% as of February 2021 from a low of 60.0% at acquisition. NCF has increased to $8.0. million as of December 2020 from $6.9 million in 2017.
- The mortgage loan benefits from the experienced sponsorship of Carlos Ulloa and Debra Corchia, two of the four non-recourse carveout guarantors. The borrowers are collectively owned by the Holden Family Office, Omricom Development, TJAC Development, and Kireland Equity Investments. TJAC Developments is a real estate investment and development company with over 20 years of operational experience and 1.1 million sq. ft. of commercial real estate across the East Coast. A joint venture between TJAC and Kireland acquired the portfolio between 2012 and 2016. As part of this transaction, Omricom Development, Holden Family Office, and related parties will acquire a 58.8% majority stake in the portfolio. The loan's carveout guarantors will be four principals of Omricom Development, a Boca Raton-based commercial real estate management and investment company. As of February 2021, the four guarantors have a combined net worth in excess of $63.3 million.

The loan exhibits the following concerns and mitigating factors:

- The whole loan has high leverage with a 99.4% LTV ratio, based on S&P Global Ratings' valuation. Our long-term sustainable value estimate is 33.9% lower than the appraiser's as-is valuation.
- The trust loan is interest-only for its entire five-year term, and there will be no scheduled amortization during the loan term. We accounted for this lack of amortization by applying a

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negative LTV threshold adjustment across the capital structure.

- Although, the portfolio properties are located in the primary West Palm Beach market, the submarket vacancy rates are above 10.0%. The properties are located within the Boca Raton West office submarket according to CoStar, which had a vacancy rate of 11.3% and gross rents of $40.96 per sq. ft. as of fourth quarter 2020. The market rent is 19.7% higher than in the subject's in-place gross rent of $34.22 per sq. ft. The property was 90.4% occupied as of the January rent roll. The Boca Raton West office submarket has a high historical 10-year average vacancy rate of 16.5% according to CoStar. We utilized a 12.3% vacancy rate assumption in our analysis, which is consistent with the subject's five-year historical average vacancy of 12.6%.
- The properties face moderate tenant rollover risk during the loan term, with 60.6% of the leased NRA and 67.0% of in-place gross rents expiring during the five-year loan term, as calculated by S&P Global Ratings. However, this is partially mitigated by the fact that the rollover is staggered, with 8.1%, 8.0%, 13.5%, 15.0%, 18.8%, and 3.6% of in-place gross rents expiring from 2021 through March 2026, respectively. There is a $1.5 million ($2.92 per sq. ft.) upfront TI/LC reserve, as well as an ongoing reserve of $1.00 per sq. ft. annually.
- The loan allows for the release of adjacent land parcels located near Fountain Center and City National. The collateral contains vacant land, which the appraiser has determined does not contribute any value to the overall property. The sponsor is permitted to release these parcels for development, subject to a release price of $1.0 million per parcel, anti-poaching guarantees, and other restrictions.
- 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.
- The mortgage loan is structured with a hard springing lockbox, as determined by S&P Global Ratings, that springs into existence upon the first occurrence of an EOD or if the DY falls below 7.5%. There are also ongoing reserves for taxes, insurance, capital expenditures, and leasing expenses.
- As of February 2021, the properties are open and operating and have been during the entirety of the COVID-19 pandemic. In 2020, the sponsor executed one- to three-month rent deferral agreements with approximately 50 tenants and the vast majority of that deferred rent was paid back by December 2020. Per the sponsor's aged receivables report, $30,056 (0.2% of EGI) of rental obligations were outstanding for greater than 60 days. The loan is structured with an upfront $1.0 million debt service reserve (equivalent to four months of debt service).

9. Gestamp Automocion SLB

Table 21

Credit Profile

Loan no.	9	Property type	Industrial
Loan name	Gestamp Automocion SLB	Subproperty type	Manufacturing

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Table 21

Credit Profile (cont.)

