MORNINGSTAR®

Corporate Credit Spread Chartbook
Real Estate Investment Trusts

Morningstar Credit Ratings, LLC
5 November 2018

Contents

1 Historical Sector Spreads
3 Spread Charts by Sector
3 Industrial
5 Multifamily
7 Office
9 Retail
11 REIT Sector Coverage

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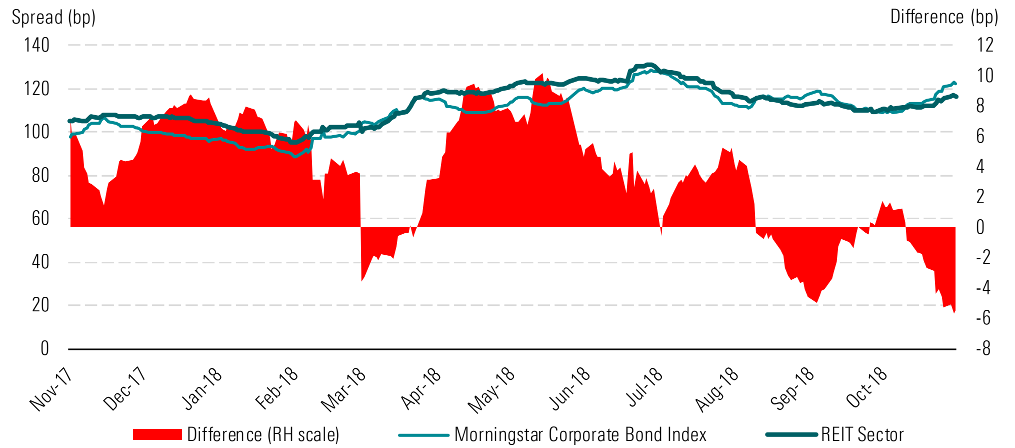
Executive Summary

Morningstar Credit Ratings, LLC maintains ratings for 22 real estate investment trusts across five sectors. Three REITs currently maintain a positive rating outlook and all others are stable. REITs specializing in industrial warehouse properties continue to enjoy strong demand in excess of new supply; otherwise, most other sectors are experiencing conditions that suggest the commercial real estate cycle is near the top of the cycle. In our view, investment-grade REITs are not raising any warning signs with respect to their balance sheets, which are in the best shape perhaps ever. We are not anticipating negative rating pressure in the coming year or two.

Historical Sector Spreads

Pursuant to our most recent REIT chartbook in July, the credit spreads of the Morningstar Corporate Bond Index and the REIT Sector Index (average ratings A- and BBB+, respectively) have widened noticeably, though the CBI pushed outside of REITs at first in August through most of September and again in early October and was 5 basis points higher at the end of October. In view of the recent bouts of volatility in the financial markets, bond investors are seeking greater compensation, more so reflected in corporate bonds in which some sectors are facing increasing uncertainty, especially technology. REIT bonds, typically backed by monthly contractual cash flows and liquidity compounded by unencumbered physical assets, provide investors with more certainty in the current environment.

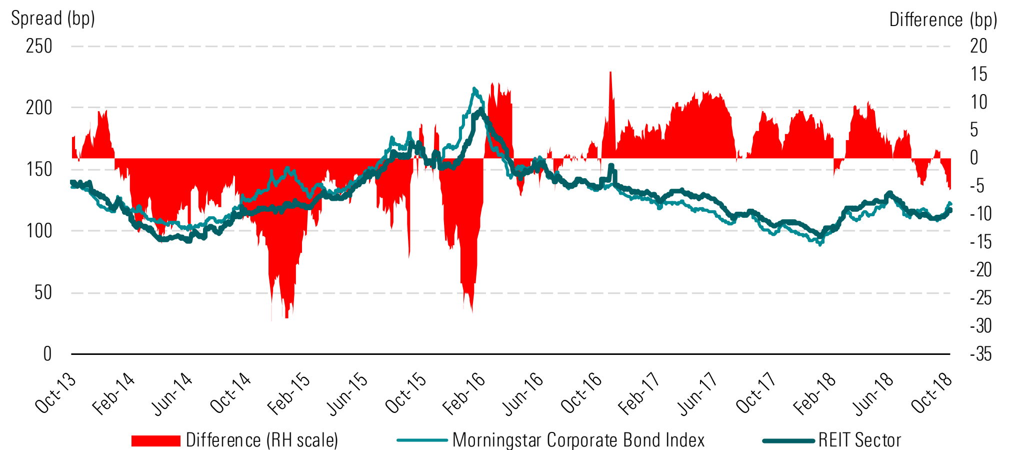
Exhibit 1 Morningstar Corporate Bond Index vs. REIT Sector (Trailing 12 Months)



