Morningstar Corporate Credit Rating

**Investor Benefits**
- Offers a new measure of the credit quality of companies on our coverage list.
- Encapsulates our in-depth modeling and quantitative work in one letter grade.
- Allows investors to rank companies by each of the four underlying components of our credit ratings, including both analyst-driven and quantitative measures.
- Provides access to all the underlying forecasts that go into the rating, available through our institutional service.

**Purpose**
The Morningstar Corporate Credit Rating measures the ability of a firm to satisfy its debt and debt-like obligations. The higher the rating, the less likely we think the company is to default on these obligations.

The Morningstar Corporate Credit Rating builds on the modeling expertise of our securities research team. For each company, we publish:
- Five years of detailed pro-forma financial statements
- Annual estimates of free cash flow
- Annual forecasts of return on invested capital
- Scenario analyses, including upside and downside cases
- Forecasts of leverage, coverage, and liquidity ratios for five years
- Estimates of off balance sheet liabilities

These forecasts are key inputs into the Morningstar Corporate Credit Rating and are available to subscribers at select.morningstar.com.

**Methodology**
We feel it’s important to perform credit analysis through different lenses—qualitative and quantitative, as well as fundamental and market-driven. We therefore evaluate each company in four broad categories.

**Business Risk**
Business Risk captures the fundamental uncertainty around a firm’s business operations and the cash flow generated by those operations. Key components of the Business Risk rating include the Morningstar Economic Moat™ Rating and the Morningstar Uncertainty Rating.

**Cash Flow Cushion™**
Morningstar’s proprietary Cash Flow Cushion™ ratio is a fundamental indicator of a firm’s future financial health. The measure reveals how many times a company’s internal cash generation plus total excess liquid cash will cover its debt-like contractual commitments over the next five years. The Cash Flow Cushion acts as a predictor of financial distress, bringing to light potential refinancing, operational, and liquidity risks inherent to the firm.

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**Morningstar Research Methodology for Determining Corporate Credit Ratings**

- **Competitive Analysis**
  - Analyst conducts company and industry research:
    - Management interviews
    - Conference calls
    - Trade show visits
    - Competitor, supplier, distributor, and customer interviews
    - Assign Economic Moat™ Rating

- **Cash-Flow Forecasts**
  - Analyst considers company financial statements and competitive dynamics to forecast future free cash flows to the firm.
  - Analyst derives estimate of Cash-Flow Cushion™.

- **Scenario Analysis**
  - Analysts run bull and bear cases through the model to derive alternate estimates of enterprise value.
  - Based on competitive analysis, cash-flow forecasts, and scenario analysis, the analyst assigns Business Risk.

- **Quantitative Checks**
  - We gauge a firm’s health using quantitative tools supported by our own backtesting and academic research.
  - Based on Morningstar Solvency Score™ and Distance to Default

- **Rating Committee**
  - Senior personnel review each company to determine the appropriate final credit rating.
  - Review modeling assumptions
  - Approve company-specific adjustments

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The advantage of the Cash Flow Cushion ratio relative to other fundamental indicators of credit health is that the measure focuses on the future cash-generating performance of the firm derived from Morningstar’s proprietary discounted cash flow model. By making standardized adjustments for certain expenses to reflect their debt-like characteristics, we can compare future projected free cash flows with debt-like cash commitments coming due in any particular year. The forward-looking nature of this metric allows us to anticipate changes in a firm’s financial health and pinpoint periods where cash shortfalls are likely to occur.

Morningstar Solvency Score™
The Morningstar Solvency Score™ is a quantitative score derived from both historical and forecasted financial ratios. It includes ratios that focus on 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 does the company finance its operations), and interest coverage (how much of profit is used up by interest payments).

Distance to Default
The Distance to Default rating is a quantitative, market-based measure of a company’s current financial health. (Distance to Default serves as the basis for Morningstar’s Financial Health Grade.) The underlying model treats the equity of a firm as a call option on that firm’s assets. Based on estimates of asset volatility and the Black-Scholes option-pricing model, we can estimate the likelihood that the value of the company’s assets falls below the value of its liabilities, implying likely default.

For each of these four categories, we assign a score, which we then translate into a descriptive rating along the scale of Very Good / Good / Fair / Poor / Very Poor.

Overall Credit Rating
The four component ratings roll up into a single preliminary credit rating. To determine the final credit rating, a credit committee of at least five senior research personnel reviews each preliminary rating.

We review credit ratings on a regular basis and as events warrant. Any change in rating must be approved by the Credit Rating Committee.

Investor Access
Morningstar Corporate Credit Ratings are available on Morningstar.com, as are the four underlying ratings. Our credit research, including detailed cash-flow models that contain all of the components of the Morningstar Corporate Credit Rating, is available to subscribers at select.morningstar.com.