Pooled trust loan balance ($)	49,500,000	Property sq. ft./no. of units	637,750
% of total pooled trust balance (%)	4.3	Year built/renovated	2014
City	Chattanooga	Sponsor	AG Net Lease IV Corp., AG Net Lease IV (Q) Corp., and AG Net Lease Realty Fund IV Investments (H-1) L.P.
State	Tenn.	S&P Global Ratings' amortization category	Partial IO
S&P Global Ratings' market type	Tertiary	S&P Global Ratings' amortization adjustment (%)	(1.25)
S&P Global Ratings' NCF ($)	3,550,000	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(13.48)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	7.50	S&P Global Ratings' LTV (%)	104.7
S&P Global Ratings' value (mil. $)	47.3	S&P Global Ratings' DSC (x)	1.31
S&P Global Ratings' value variance (%)	(40.1)	'AAA' SCE (%)	55.8
S&P Global Ratings' value per sq. ft./unit ($)	74	'AAA' DCE (%)	37.3

NCF--Net cash flow. LTV--Loan-to-value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. N/A--Not applicable. IO--Interest only.

Strengths and concerns

The loan exhibits the following strengths:

- The $49.5 million mortgage loan is secured by the fee-simple interest in a 637,750-sq.-ft. industrial manufacturing facility located in Chattanooga, Tenn. The property was initially built in 2014 as a 209,000-sq.-ft. facility and was expanded three times from 2015 to 2019 by 420,000 sq. ft. The building features 40 to 65 ft. clear heights, 31 grade-level loading doors, 21 dock doors, and an adjacent rail spur. The property consists of 57.6% production space (367,222 sq. ft.), 38.3% warehouse (243,971 sq. ft.) and 4.1% office (26,557 sq. ft.). The property is 100% occupied by Gestamp Automocion, which executed a NNN lease in December 2020 through November 2040, with 2.15% annual rent increases and no termination options.
- The loan is acquisition financing because the property was acquired by the sponsor in a sale leaseback transaction with Gestamp Automocion. The sponsor contributed $26.6 million of equity as part of the $76.1 million all-in acquisition cost (34.9% of the acquisition costs).
- The property is a strategic, mission#critical production facility for Gestamp Automocion, which produces upper and lower structural automotive parts primarily for Volkswagen, Mercedes, and BMW. The property is situated in the middle of the southeastern automotive corridor and the tenant's operations there supply Volkswagen's sole North American assembly plant (which is

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less than one mile away), as well as the nearby Mercedes and BMW assembly plants in Alabama and South Carolina, respectively.

- The property benefits from Gestamp Automocion's financial commitment. The tenant has spent approximately $82 million to build the facility, of which $30 million was spent on initial building construction, with an additional $34 million and $16 million spent on the 2016 and 2019 expansions, respectively. The property also houses over $100 million in equipment and Gestamp plans to invest an additional $30 million in building improvements and equipment over the next two years. The property's operations generate approximately $250 million in revenue and $25 million in EBITDA for the tenant.
- While the property is in Chattanooga, which we consider a tertiary market, the industrial submarket vacancy rates are below 5.0%. According to CoStar, the Chattanooga industrial submarket had an average vacancy rate of 3.9% as of fourth-quarter 2020 and an average gross rent of $5.70 per sq. ft., compared to $7.25 per sq. ft. at the property. The submarket's vacancy rate has averaged 3.4% over the last five years. Although the property is 100% leased to Gestamp Automacion through 2040, we applied a 10.0% vacancy rate in our analysis to account for the single tenant risk.
- The mortgage loan benefits from AG Net Lease Realty Fund IV L.P.'s (AGNL) experienced sponsorship. As of Dec. 31, 2020, AGNL reported total investor commitments of $997.4 million. The company's portfolio of net lease loans primarily consists of industrial/warehouse properties throughout the U.S.
- The mortgage loan is structured with a hard in-place lockbox and springing cash management, as determined by S&P Global Ratings, which allows the borrower to control funds until an EOD has occurred, a DSC ratio of 1.20x is breached for two consecutive quarters, or the major tenant is in default under its lease because it has terminated its lease, declared bankruptcy, or abandoned or failed to be in actual, physical possession of its space. At that point, if the borrower or the major tenant are not already paying these obligations directly, the borrower will be required to maintain monthly tax and insurance escrows and replacement reserves. During a cash sweep event, all excess cash flow will be deposited into a lender-controlled account.
- As of Feb. 6, 2021, the property is open and operating. Gestamp Automocion is current on its rental payments and the borrower has not requested any rent relief or loan modification.