Source: Morningstar, Inc. Data as of Oct. 31, 2018.

Over the past five years, REITs have traded inside the Corporate Bond Index on average by just under 2 basis points, with some significant swings. The CBI traded its widest to REITs over this period in late 2014 and early 2015 at 29 basis points wide, as the swooning oil and gas prices pressured a number of sectors outside REITs, especially energy and industrial manufacturing. The CBI moved wide again by 28 basis points relative to REITs in late 2015 and early 2016, as global growth worries increased along with continuing weakness in energy prices, which led to heightening concerns for default risk. REITs benefited as investors prized the stability afforded by their ownership of hard assets that generate contractual cash flows. Starting in November 2016, when REITs traded at their widest to the CBI over the period, 16 basis points, both indexes trended lower until early this year, with the CBI inside of REITs since with few exceptions.

Exhibit 2 Morningstar Corporate Bond Index vs. REIT Sector (Trailing 5 Years)

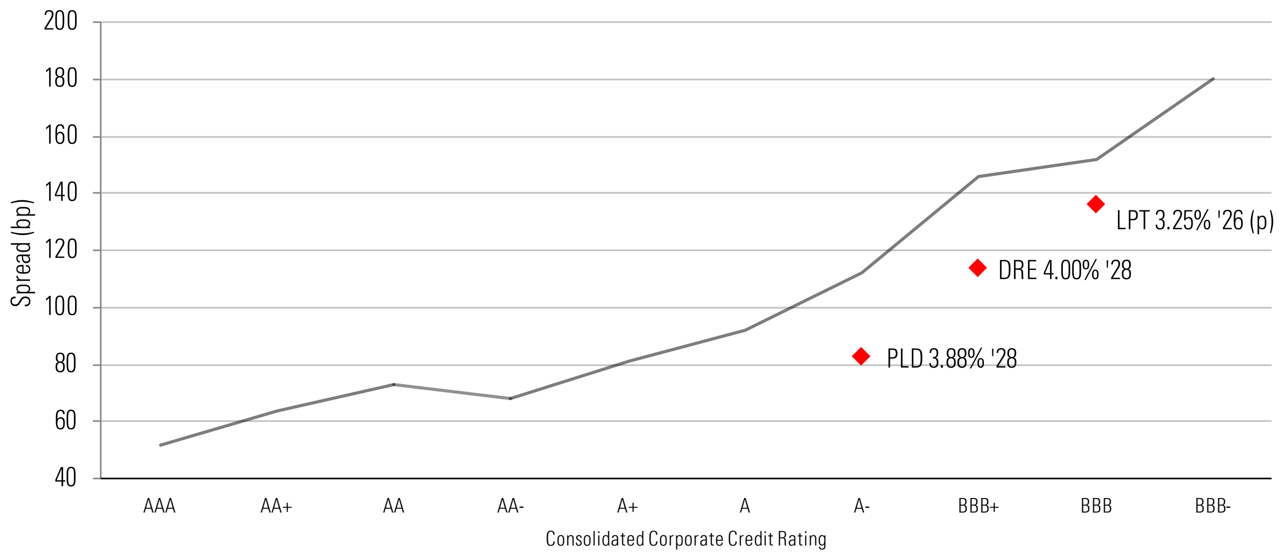


Source: Morningstar, Inc. Data as of Oct. 31, 2018.

