

# Morningstar Medalist Rating Methodology



May 2023

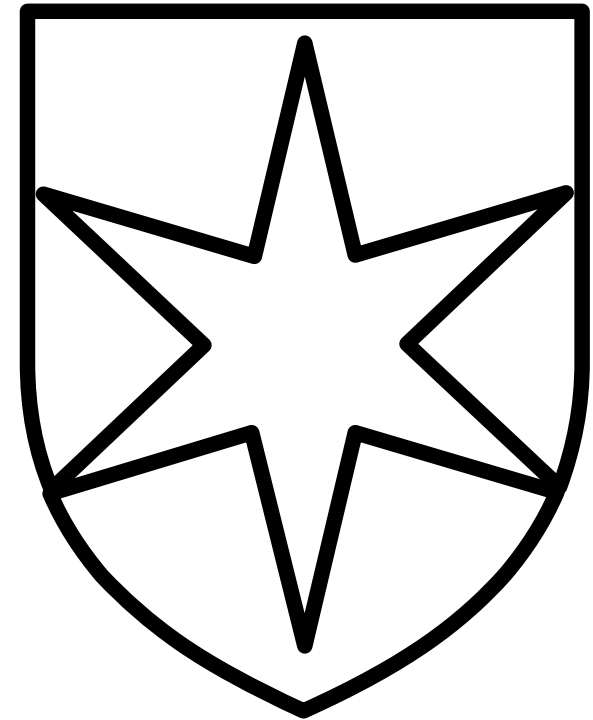
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## What Is the Morningstar Medalist Rating?

The Morningstar Medalist Rating for funds is the summary expression of our forward-looking analysis of investment strategies.

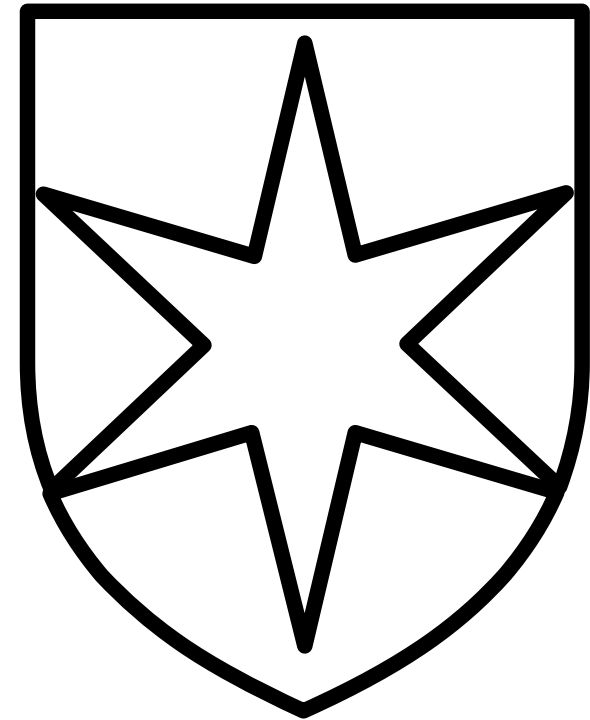
The Morningstar Medalist Rating for funds is expressed on a five-tier scale running from Gold to Negative. The top three ratings of Gold, Silver, and Bronze all indicate that our analysts expect the rated investment vehicle to produce positive alpha relative to its Morningstar Category index or category median over the long term.







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# Historical Suite of Fund Ratings

- Morningstar Rating for Funds (the "star rating"), launched in 1986
- Morningstar Analyst Rating, launched in 2011
- Morningstar Quantitative Rating, launched in 2017