The loan exhibits the following concerns and mitigating factors:

- The trust loan has high leverage with a 104.7% LTV ratio, based on S&P Global Ratings' valuation. Our long-term sustainable value estimate is 40.1% lower than the appraiser's valuation.
- The trust loan has a moderately low DSC of 1.31x, calculated using the loan's fixed interest rate and our in-place NCF for the property, which is 13.5% lower than the issuer's NCF and is primarily driven by our vacancy rate assumption of 10.0%.
- The trust loan is interest-only for the first five years of the 10-year loan term. We accounted for the limited amortization by applying a negative LTV threshold adjustment across the capital structure.
- In addition to the mortgage loan, the borrower can obtain additional mezzanine debt. The mezzanine loan can be made in an amount resulting in a maximum LTV ratio of 62.7%, a minimum DSC of 1.58x, and a minimum debt yield of 8.63%. The borrower's ability to incur additional subordinated debt exposes the trust loan to a higher default risk; however, loan metrics must improve for the borrower to obtain additional mezzanine debt.

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- The property is currently under a payment in lieu of taxes (PILOT) tax abatement with City of Chattanooga and the Hamilton County Economic Development Board. The PILOT program for the initial buildout (209,000 sq. ft.) started in 2010 and is expiring in December 2024. The subsequent expansions at the property (420,000 sq. ft.) are under a PILOT program that commenced in 2020 and expires in December 2029. We accounted for the abatement by assuming the unabated tax in our analysis and passing this increase in expense to the tenant in accordance with the terms of the tenant's NNN lease.
- The property is exposed to single-tenant risk. Gestamp Automocion is the sole tenant at the property, and the loan could come under stress if the tenant defaults on its lease or goes bankrupt. However, Gestamp Automocion spent significant capital to complete the development and renovation of the property (which it considers mission critical) and its lease term (no early termination or contraction rights) is nine years beyond the loan term. Additionally, the loan is structured with a cash flow sweep if the tenant goes dark or declares bankruptcy.
- The Phase I environmental report indicates that the property is located on a former Volunteer Army Ammunition Plant, which was used for storage and production of 2,4,6-TNT, an explosive material. However, the area where the property is currently situated was generally used for administrative purposes. The property is also located within an area of known impacted groundwater, currently being remediated via monitored natural attenuation. The property is subject to activity and use limitations (AULs) that include a groundwater use restriction and restriction of the property to industrial use. The known presence of impacted groundwater is considered to represent a controlled recognized environmental condition. A limited phase II site assessment was conducted on Nov. 25, 2020, and concludes that there is an absence of any hazardous substances at concentrations that exceed the environmental protection agency regional screening levels and the report recommended that no further assessment is needed.
- 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 (a) additional leverage beyond a de minimis amount and (b) potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.
- 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 acts" or voluntary bankruptcy.
- 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.

10. 30 Hudson Yards 67

Table 22

Credit Profile

Loan no.	10	Property type	Office
Loan name	30 Hudson Yards 67	Sub-property type	CBD
Pooled trust loan balance ($)	45,000,000(ii)	Property sq. ft./no. of units	44,954
% of pool	3.9	Year built	2019

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Table 22

Credit Profile (cont.)

City	New York	Sponsor	Massa Nova GmbH.
State	N.Y.	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 ($)	2,210,000(i)	S&P Global Ratings' subordinate debt category	N/A
S&P Global Ratings' NCF variance (%)	(24.98)	S&P Global Ratings' subordinate debt adjustment	N/A
S&P Global Ratings' cap rate (%)	6.75	S&P Global Ratings' LTV (%)	134.1(ii)
S&P Global Ratings' value (mil. $)	33.5(i)	S&P Global Ratings' DSC (x)	1.44(ii)
S&P Global Ratings' value variance (%)	(51.9)	'AAA' SCE (%)	66.5
S&P Global Ratings' value per sq. ft./unit ($)	1,177	'AAA' DCE (%)	52.3

(i)Pari passu adjusted. (ii)The loan is pari passu; LTV and DSC calculated based on the $26.0 million pari passu companion loan and the $45.0 million pooled trust loan balance (collectively, the whole loan). CBD--Central business district. NCF--Net cash flow. LTV--Loan to value. DSC--Debt service coverage. SCE--Stand-alone credit enhancement. DCE--Diversified credit enhancement. N/A--Not applicable.