Spread Charts by REIT Sector

Industrial

Exhibit 3 Industrial REITs vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of Oct. 31, 2018.
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook

Sector Trends

Industrial REITs rated by Morningstar Credit Ratings currently trade on average 26 basis points inside of the CBI. Growing e-commerce activity and a strengthening economy are producing some of the strongest demand for industrial space on record. To wit, despite around 50 million newly developed square feet entering the warehouse market, availability in the third quarter was the tightest in nearly 20 years. E-commerce continues to be a significant driver. According to the U.S. Labor Department, the number of employees in the positions related to e-commerce has increased almost twofold since 2001 and could reach 1.5 million this year, even as automation has played a larger role in role in warehouse logistics. In our view, the primary threats to these positive trends remain a drop-off in manufacturing activity, perhaps as a result of tariff-related events or a cooling economy, or a deceleration in e-commerce trends, risks that we consider remote.

Issuer Highlights

- Prologis, Inc. (A-, stable) continued to report strong rent growth and occupancy performance in the third quarter. The company's portfolio benefits from locations in the nation's strongest warehouse markets, which are benefiting from the strong demand for industrial space. Core funds from operations increased 15.4% over the previous year's third quarter, driven by higher rental revenue in part from the acquisition of DCT Industrial Trust. Prologis continued to report solid increases in industrial rents on new and renewing leases in the third quarter, and same-store NOI growth was 4.5%. Customer retention topped

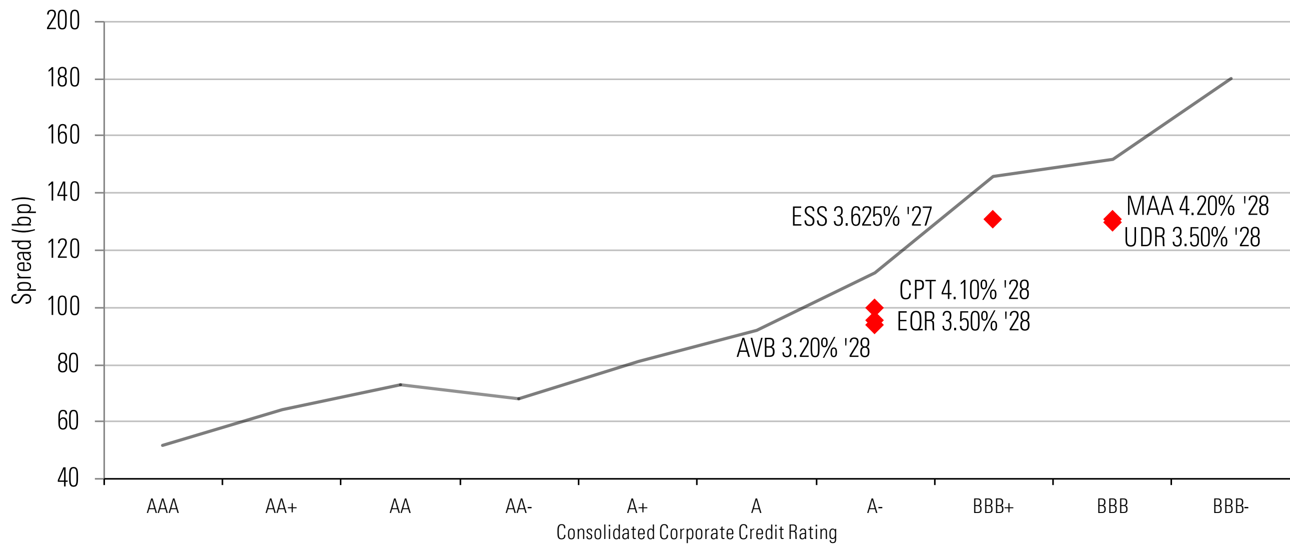
80% for the first time in two years at 82.4%. Quarter-end occupancy gained another 10 basis points from June 30 to 97.5%, 120 basis points higher than a year earlier. In October, we affirmed Prologis' A- rating with a stable outlook, reflecting low Business Risk, supported by a high-quality, well-located portfolio of industrial properties in important distribution markets, solid interest coverage and leverage metrics, and a highly experienced management team.

