U.S. REIT Credit Rating Methodology

Morningstar Credit Ratings
August 2017
Version: 1

Contents

Overview of Methodology

Morningstar Credit Ratings, LLC's real estate investment trust (REIT) credit rating methodology is a sector-specific application of the Corporate Credit Rating Methodology. The REIT methodology is based on the same key components, or pillars, as the methodology for nonfinancial corporations: Business Risk, Morningstar® Cash Flow Cushion™, Morningstar Solvency Score™, and Distance to Default. We have adjusted the components of the Cash Flow Cushion and Business Risk pillars to account for the differences in capital structure and business model between REITs and other nonfinancial corporations. The methodology combines qualitative judgments with quantitative financial and market data to arrive at a model-derived credit score. However, the model score is only an input to the final rating decision, which may consider trends in performance, anticipated company actions, macroeconomic developments, or other factors that may not be reflected in the model.

The four key components that drive Morningstar's credit rating methodology for REITs are:

(1) Our Business Risk component encompasses various measures of a REIT's business risk, based on our assessment of its country and company risk.
(2) Our Cash Flow Cushion Score is an evaluation of a REIT's ability to cover debt maturities, interest, and other debtlike obligations.
(3) Our Solvency Score is a predictor of default based on four key metrics.
(4) Our Distance to Default Score is based on a REIT's likelihood of financial distress using market-based inputs.

A fundamentally focused methodology, a robust and standardized set of procedures, and core financial risk and analytical tools drive our credit ratings for REITs. Based on other qualitative and quantitative factors (positive or negative trends in various metrics and upcoming operational or financial activities, for example), we will also discuss, and potentially adjust as appropriate, our model's recommended score.

We factor a REIT's scores in each area into our final corporate credit rating. The consolidated corporate rating, or CCR, is our estimate of the consolidated REIT's economic capacity to meet its financial obligations in accordance with their terms. The CCR assumes that all resources of the consolidated REIT, including the assets of its foreign subsidiaries, its shares in joint ventures, and its investments in other entities, are available to meet those obligations. The CCR would be the rating of the ultimate parent's senior unsecured debt assuming that it is the only class of debt; that the ultimate parent level issued and all subsidiaries guaranteed all debt; and the domestic and foreign assets of the REIT were available to service that debt.

We rate firms on an industry standard scale. See "Morningstar Credit Ratings Definitions and Other Related Opinions and Identifiers," in the Methodologies section under the Ratings/Surveillance tab on our website, www.morningstarcreditratings.com, for details.

Business Risk Score

The Business Risk assessment for REITs is similar to Morningstar's scoring system used for nonfinancial companies. However, we place emphasis on REIT-specific considerations within each of the underlying rating factors contributing to this score.

Two component scores converge to form our final Business Risk assessment: country risk and company risk. We weight the assigned component scores as follows to determine the overall Business Risk assessment for each REIT:

Country Risk: 10%
Company Risk: 90%

Country Risk

No matter how solid a REIT's balance sheet and operations, if it operates in an unstable political or economic environment, we may determine that its credit rating should be lower than that of a similar firm operating under more benign conditions. We capture our assessment of this consideration by assigning each REIT a score between 1 and 25 (25 being best) for this measure.

Company Risk

We score each REIT on eight company-specific risk factors. The emphasis is on the inherent characteristics of the company regardless of its current capital structure and financial strength (which we capture with other measures). Measures such as the Morningstar Research Services LLC's Morningstar Economic Moat™ (or the Morningstar analyst's estimate of sustainable competitive advantage) and Uncertainty assessment also contain an inherent industry element. While many REITs should score well for uncertainty given stable business models with long-term contractual cash flows, most do not possess economic moats, owing to the nature of commercial real estate. Unlike many other assets, economic returns for long-lived commercial real estate assets are dependent on both current income and asset price appreciation, the latter of which can be highly volatile because of rapidly changing market conditions and can be realized only through a final sale.

Size

The size of a REIT is relevant in assessing credit quality, as larger REITs tend to have greater financial flexibility to sell noncore properties, focus resources on better-performing assets, and benefit from economies of scale. We believe earnings before interest, taxes, depreciation, and amortization is the best measure of size for REITs and assign points for size according to the following scale:

Annual EBITDA	Score
> $2.50 billion	10
$1.50 billion < $2.50 billion	9
$1.25 billion < $1.50 billion	8
$1.00 billion < $1.25 billion	7
$650.0 million < $1.00 billion	6
$450.0 million < $650.0 million	5
$350.0 million < $450.0 million	4
$250.0 million < $350.0 million	3
$125.0 million < $250.0 million	2
< $125.0 million	1

Morningstar Economic Moat™

When it comes to company risk, our assessment of a firm's economic moat is one of the most important factors. The concept of an economic moat plays a vital role in our qualitative assessment of a firm's long-term cash-generation potential and, therefore, in the determination of the final credit rating.