Strengths and concerns

The loan exhibits the following strengths:

- The mortgage loan is secured by a single-floor (67th floor), 44,954-sq.-ft. condominium in 30 Hudson Yards, a 68-story, trophy-quality, 2.6 million-sq.-ft. office building. The 30 Hudson Yards building is prominently located in the Hudson Yards development, which is located at 530 West 33rd Street on the southwest corner of 33rd Street and 10th Avenue in New York, N.Y. The 30 Hudson Yards building is the second tallest building in New York City at 1,296 feet and was recently completed in 2019. The remaining non-collateral portions of the property include the Wells Fargo condominium, the Warner Media condominium, the KKR condominium, and the Related Cos. L.P., DNB, and AROSA tenants. The property meets LEED Core and Shell Gold certification standards, offers panoramic views from the higher floors, has outdoor terraces, a triple-height lobby, and the highest observation deck in New York City. The property also provides access to the retail portion of the adjacent 10 Hudson Yards property and upon completion of the adjacent 50 Hudson Yards property, will offer direct concourse access to the No. 7 Subway Extension station.
- The loan benefits from the property's location within the Hudson Yards development, one of the largest private real estate development projects in U.S. history. Upon completion, Hudson Yards is expected to include more than 18 million sq. ft. of commercial and residential space, along with more than 100 shops, a collection of restaurants, approximately 4,000 residences, affordable housing, The Shed, 14 acres of public open space, a 750-seat public school, and the inaugural Equinox Hotel with 212 guestrooms.
- The collateral is 100.0% leased to Related Cos. L.P. for 18 years commencing January 2021. The sponsor, Massa Nova GmbH, acquired the condominium in early 2019 from Oxford Properties

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for $98.9 million and received seller financing. The 67th floor served as the marketing floor for the 30 Hudson Yards tower. The sponsor, along with Related Cos. L.P., negotiated with Facebook to occupy the 67th floor, as part of their larger footprint at the property where they also occupy floors 68 through 71. According to the issuer, Facebook preferred to lease the space for only four years while its space in 50 Hudson Yards is developed, while the sponsor preferred to sign a long-term lease. As such, the sponsor entered into a long-term lease with Related Cos. L.P. through 2039, who then subsequently entered into a four-year sublease with Facebook for the 67th floor. Related Cos. L.P.'s lease is for $150.00 per sq. ft. per year, with $10.00 escalations every five years. Facebook's sublease rent is $150.00 per sq. ft. In the future, if Related signs a subtenant at a rent in excess of $150.00 per sq. ft., their lease agreement includes a provision for profit sharing between the sponsor and Related Cos. L.P. with two-thirds of the excess rent going to Related Cos. L.P., and the remaining to the sponsor. The loan is structured with an upfront reserve for outstanding TI/LC obligations totaling $4.8 million.