- Duke Realty Corporation (BBB+, stable) reported a very strong 16.7% rise in core FFO for the third quarter. The REIT specifically cited new or expanding relationships with home-improvement retailers and suppliers, multinational package delivery and supply chain companies, and third-party logistic companies contributing to its high industrial portfolio occupancy of 97.9% and double-digit rent growth on leases. In September, Duke Realty sold $450 million of senior unsecured notes, the primary purpose of which was to retire $224 million of mortgage debt, reducing its already-low secured leverage to among the lowest in the entire REIT sector. In October, we affirmed Duke Realty's BBB+ corporate credit rating and maintained a stable outlook, supported by its moderate Business Risk and Cash Flow Cushion pillars resulting from its high-quality, largely unencumbered portfolio of bulk warehouse facilities, which is uniquely positioned to capture robust e-commerce demand.
- Also in October, we affirmed the BBB rating of Liberty Property Trust and changed our rating outlook to positive. The improved outlook results from the REIT's continued improvement in the quality and focus of its portfolio as it sheds costlier noncore assets with relatively lower growth prospects, which will improve margins and returns and therefore our Solvency Score pillar.

Spread Charts by REIT Sector

Multifamily

Exhibit 4 Multifamily REITs vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of Oct. 31, 2018.
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook

Sector Trends

Multifamily REITs rated by Morningstar Credit Ratings currently trade on average 17 basis points inside of the CBI. Dynamics in the economy and in homeownership continue to support the rental markets and multifamily REITs, although rent growth has slowed from the mid-single-digit percentage range to the low single digits nationally. Apartment fundamentals are closely tied to employment, such that the current tight labor markets are putting more paychecks in the hands of potential renters. According to Reis, an average of 207,000 jobs per month were added in first eight months of 2018 in the United States; this compares with 189,000 per month in the same period last year. Median home prices have spiked relative to median rents to levels not seen since before the recession. Another factor supporting demand for rental space is recent tax reform, which has lowered incentives for home purchase, especially in regions where taxes are relatively high and where many investment-grade multifamily REITs own apartments. In a recent survey by Freddie Mac, 78% of respondents believe renting is more affordable than homeownership, up 11% from the prior survey six months ago. On the supply side, metros where new developments had recently been causing some softness in rents are absorbing those units with negligible impact on REITs' overall operations. In August and September, we affirmed all of the multifamily REITs rated by Morningstar Credit Ratings: AvalonBay Communities, Inc. (A-, stable), Camden Property Trust (A-, stable), Equity Residential (A-, stable), Essex Property Trust, Inc. (BBB+, stable), Mid-America Apartment Communities, Inc. (BBB, stable), and UDR, Inc. (BBB, stable).

