Morningstar Sustainability Ratings

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The Morningstar Sustainability Rating is a measure of how well the portfolio holdings in a portfolio are managing their environmental, social, and governance, or ESG, risks and opportunities relative to the portfolio’s peer group.
Morningstar Sustainability Rating

Company ESG Research
Sustainalytics

Company ESG Scores (0–100)
Controversy Scores (1–5)

Portfolio Sustainability Score
Morningstar

Asset-weighted roll-up of company ESG scores with deductions for controversies

Sustainability Rating
Morningstar

Portfolio Sustainability Score relative to peer group

[Graph showing sustainability rating levels: High, Above Average, Average, Below Average, Low]
Morningstar Sustainability Ratings Methodology Changes

- The Morningstar Sustainability Rating is a measure of how well the portfolio holdings in a portfolio are managing their environmental, social, and governance, or ESG, risks and opportunities relative to the portfolio’s peer group.

- Original Methodology
  - Holdings = most-recent portfolio
  - Peer Group = Morningstar Category

- Methodology after November 2018
  - Holdings = portfolios over the past year
  - Peer Group = Morningstar Global Category
Morningstar Sustainability Ratings Methodology Changes – Two More!

- Holdings coverage threshold: to 67% from 50%
  - % of portfolio assets covered by Sustainalytics company ESG ratings
- Peer group size threshold: to 30 from 10
  - # of portfolios within a peer group that meet the coverage threshold in order for any portfolios in a peer group to receive Sustainability Ratings
Rationale for Holdings and Peer Group Changes

▶ Holdings
  ▶ Ability to incorporate longer time period
  ▶ Allows assessment of manager consistency

▶ Peer Group
  ▶ Morningstar Global Category system buckets all like strategies in same category regardless of where a strategy is offered
  ▶ Results in larger, more-stable peer groups
Rationale for Threshold Changes

- **Coverage Threshold**
  - Improvements in overall coverage
  - Two-thirds threshold more representative of overall portfolio

- **Peer Group Threshold**
  - Difficult to apply ratings distribution to small peer groups
  - Most global categories have 30 rated funds
Holdings: Historical Sustainability Score Calculation

- Weighted average of the portfolios reported in the past 12 months
- More recent portfolio scores are weighted heavier than distant past portfolios

\[
\text{Historical Portfolio Sustainability Score} = \frac{\sum_{i=1}^{12} (12 - i) \times \text{Portfolio Sustainability}_i}{\sum_{i=1}^{12} i}
\]

Where:

\[i = \text{number of months from present}\]

- Captures the manager’s decision making process to see if ESG considerations are applied consistently
Holdings: Historical Sustainability Score Sample Calculation

- Weighted average of the portfolios reported in the past 12 months
- More recent portfolio scores are weighted heavier than older portfolios

Sample calculation:

<table>
<thead>
<tr>
<th>Portfolio Date</th>
<th>Portfolio Sustainability Score</th>
<th>Weight</th>
<th>Weighted Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/31/2018</td>
<td>48.84</td>
<td>12</td>
<td>586.08</td>
</tr>
<tr>
<td>6/30/2018</td>
<td>48.01</td>
<td>11</td>
<td>528.11</td>
</tr>
<tr>
<td>5/31/2018</td>
<td>48.66</td>
<td>10</td>
<td>486.60</td>
</tr>
<tr>
<td>4/30/2018</td>
<td>48.07</td>
<td>9</td>
<td>432.63</td>
</tr>
<tr>
<td>3/31/2018</td>
<td>47.65</td>
<td>8</td>
<td>381.20</td>
</tr>
<tr>
<td>2/28/2018</td>
<td>47.86</td>
<td>7</td>
<td>335.02</td>
</tr>
<tr>
<td>1/31/2018</td>
<td>48.77</td>
<td>6</td>
<td>292.62</td>
</tr>
<tr>
<td>12/31/2017</td>
<td>48.29</td>
<td>5</td>
<td>241.45</td>
</tr>
<tr>
<td>11/30/2017</td>
<td>47.83</td>
<td>4</td>
<td>191.32</td>
</tr>
<tr>
<td>10/31/2017</td>
<td>47.20</td>
<td>3</td>
<td>141.60</td>
</tr>
<tr>
<td>9/30/2017</td>
<td>47.42</td>
<td>2</td>
<td>94.84</td>
</tr>
<tr>
<td>8/31/2017</td>
<td>47.62</td>
<td>1</td>
<td>47.62</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td></td>
<td><strong>3759.09</strong></td>
</tr>
</tbody>
</table>

Historical Score $= \frac{3759.09}{78} = 48.19$
Holdings: Smoothing Effect of Historical Sustainability Score

Portfolio Sustainability Score

Portfolio Historical Sustainability Score
Morningstar Global Category is a system of peer groups for managed portfolios based on investment strategy without regard to where they are available for sale.

For example, under the Morningstar Global Category system, diversified Emerging Markets funds are typically placed into the same peer group, regardless of where a fund is available for sale.

Typical mapping for funds:

<table>
<thead>
<tr>
<th>Morningstar Category</th>
<th>Morningstar Global Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>(US) Diversified Emerging Markets</td>
<td>Emerging Markets Equity</td>
</tr>
<tr>
<td>(EAA) Global Emerging Markets</td>
<td>Emerging Markets Equity</td>
</tr>
<tr>
<td>(AUS) Equity Emerging Markets</td>
<td>Emerging Markets Equity</td>
</tr>
<tr>
<td>(US) World Large Stock</td>
<td>Global Equity</td>
</tr>
<tr>
<td>(EAA) Global Flex-Cap Equity</td>
<td>Global Equity</td>
</tr>
<tr>
<td>(Japan) World Equity</td>
<td>Global Equity</td>
</tr>
<tr>
<td>(US) Large Cap Blend</td>
<td>US Equity Large Cap Blend</td>
</tr>
<tr>
<td>(EAA) US Large Cap Blend Equity</td>
<td>US Equity Large Cap Blend</td>
</tr>
<tr>
<td>(Can) US Equity</td>
<td>US Equity Large Cap Blend</td>
</tr>
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</table>
Peer Group: Impact of Moving to Larger Global Category (Denmark Equity to Europe Equity Other)

Globe Ratings

<table>
<thead>
<tr>
<th></th>
<th>July 2018</th>
<th>Projected</th>
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<tbody>
<tr>
<td>1</td>
<td></td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>3</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>4</td>
<td>20%</td>
<td>60%</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>10%</td>
</tr>
</tbody>
</table>
Coverage Threshold: Average Portfolio AUM ESG Coverage Through Time

Average Portfolio

% AUM Covered

Impact Assessment: Expected Rating Changes

Sustainability Rating October Methodology Change

Rating Notch Differences

Data as of 7/31/2018
Impact Assessment: Expected Rating Changes by Asset Class

Data as of 7/31/2018
Timing Details for Methodology Changes

► When will the changes take place?
  ► Methodology in effect as of October 31, 2018
  ► Morningstar Sustainability Ratings for September 2018 will be run on November 8, 2018

► When will the new data point ‘Historical Sustainability Score’ be added to Morningstar Products?
  ► Licensed Data - 10/25
  ► Direct Desktop - 10/31
  ► Direct and Office Cloud - 11/1
  ► Morningstar Essentials - 11/7
  ► Advisor Workstation - 12/7
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