- The property is located in a primary market, within the Penn Plaza/Garment submarket of New York City, the second-largest office submarket in the U.S., according to CoStar. As of year-end 2020, the five-star office submarket vacancy rate was 11.5%, with an average gross rental rate of $90.91 per sq. ft. The buildings located within the Hudson Yards development, 10 Hudson Yards, 55 Hudson Yards, 30 Hudson Yards, and 50 Hudson Yards (nearing completion), exhibited an average vacancy rate of roughly 9.0%, with an average gross rental rate of $105 per sq. ft., as of February 2021, according to CoStar. We assumed a 10.0% vacancy rate on the rental income derived from the single-tenant occupying the collateral.
- The mortgage loan is structured with a hard in-place lockbox and in-place cash management, as determined by S&P Global Ratings. A cash sweep event occurs upon an EOD, a bankruptcy event of borrower or manager, if the DSC falls below 1.60x, or one of the specified tenants or specified tenant guarantor has terminated or elected to terminate its space, declared bankruptcy, or reduced its square footage beyond certain minimum thresholds. The loan is structured with upfront reserves for condominium costs ($69,299), outstanding TI/LC ($4.8 million), taxes ($143,650), and insurance ($97,653). There are also ongoing reserves for taxes, insurance, and leasing expenses.
- We visited the property on Feb. 9, 2021. At the time of the visit, there was active construction taking place on the 67th floor, clearly in the later stages of the build-out for Facebook because they are expected to move-in before April. The floor features a private staircase located on the south side of the floor connecting Facebook's space on the 68th floor. The views from the floor are unimpeded to the south, east, and west. The recently constructed 50 Hudson Yards tower partially impedes the view to the northeast (towards Central Park). The property has remained open during the COVID-19 pandemic; however, foot-traffic was minimal at the time of the visit. To our knowledge, there have been no issues with lease obligation payments or requests for rent relief.

The loan exhibits the following concerns and mitigating factors:

- The whole loan is highly leveraged with an S&P Global Ratings' LTV ratio of 134.1% based on our valuation and the whole loan balance. The LTV ratio based on the appraiser's valuation of $110.0 million is 64.6%. Our estimate of long-term sustainable value is 51.9% lower than the appraiser's valuation, driven mostly by our higher vacancy and capitalization rate assumption.
- The whole loan has a moderate DSC of 1.44x, calculated using the fixed interest rate and our in-place NCF for the property, which is 25.0% lower than the issuer's NCF. Our NCF variance is primarily driven by our vacancy assumption and PILOT program treatment.

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- The trust loan is interest-only for its entire 10-year term, and 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 loan proceeds will be used to refinance existing debt ($64.8 million), fund closing costs ($1.3 million), and fund upfront reserves ($5.1 million). Based on the sponsor's total cost basis of approximately $113.1 million, roughly $28.0 million of cash equity remains in the property at closing.
- The loan is subject to single-tenant risk because 100.0% of the NRA is leased to Related Cos. L.P. Related Cos. L.P.'s lease runs for a term of 18 years through 2039, which is eight years beyond loan maturity. Related Cos. L.P.'s contractual base rent is $150.00 per sq. ft., as calculated by S&P Global Ratings. In our view, this is a full rent considering comparable leases in Hudson Yards, and across similar trophy-quality properties in Manhattan, while also considering the high-floor location in the building (floor 67) and the $150.00 per sq. ft. sublease rent paid by Facebook. According to the appraiser, Facebook's net effective rent for floors 68 through 71 is comparable at $162.31 per sq. ft. We assumed a 10.0% vacancy rate on the rental income derived from the lease in our derivation of long-term sustainable NCF.
- The collateral is one of eight condominium units in the 30 Hudson Yards tower. The 67th floor condominium owner holds only 1.7% of voting rights in the condominium regime, and therefore, lacks the ability to block decisions that require a simple majority. A vote to remove a unit from the regime requires a 95.0% vote, and the use of proceeds in a casualty condemnation requires 97.0%, neither of which can be blocked or controlled by the collateral sponsor. We increased our capitalization rate in our valuation to account for this risk.
- The loan's collateral is constrained to only one floor of building, comprising less than 45,000 sq. ft. In our view, this small footprint limits the pool of buyers/prospective tenants compared to other properties that are not subject to such constraint. We accounted for this risk in our capitalization rate assumption.
- The property is subject to a PILOT program with the New York City Industrial Development Agency (IDA). The property is currently in year two of the PILOT program, which commenced on March 14, 2019. The PILOT payment is currently based on a transitional assessed value, which phases in through 2026. The PILOT payment during the first four years is equal to 60.0% of the taxable assessed value; in years five through 15, the payment is based on 103.0% of the prior year's PILOT; and in years 16 through 19, the PILOT is based on the greater of 103.0% of the prior year's PILOT and 68.0% of the assessed value in year 16, 76.0% in year 17, 84.0% in year 18, 92.0% in year 19, and 100% in year 20. The PILOT's initial term runs until March 13, 2039. We assumed the fully assessed real estate taxes in our derivation of long-term sustainable NCF and added back the savings' net present value over the PILOT's remaining term to our value.
- 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 (a) additional leverage beyond a de minimis amount and (b) potential additional liens, such as mechanic's liens, some of which may have priority over the mortgage lien.
- 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 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.