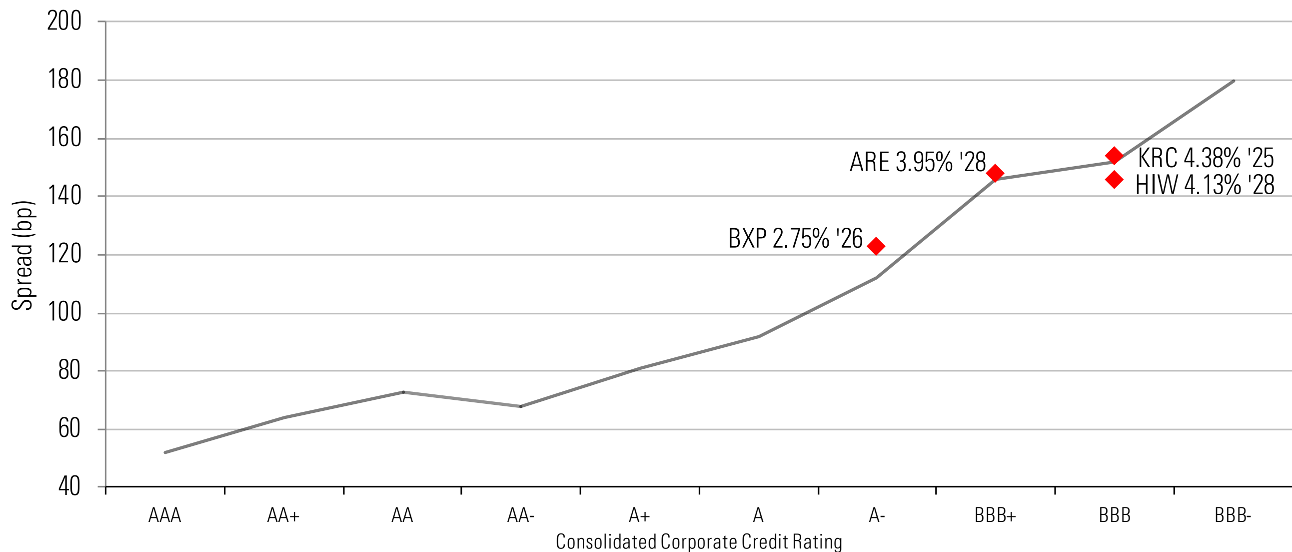
Issuer Highlights

- Equity Residential reported third-quarter funds from operations modestly lower than the same period in 2017; however, on a normalized basis, FFO increased 4.9% with same-store and lease-up net operating income contributing positively, while interest expense detracted modestly. The turnover rate of 16.4% was a record low for the REIT's third quarter. Full-year FFO guidance for 2018 was revised higher, with physical occupancy and same-store revenue expected to come in above and at the top end of the prior guidance range, respectively. During the quarter, Equity Residential re-established exposure to the Denver multifamily market with the purchase of two assets, a midrise and a high-rise. We view the acquired properties as similar to the company's coastal portfolios, given their low age, higher quality, in-fill locations, and relatively higher rents. We are not lowering our assessment for management given changes at the CEO and CFO positions; indeed, Equity Residential's deep bench with solid experience contributes very positively, and we view the changes as a natural transition.
- Camden Property Trust reported solid operating results in the third quarter, with a very good year-over-year increase in same-store net operating income at 3.8%, while year to date was up 3.6% over 2017. Third-quarter funds from operations of $117 million was 13.5% higher than in 2017, helped by a 6.0% increase in revenue. Management increased its guidance for 2018 FFO growth to 5.1% from 4.6% at the midrange. Given its more diverse markets, we view Camden as less exposed to the prospect of increased competition from new apartment supply in comparison with some of its peers. We believe the company should remain among the better credits in the apartment REIT sector, given its moderate to high-quality portfolio in a variety of markets and price points. In October, Camden issued $400 million in senior unsecured notes with the proceeds to retire a sizable portion of secured debt. We anticipate that Camden's ratio of secured debt to gross assets will shrink to about 6% from 10%, providing additional flexibility to the balance sheet.

Spread Charts by REIT Sector

Office

Exhibit 5 Office REITs vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of Oct. 31, 2018.
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook

Sector Trends

Officer REITs rated by Morningstar Credit Ratings currently trade on average 4 basis points outside of the CBI. The office sector appears to be reaching peak of the cycle in most markets, with decelerating growth in rental rates and new construction tapering off. The national office vacancy rate did not change in the third quarter, remaining 16.6%, while rents increased 2.5%, according to Reis. While absorption of office space declined in the quarter relative to the same period in 2017, the decline in newly constructed office space was greater, in part a result of rising development costs and scarcity of construction labor. The growth in the STEM (science, technology, engineering, and mathematics) professions, over 85% of which are considered office-using industries, according to Cushman & Wakefield, is driving relatively higher demand in certain markets, especially on the West Coast, where a number of investment-grade office REITs are focusing their efforts.

