

# Morningstar's Quantitative Rating Analysis

## Frequently Asked Questions

### What is the Morningstar Quantitative Rating?

The Morningstar Quantitative Rating, or MQR, is comparable to Morningstar Analyst Ratings, which are the summary expression of Morningstar's forward-looking analysis of a fund. Morningstar calculates the Quantitative Rating using a statistical model derived from the Analyst Rating that our analysts assign to managed investments. Quantitative Ratings are visualized using Gold, Silver, Bronze, Neutral, and Negative with a Q superscript.



### What is MQR Analysis?

MQR Analysis provides reports for funds that are not covered by our analysts. With this launch, Morningstar's collective written coverage will expand from over 4,000 funds (over 20,000 share classes) to over 40,000 funds (over 150,000 share classes).

The three driving principles underlying MQR Analysis are:

- When analysts are writing their analyses of funds, they pick specific mental models that support their pillar ratings theses.
- MQR Analysis' "opinions" are those of the MQR model (we use Shapley values to derive the model's "opinion").
- MQR Analysis picks up analyst-written content (for example, Parent Pillar analysis) wherever possible.

### How is MQR Analysis generated?

First, we run MQR to generate pillar ratings and overall ratings for the MQR-covered universe. Then we build the dataset required to generate MQR Narratives and override the machine-generated text with analyst-written text wherever possible (for example, Parent Pillar). This produces the final MQR Analysis output.

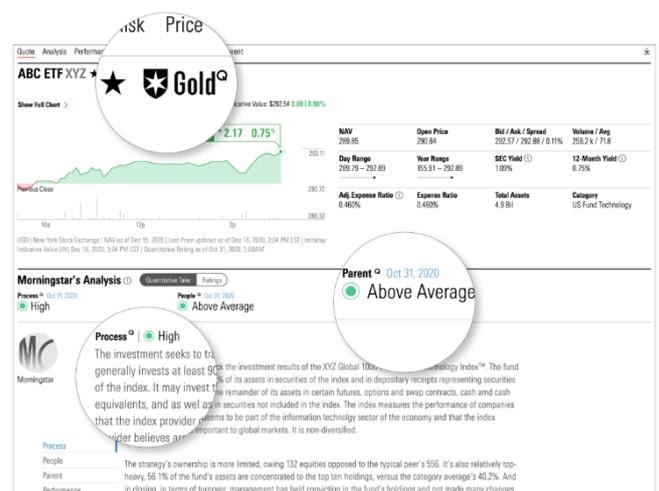
### How often is the MQR Analysis content refreshed?

MQR Analysis is published on a monthly cadence, for the entire rated universe.

### Where is MQR Analysis available?

MQR Analysis is available as of March 22, 2021, within the Morningstar report in the following Morningstar products:

- Morningstar.com, Morningstar.co.uk, & Morningstar.ca
- Morningstar® Direct<sup>SM</sup>
- Morningstar® Office<sup>SM</sup>
- Morningstar® Advisor Workstation<sup>SM</sup>



MQR Analysis can also be made available to clients via our Research data feeds. If clients have interest in receiving the MQR through Research data feeds, please contact your Customer Success Manager.

### How can I tell which content was generated by a Morningstar analyst vs. the MQR Analysis?

If there is an author name associated with the content, it was written by a Morningstar analyst. Morningstar still includes the Q superscript in these cases because a machine associated the pillar rating and content with the MQR-covered share class.

### The fund I'm researching has a Morningstar Quantitative Rating but doesn't have the accompanying MQR Analysis report. Why is that?

MQR Analysis requires fundamental data about the fund to determine which mental models to execute against when generating the MQR Narratives. If a fund does not have that data, we cannot choose which mental models are appropriate, so we don't generate any analysis.

If we do not have enough data to generate *one of the sections* (Summary, Process, People, Parent, Performance, Price), but we do have enough data to generate others, we will substitute generic language for that section, and the Morningstar report will look like this:

**Process** <sup>Q</sup> |  Average **Mar 15, 2021**

Morningstar generates quantitatively driven content for managed investments covered by the Morningstar Quantitative Rating, collectively called MQR Analysis. This share class' Process Pillar MQR Analysis content was not generated because of insufficient data. To generate individualized content, MQR Analysis requires sufficient data to generate its framework of "mental models" designed to mimic content written by analysts.

The Quantitative Process Pillar uses an algorithm designed to predict the Process Pillar rating analysts would assign the investment product, if they covered it.

If we don't have enough data to generate MQR Narratives for *any of the sections* (Summary, Process, People, Parent, Performance, Price), the Morningstar report will look like this:

**iShares Global Tech ETF IXN** ★★★  **Silver** <sup>Q</sup>

Quantitative rating as of Jan 31, 2021

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Quote Fund Analysis Performance Risk Price Portfolio Parent Crowd Sense

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**Morningstar's Analysis** <sup>Q</sup> Quantitative Take Ratings

<b>Process</b> <sup>Q</sup> Jan 31, 2021  Above Average	<b>People</b> <sup>Q</sup> Jan 31, 2021  Above Average	<b>Parent</b> <sup>Q</sup> Jan 31, 2021  Above Average
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The number of funds that receive a Morningstar Analyst Rating is limited by the size of the Morningstar analyst team. To expand the number of funds we cover, we have developed a machine-learning model that uses the decision-making processes of our analysts, their past ratings decisions, and the data used to support those decisions. The machine-learning model is then applied to the "uncovered" fund universe to create the Morningstar Quantitative Rating (denoted on this page by a <sup>Q</sup>), which is analogous to the rating a Morningstar analyst might assign to the fund if an analyst covered the fund. These quantitative rating predictions make up what we call the Morningstar Quantitative Rating™ for funds. [Click here for more on how to use these ratings.](#)

### Why isn't there a publish date next to the Performance and Price sections?

This consistent with how analyst-written content is displayed in the Morningstar report. There is no publish date for the Performance or Price sections for analyst-written content or MQR Analysis.