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Appendices

Our property evaluation results and loan-level credit enhancement for the full pool appear in the Appendix I and II tables below.

The loan-level credit enhancement levels shown in Appendix II include the SCE and DCE for each loan at various rating categories. The SCE assumes the loan is part of an undiversified stand-alone 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 24.1 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 1.0% 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' net cash flow (mil. $)	Net cash flow variance	Cap rate (%)	S&P Global Ratings' value (mil. $)	Value variance (%)	loan-to-value ratio (%)	Debt service coverage (x)
1	410 Tenth Avenue	OF	P	80.000	6.9	7.421	(28.1)	6.45	117.155	(41.7)	68.3	3.53
2	MGM Grand & Mandalay Bay	LO	S	79.986	6.9	21.765	(8.7)	11.25	192.766	(46.8)	41.5	7.54
3	141 Livingston	OF	P	75.000	6.5	5.110	(16.9)	7.25	70.490	(48.4)	106.4	2.09
4	Phillips Point	OF	P	75.000	6.5	5.870	(16.8)	8.00	70.626	(35.3)	106.2	2.31
5	Pittock Block	MU	S	66.000	5.7	4.805	(8.6)	8.25	61.512	(60.1)	107.3	2.18
6	The Galleria Office Towers	OF	P	65.000	5.6	6.143	(8.9)	7.80	73.205	(45.2)	88.8	1.56
7	U.S. Industrial Portfolio VI	IN	T	60.000	5.2	4.552	(21.4)	8.25	55.172	(45.4)	108.8	2.01
8	Boca Office Portfolio	MU	P	50.000	4.3	4.300	(14.2)	8.25	50.280	(33.9)	99.4	2.11
9	Gestamp Automocion SLB	IN	T	49.500	4.3	3.547	(13.5)	7.50	47.295	(40.1)	104.7	1.31
10	30 Hudson Yards 67	OF	P	45.000	3.9	2.212	(25.0)	6.75	33.548	(51.9)	134.1	1.44
11	Dawson Marketplace	RT	T	43.800	3.8	3.447	(15.1)	8.25	41.783	(38.6)	104.8	2.19
12	8670 Wilshire	OF	P	42.500	3.7	2.753	(15.1)	8.25	31.244	(55.6)	136.0	1.69
13	JW Marriott Nashville	LO	S	35.000	3.0	2.544	(45.3)	10.25	24.816	(56.4)	141.0	2.28