Issuer Highlights

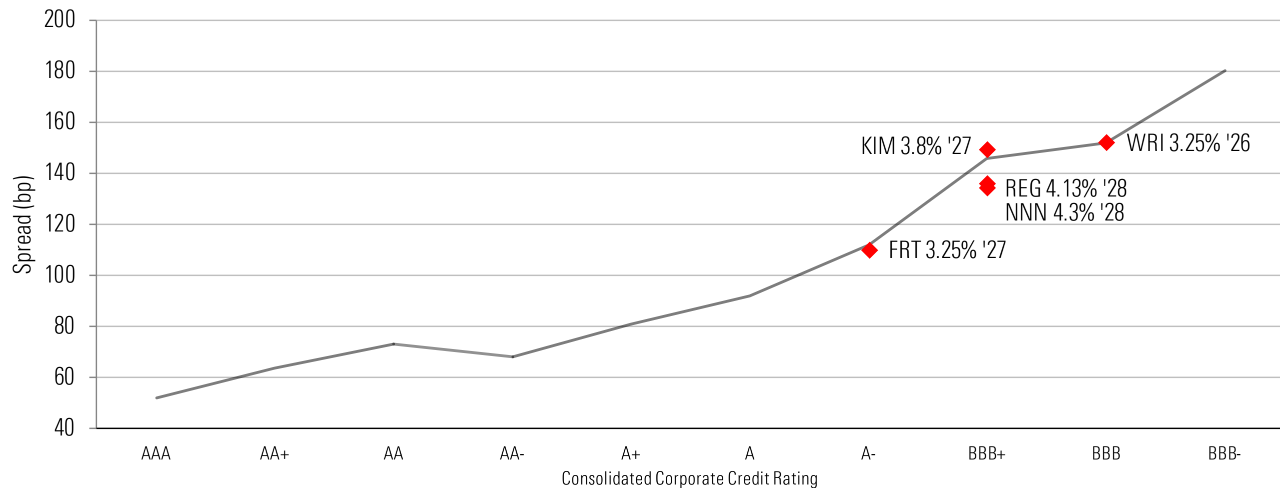
- Boston Properties, Inc. (A-, stable) reported third-quarter 2018 FFO that was 4.4% above the 2017 third quarter, while total revenue increased 4.3%. Same-store NOI was up 2.7% on a cash basis, and in-service occupancy was 91.1% on Sept. 30, up from 90.2% at the same point last year. On the earnings call, management pointed out that portfolio fundamentals are benefiting from record-low unemployment and that its markets continue to see increasing demand from urbanization, with tenants preferring urban amenities.

- In August, Kilroy Realty Corporation (BBB, stable) announced that it would offer 5 million shares of its common stock, subject to forward sale agreements in a program with its several investment banks as joint book-running managers. Proceeds are to be used for general corporate purposes, including the funding of property development and acquisitions and repayment of outstanding indebtedness. We view the potential equity issuance as credit positive and expect that it will have a moderate deleveraging effect. On a net debt/gross assets basis, net debt will decrease to about 39% pro forma from 44.3% at June 30.

Spread Charts by REIT Sector

Retail

Exhibit 6 Retail REITs vs. Morningstar Corporate Bond Index



Source: Morningstar Credit Ratings, LLC, Morningstar, Inc., and Interactive Data as of Oct. 31, 2018.
(UR) = rating under review / (p) = positive outlook / (n) = negative outlook

Sector Trends

Retail REITs rated by Morningstar Credit Ratings currently trade on average 4 basis points outside of the CBI. As we have written previously, brick-and-mortar retailers that are susceptible to loss of sales from the growth in e-commerce continue to be challenged, most notably Sears and other department stores, as well as the recent Toys 'R' Us bankruptcy notable this year. Despite this, investment-grade REITs have set up their portfolios to not only weather this storm but also benefit from it by replacing those weaker tenants with stronger and more sustainable, Internet-proof retailers. The latter are actively expanding their presence as well. According to an IHL Group estimate, approximately 3,800 net store openings are expected in 2018. In October, we affirmed the ratings of Federal Realty Trust (A-, stable) and Weingarten Realty Investors (BBB) and changed Weingarten's rating outlook to positive.