According to the Morningstar Research Services LLC research methodology (which can be found at http://corporate.morningstar.com/US/, the Morningstar Economic Moat™ is a term to describe the sustainability of a company's future economic profits. Economic profit is defined as returns on invested capital over and above the estimate of a firm's cost of capital, or weighted average cost of capital. Competitive forces in a free-market economy tend to chip away at companies that earn economic profits because, eventually, competitors attracted to those profits will employ strategies to capture some of those excess returns. The primary differentiating factor among companies is how long they can hold competitors at bay. Only firms with economic moats—something inherent in their business model that rivals cannot easily replicate—can achieve excess returns for a prolonged period. Companies with moats also have a buffer against adverse events such as cyclical downturns or management mistakes. Many highly rated companies have economic moats. However, companies with no moat can achieve investment-grade credit ratings through conservative capital structure and good stewardship of the business.

Morningstar Research Services assigns one of three economic moat scores: none, narrow, or wide. There are two requirements for a firm to earn a narrow or wide score: the prospect of earning above-average returns on capital and some competitive edge that prevents those returns from quickly eroding. To assess the sustainability of excess profits, Morningstar Research Services analysts perform ongoing assessments of the Morningstar Moat Trend™. A firm's moat trend is positive in cases where its competitive advantage is growing stronger, stable when changes to the moat over the next several years are not anticipated, and negative when we foresee signs of deterioration. A negative or positive trend does not necessarily signify that a moat will change but that the company's competitiveness is deteriorating or improving.

Morningstar may adjust the published Morningstar Economic Moat™ as part of our analysis of the sensitivity of the credit risk to potential changes in the economic moat. When an economic moat is unavailable from Morningstar Research Services, we will determine a score for the moat component of Business Risk based on our assessment of the REIT's sustainable competitive advantage.

Our moat rating translates to the following scores:

Moat	Score
Wide	10
Narrow	5
None	1

Morningstar, Inc. Uncertainty Assessment
Morningstar Research Services' Uncertainty assessment classifies the uncertainty around company value using four elements: range of sales, operating leverage, financial leverage, and contingent events. Some industries require special adjustments to this formula, but the basic framework remains the same—bounding the range of the value of the company determined by long-term cash flows. From a debt holder's perspective, the Uncertainty assessment measures the stability and reliability of the "equity cushion" at the bottom of the capital structure.

Morningstar may adjust the published Morningstar Research Services Uncertainty assessment as part of our analysis of the sensitivity of the credit risk to potential changes in the Uncertainty assessment. When an Uncertainty assessment is unavailable, we will determine one based on our forecast enterprise value of a company.

Concentration Risk
In our assessment of concentration risk, we consider a REIT's tenant and geographic diversification. Whether geography or tenant risk takes precedence largely depends upon property type. Generally, we consider a portfolio that relies on just one or two metropolitan areas for the majority of operations less diverse and would score it lower. We draw a similar conclusion when a small number of tenants account for a significant amount of rent.

Concentration	Score
Low	5
Medium	4
High	3
Very High	2
Extreme	1

Management Score
Our analysts assign each company we cover a management score of 1 to 5. The score captures our view of a company's transparency, financial prudence, and management credibility. We emphasize balance-sheet management, shareholder return policies, merger-and-acquisition appetite, and other factors affecting creditworthiness. We also consider whether the firm consistently executes an articulated

strategy and the nature and magnitude of deviations from the stated strategy, especially as it relates to creditors.

Those companies for which our view of management is neutral receive a score of 3. Modestly positive or negative views result in a score of 4 or 2, respectively, while scores of 5 or 1 are reserved for cases of good or poor creditor treatment.

Capital Access

REITs are typically capital-intensive businesses, and their ability to retain excess cash is limited by the distribution of most of their earnings, typically via dividends. Current legislation requires that at least 90% of otherwise taxable income be distributed to ownership (shareholders) to qualify as a REIT. As a result, companies finance most acquisition and development investment through external sources—selling shares of equity, increasing balance-sheet leverage, or investing proceeds from asset dispositions. We evaluate capital access based on our assessment of these potential sources against likely uses, such as debt maturity profile and growth plans. REITs pursuing large, long-term development programs will likely score lower than those with less focus on development, as will acquisitive firms relative to those less acquisitive.

Capital Access	Score
Minimal or none required	5
Lower-than-average dependence	4
Average dependence	3
Higher-than-average dependence	2
Critical dependence	1

Cyclicality of Operations

In assessing REITs' cyclicality of operations, we evaluate each REIT's historical performance during poor economic environments and how we think it will perform during similar economic periods. Generally, we expect the average REIT to experience declines in fundamentals during poor economic times. We view REITs that have a track record of generating stronger performance no matter the economic environment more favorably and will score them a 4 or 5; and we view REITs with larger-than-average declines in relative performance less favorably and will score them a 1 or 2.