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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' net cash flow (mil. $)	Net cash flow variance	Cap rate (%)	S&P Global Ratings' value (mil. $)	Value variance (%)	loan-to-value ratio (%)	Debt service coverage (x)
14	Morgan Stanley Tower	OF	S	34.000	2.9	2.946	(12.3)	8.25	34.933	(35.4)	97.3	1.61
15	The Village at Meridian	RT	T	30.995	2.7	4.547	(17.9)	8.75	51.965	(43.8)	59.6	4.13
16	Millennium Corporate Park	OF	P	27.000	2.3	2.175	(16.4)	7.50	29.547	(34.3)	91.4	2.62
17	711 Fifth Avenue	MU	P	26.500	2.3	0.785	(68.1)	7.02	16.185	(66.7)	163.7	0.92
18	Oakland Commons I&II	OF	S	24.300	2.1	1.982	(15.1)	8.50	23.314	(33.2)	104.2	1.39
19	Orlando Technology Park	OF	S	24.150	2.1	2.131	(19.2)	8.50	23.894	(31.7)	101.1	1.72
20	Woodbury Crossing Phase II	MF	T	20.380	1.8	1.584	(8.5)	7.75	20.436	(37.7)	99.7	1.80
21	Advanced Energy	IN	T	18.390	1.6	1.554	(5.1)	8.25	17.863	(41.7)	103.0	1.50
22	Value Store It Miami	SS	P	17.000	1.5	1.290	(9.8)	7.75	16.640	(38.8)	102.2	2.07
23	Willoughby Commons	RT	S	16.950	1.5	1.160	(23.2)	8.25	13.605	(42.6)	124.6	1.19
24	Camellia Trace	MF	T	15.655	1.4	1.332	(6.3)	7.50	17.760	(28.1)	88.1	2.43
25	Dollar General Portfolio	RT	T	13.850	1.2	1.037	(16.5)	7.43	13.956	(34.5)	99.2	2.34
26	9633 Westheimer Road	MU	P	13.681	1.2	1.045	(8.3)	7.77	13.453	(38.5)	101.7	1.94
27	46-50 East 167th Street	RT	P	13.585	1.2	0.912	(16.5)	7.00	13.023	(37.7)	104.3	1.72
28	Bridgeport Distribution Center	IN	T	11.700	1.0	1.128	(13.4)	9.50	11.448	(31.9)	102.2	1.72
29	303 3rd Street	MU	P	9.500	0.8	0.716	(9.6)	7.22	9.917	(45.1)	95.8	2.03
30	5501 New Utrecht Avenue	OF	P	9.500	0.8	0.647	(15.1)	6.75	9.580	(42.3)	99.2	1.78
31	Hamden Self Storage	MU	P	9.500	0.8	0.761	(7.4)	8.25	10.020	(34.5)	94.8	1.42
32	Bristol Park	MF	T	8.515	0.7	0.723	(7.4)	7.50	9.646	(25.8)	88.3	2.39
33	6450 Industrial	IN	T	7.650	0.7	0.842	(13.3)	9.00	9.357	(27.2)	81.8	1.90

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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' net cash flow (mil. $)	Net cash flow variance	Cap rate (%)	S&P Global Ratings' value (mil. $)	Value variance (%)	loan-to-value ratio (%)	Debt service coverage (x)
34	651 Bushwick Avenue	MU	P	7.000	0.6	0.478	(9.6)	6.58	7.267	(41.4)	96.3	1.72
35	Grocery Outlet Truckee	MU	T	6.600	0.6	0.583	(9.6)	8.25	7.072	(46.4)	93.3	2.27
36	Holiday Inn Philadelphia South	LO	S	6.288	0.5	0.569	(27.0)	9.75	5.834	(41.7)	107.8	1.33
37	CVS Valley Stream	RT	P	6.180	0.5	0.411	(16.5)	7.00	5.867	(42.5)	105.3	1.64
38	Deschutes Business Center	IN	Var	5.500	0.5	0.448	(13.3)	8.00	5.604	(41.0)	98.1	2.13
39	The Cove Storage Portfolio	SS	T	5.090	0.4	0.396	(9.8)	8.25	4.802	(38.4)	106.0	1.39
40	Scotsman Self Storage	SS	T	3.085	0.3	0.250	(9.8)	8.50	2.939	(33.2)	105.0	1.47
	Total/weighted average	--	--	1159.330	100.0	106.900	(17.3)	8.10	--	(43.4)	99.4	2.44

(i)Loan balances, net cash flows, and values refer to the trust portion of contributed loan (i.e., the pari passu amount). All LTVs, DSCRs, debt yields, haircuts, and values refer to those generated by S&P Global Ratings, unless otherwise indicated. NCF--Loan to value. 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'	
Loan no.	Property name	Loan balance ($)	'AAA' DF	'BBB' DF	SCE	DCE	SCE	DCE
1	Phillips Point	75,000,000	28.8	22.7	60.9	17.6	53.9	16.2
2	Pittock Block	66,000,000	29.2	23.0	62.7	18.4	55.7	18.4
3	The Galleria Office Towers	65,000,000	41.1	32.6	46.5	19.1	38.1	14.5
4	U.S. Industrial Portfolio VI	60,000,000	29.9	23.6	56.8	17.0	49.9	13.9
5	Boca Office Portfolio	50,000,000	26.5	20.9	54.7	14.5	47.2	11.6
6	Gestamp Automocion SLB	49,500,000	66.8	53.4	55.8	37.3	48.6	30.3
7	30 Hudson Yards 67	45,000,000	78.7	63.3	66.5	52.3	60.9	44.7
8	Dawson Marketplace	43,800,000	28.5	22.5	57.1	16.3	49.9	13.2
9	8670 Wilshire	42,500,000	59.9	47.8	66.9	40.1	61.4	34.3
10	JW Marriott Nashville	35,000,000	43.5	34.4	77.0	34.4	70.9	34.4
11	Morgan Stanley Tower	34,000,000	42.4	33.6	55.0	23.3	47.3	18.6