Issuer Highlights

- Federal Realty reported increases of 5.4% in revenue and 5.3% in FFO for the third quarter of 2018 versus the same period in 2017. The increase in FFO was mainly driven by lower operating expenses, and management noted that the absolute number was the highest in any quarter in its history. Same-store NOI increased 3.5%, and cash spreads on renewal leases averaged a healthy 12% over the last four quarters. A highlight during the quarter was the signing of a major tenant to occupy the company's latest development at Santana Row in San Jose, global software developer Splunk.
- National Retail Properties, Inc. (BBB+, stable) reported third-quarter earnings consistent with its historical record of solid performance with a steadily growing portfolio. The company's revenue rose 5.1% versus the third quarter of 2017 while FFO increased 7.5%. Portfolio occupancy ticked up 20 basis

points to 98.7% as of Sept. 30. The company purchased 18 properties for $79 million during the quarter, bringing the year-to-date totals to 129 and $396 million, respectively. National Retail has a long history of being largely a net buyer; annual acquisition spending averaged $715 million from 2013 through 2017, as dispositions averaged just $71 million. We project the company to generate rent growth at an annual rate of about 2.5% over the next 12-24 months, while maintaining debt at around 5.2 times EBITDA and 35%-38% of gross assets. The company extended its weighted average maturity to 9.6 years with the help of the $300 million 30-year bond issuance and reduced its interest costs with the early retirement of higher-coupon $300 million bonds due in 2021, both of which support financial flexibility.

- Weingarten's positive rating outlook is driven by its long history of operating a successful portfolio of shopping centers through several economic cycles and its experienced management team. As well, recent debt reductions that lowered leverage and raised interest coverage support the positive outlook. The REIT has moderate Business Risk, supported by a large number of investment-grade tenants with little concentration and its highly experienced management team. We expect leverage to remain at or just less than 5.5 times and interest coverage to flatten at about 5.0 times.

Exhibit 7 Morningstar Credit Ratings Sector Coverage: Real Estate Investment Trusts

REIT	Ticker	Credit Rating	Rating Outlook	Analyst
Industrial				
Prologis Inc	PLD	A-	Stable	Magerman
Duke Realty Corp	DRE	BBB+	Stable	Wimmer
Liberty Property Trust	LPT	BBB	Positive	Wimmer
First Industrial Realty Trust, Inc.	FR	BBB	Stable	Magerman
Multifamily				
AvalonBay Communities Inc	AVB	A-	Stable	Magerman
Camden Property Trust	CPT	A-	Stable	Magerman
Equity Residential	EQR	A-	Stable	Wimmer
Essex Property Trust Inc	ESS	BBB+	Stable	Wimmer
Mid-America Apartment Communities	MAA	BBB	Stable	Wimmer
UDR	UDR	BBB	Stable	Magerman
Office				
Boston Properties, Inc.	BXP	A-	Stable	Wimmer
Alexandria Real Estate Equities, Inc.	ARE	BBB+	Stable	Magerman
Kilroy Realty Corporation	KRC	BBB+	Stable	Magerman
Highwoods Properties, Inc.	HIW	BBB	Stable	Wimmer
Retail				
Federal Realty Investment Trust	FRT	A-	Stable	Wimmer
Kimco Realty Corp	KIM	BBB+	Stable	Magerman
National Retail Properties, Inc.	NNN	BBB+	Stable	Magerman
Regency Centers	REG	BBB+	Stable	Wimmer
Weingarten Realty Investors	WRI	BBB	Positive	Magerman
Cell Tower				
American Tower Corporation	AMT	BBB	Stable	Wimmer
Crown Castle International Corp.	CCI	BBB-	Positive	Wimmer
SBA Communications Corporation	SBAC	BB+	Stable	Magerman

Source: Morningstar Credit Ratings, LLC as of Oct. 31, 2018.

About Morningstar® Credit Research

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