Portfolio Quality and Positioning

This factor reflects our assessment of a REIT’s asset quality and how well these assets are positioned in their markets relative to peers. If an asset is the first or second choice in its market for employment, housing, shopping, lodging, warehousing, and so forth, we consider it higher quality, and it will earn relatively higher occupancies and rents. Portfolios positioned in locales with limited land for new development, relatively higher construction costs, or regulations that don’t favor new real estate projects will also command relatively higher occupancies and rents. Conversely, REITs in areas exhibiting endemic crime, chronic economic weakness, punitive tax regimes, population declines, and the like are more likely to earn lower scores for this factor.

Portfolio Quality and Positioning	Score
Among the highest	10.0
Higher than average	7.5
Average	5.0
Lower than average	2.5
Among the lowest portfolio quality and positioning	1.0

Morningstar Cash Flow Cushion™

Given that REITs are required to distribute the majority of their earnings, mostly in the form of regular dividends, liquidity is a critical component in assessing their creditworthiness. As such, Morningstar begins by considering cash and equivalents on the balance sheet, available capacity from credit facilities, and ability to generate cash flow. For the purposes of evaluating REIT cash flow, Morningstar's approach differs from that of other nonfinancial corporations in that we calculate funds from operations and adjusted funds from operations according to conventions widely used by REITs and their investors.

Additionally, in the normal course of business, REITs will refinance all or some of their debt maturities, often with proceeds from issuing new debt, equity, or selling assets. Therefore, we measure a REIT's ability to generate proceeds against the value of its properties, primarily those unencumbered by debt and thus available for sale or collateral for secured borrowings.

REITs with less or no secured debt and with desirable assets should be able to obtain more financing or sales proceeds relative to highly leveraged REITs, especially when leveraged with secured or mortgage debt and therefore a smaller unencumbered portfolio. As well, REITs that generate higher levels of cash flow relative to near- and medium-term obligations will generate stronger Cash Flow Cushion ratings.

Morningstar Solvency Score™

Morningstar developed the Solvency Score for all nonfinancial corporate entities. While we developed the Solvency Score from a much broader universe of entities beyond REITs, it is applicable to REITs as the variability of their ratios for the parameters of the Solvency Score are within the range of the sample of nonfinancial corporations used to estimate the Solvency Score. Therefore, it is a meaningful indicator of REIT solvency, given that the limited number of REIT bankruptcies prevents a back-tested analysis solely for REITs.

The Solvency Score includes one ratio from each of these four categories: liquidity (a company's ability to meet short-term cash outflows), profitability (a company's ability to generate profit per unit of input), capital structure (how the company finances its operations), and debt-service capability (how much profit is earned per dollar of interest payments). For a full description of the Solvency Score, please refer to Morningstar's Corporate Credit Rating Methodology in the Methodologies section under the Ratings/Surveillance tab on our website, www.morningstarcreditratings.com.

Distance to Default

The distance to default metric is a market-based measure of financial health. We calculate both inputs, equity volatility and the ratio of enterprise value to market capitalization, using daily updated market data. This allows us to incorporate new information faster through the distance to default calculation compared with accounting-based measures of financial health. As a result, our credit ratings can be more responsive to early signs of financial distress.

Step 1: Calculate annualized trailing 300-day equity volatility (EQVOL).
Step 2: Calculate current enterprise value/market cap ratio (EVMV).
Step 3: Transform EQVOL into a percentile [0, 1] by ranking it relative to all other stocks in the calculable universe (EQVOLP). 1 represents high equity volatility, 0 represents low equity volatility.
Step 4: Transform EVMV into a percentile [0, 1] by ranking it relative to all other stocks in the calculable universe (EVMVP). 1 represents high-leverage companies, 0 represents low-leverage companies.
Step 5: Calculate new raw DtD = 1-(EQVOLP + EVMVP + EQVOLP*EVMVP)/3
Step 6: Transform new raw DtD into a decile [1, 10] by ranking it relative to all calculable U.S.-domiciled stocks. 10 represents poor financial health, while 1 represents strong financial health.

For companies that do not have a DtD score provided by Morningstar Research Services (typically private companies), the Morningstar analyst will estimate a DtD score using market data for publicly traded comparable companies.

Deriving the Model Rating

Morningstar combines a REIT's Business Risk, Cash Flow Cushion Score, Solvency Score, and Distance to Default scores to produce a "model-driven score" as described in detail in the Corporate Credit Rating Methodology.

If we are also assigning ratings to individual bonds or classes of debt, we will determine the issuer rating of each obligor within the corporate family that issues debt and the issue rating of each debt instrument or class of debt. See Methodology for Rating Parents, Subsidiaries, and Issues, in the Methodologies section under the Ratings/Surveillance tab on our website, www.morningstarcreditratings.com for details.

Morningstar Credit Ratings, LLC

For More Information
+1 800 299-1665
ratingagency@morningstar.com

4 World Trade Center
150 Greenwich Street, 48th Floor
New York, NY 10007 USA