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Appendix II

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

					'AAA'		'AA'	
Loan no.	Property name	Loan balance ($)	'AAA' DF	'BBB' DF	SCE	DCE	SCE	DCE
12	The Village at Meridian	30,995,000	16.6	13.0	24.6	4.1	12.0	1.4
13	Millennium Corporate Park	27,000,000	24.1	19.0	50.8	12.2	42.5	9.5
14	711 Fifth Avenue	26,500,000	100.0	100.0	72.5	72.5	67.9	67.9
15	Oakland Commons I&II	24,300,000	60.1	47.9	55.6	33.4	48.4	27.1
16	Orlando Technology Park	24,150,000	38.7	30.6	54.2	21.0	46.8	16.8
17	Woodbury Crossing Phase II	20,380,000	34.6	27.3	54.9	19.0	46.4	14.9
18	Advanced Energy	18,390,000	52.0	41.3	55.1	28.6	47.8	23.1
19	Value Store It Miami	17,000,000	27.5	21.7	56.0	15.4	48.6	12.4
20	Willoughby Commons	16,950,000	95.1	76.9	62.9	59.8	56.9	50.5
21	Camellia Trace	15,655,000	23.3	18.3	46.1	10.7	36.5	7.8
22	Dollar General Portfolio	13,850,000	26.5	20.9	53.6	14.2	46.1	11.3
23	9633 Westheimer Road	13,681,250	29.7	23.4	55.8	16.6	48.4	13.3
24	46-50 East 167th Street	13,585,000	40.1	31.7	56.9	22.8	49.7	18.5
25	Bridgeport Distribution Center	11,700,000	39.2	31.0	54.7	21.4	47.4	17.2
26	303 3rd Street	9,500,000	25.6	20.2	53.0	13.6	45.2	10.7
27	5501 New Utrecht Avenue	9,500,000	35.1	27.7	54.6	19.2	47.1	15.3
28	Hamden Self Storage	9,500,000	52.4	41.6	49.9	26.1	42.0	20.4
29	Bristol Park	8,515,000	23.3	18.3	46.2	10.8	36.6	7.8
30	6450 Industrial	7,650,000	24.6	19.4	43.4	10.7	34.3	7.8
31	651 Bushwick Avenue	7,000,000	36.5	28.9	53.3	19.5	45.5	15.4
32	Grocery Outlet Truckee	6,600,000	24.7	19.4	51.8	12.8	43.7	10.0
33	Holiday Inn Philadelphia South	6,287,797	67.5	54.0	67.5	45.6	59.6	37.4
34	CVS Valley Stream	6,180,000	44.8	35.5	57.3	25.7	50.2	20.9
35	Deschutes Business Center	5,500,000	26.2	20.6	54.1	14.2	46.5	11.3
36	The Cove Storage Portfolio	5,090,000	61.4	49.0	56.4	34.6	49.3	28.2
37	Scotsman Self Storage	3,085,200	55.2	43.9	55.9	30.9	48.8	25.0
38	410 Tenth Avenue	80,000,000	18.3	14.4	37.8	6.9	26.8	4.5
39	MGM Grand & Mandalay Bay	79,985,667	13.2	10.4	11.4	1.5	--	--
40	141 Livingston	75,000,000	28.8	22.7	57.7	16.6	50.7	13.6
	Total/weighted average	1,159,329,914	37.5	30.2	52.4	21.4	44.6	18.0

(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.

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