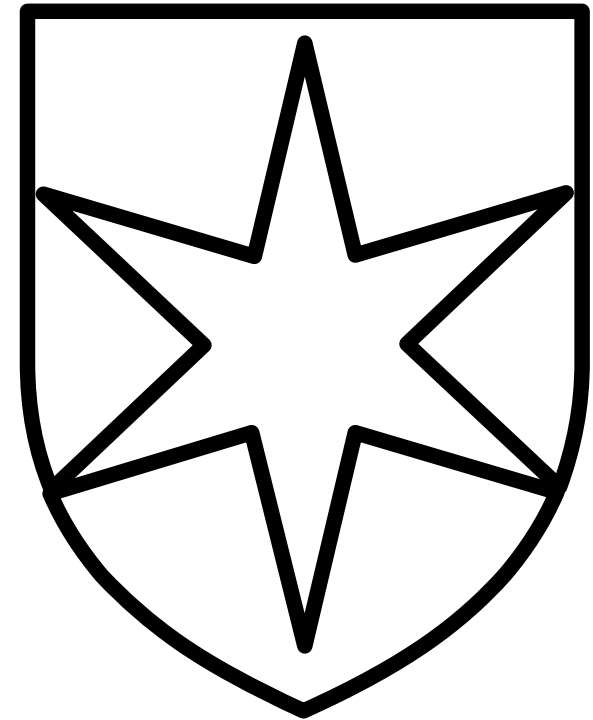
# Suite of Fund Ratings

Rating	Iconography	Type of Assessment	Benchmark	Eligibility Rqmt.
<b>Morningstar Rating</b> <b>"Star Rating"</b> (Incept: 1986)		<ul style="list-style-type: none"> <li>Backward-looking, quantitative</li> <li>Based on past risk-adjusted returns</li> </ul>	Morningstar Category peers	36 months of returns
<b>Morningstar Analyst Rating</b> (Incept: 2011)		<ul style="list-style-type: none"> <li>Forward-looking, qualitative</li> <li>Based on analysts' assessment of people, process, parent, and fees</li> </ul>	Morningstar Category index	None
<b>Morningstar Quantitative Rating</b> (Incept: 2017)		<ul style="list-style-type: none"> <li>Forward-looking, quantitative</li> <li>Based on algorithmic assessment of people, process, parent, and fees</li> </ul>	Morningstar Category index	1 month of returns
<b>Morningstar Sustainability Rating</b> (Incept: 2019)		<ul style="list-style-type: none"> <li>Backward-looking, quantitative</li> <li>Based on ESG risk assessment of funds' portfolio holdings</li> </ul>	Morningstar Category peers	Various




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# What Is the Medalist Rating?

- We will be consolidating the **Morningstar Analyst Rating** and the **Morningstar Quantitative Rating** into a single rating system and consequently a single data point.
- The **Medalist Rating** will remove the superscript “Q” at the overall rating level. At the pillar level, additional transparency and disclosure will be added to showcase decision source and any inheritance logic.
- Medalist Rating will launch May 2023.



# What Will the Medalist Rating Look Like in Our Products?

Managed Investment Name	Morningstar Medalist Rating	Morningstar Medalist Rating - Parent Pillar	Morningstar Medalist Rating - Process Pillar	Morningstar Medalist Rating - People Pillar
Product 1	 Gold	High	High <sup>0</sup>	High <sup>0</sup>
Product 2	Negative	Low <sup>0</sup>	Low <sup>0</sup>	Below Average <sup>0</sup>
Product 3	 Silver	Above Average	Above Average	Above Average
Product 4	 Bronze	Above Average	Average	Above Average
Product 5	Neutral	Average	Average	Average <sup>0</sup>

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## What's Changing?

- **No upgrades or downgrades** result from this merger.
- Display is **changing**.
- Remove the "Q" at overall rating level. Keep at Pillar level.
  - New data points: "Analyst Assigned Proportion" and "Input Data Availability"
  - Improved Author Bylines to recognize the role of inheritance
- Updated methodology document
  - We will be producing a new methodology document that combines the currently separate documents together, but the methodology itself is not materially changing in any way.

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## Why Make This Change?

- Expected growth of the managed investment universe demands scalability
- Natural evolution of our qualitative and quantitative ratings methodology
- Simplification of our ratings ecosystem
- Increases the impact of our ratings for our users



# Rating Process Overview

Disclaimer: A series of edge cases exist, for example: passives handling or universe requirements. For full description of the methodology, please refer to the [Morningstar Medalist Rating methodology document](#).

# Morningstar Medalist Rating – Our Research Framework

Potential

1. Estimate the potential alpha for the type of strategy being analyzed, before fees.

Conviction

2. Assess how much of that potential the particular strategy being analyzed can capture before fees.

Value-Add

3. Translate into estimate of alpha the strategy being analyzed can generate before fees.

Hurdle

4. Deduct annual expenses of particular strategy being analyzed.

Alpha

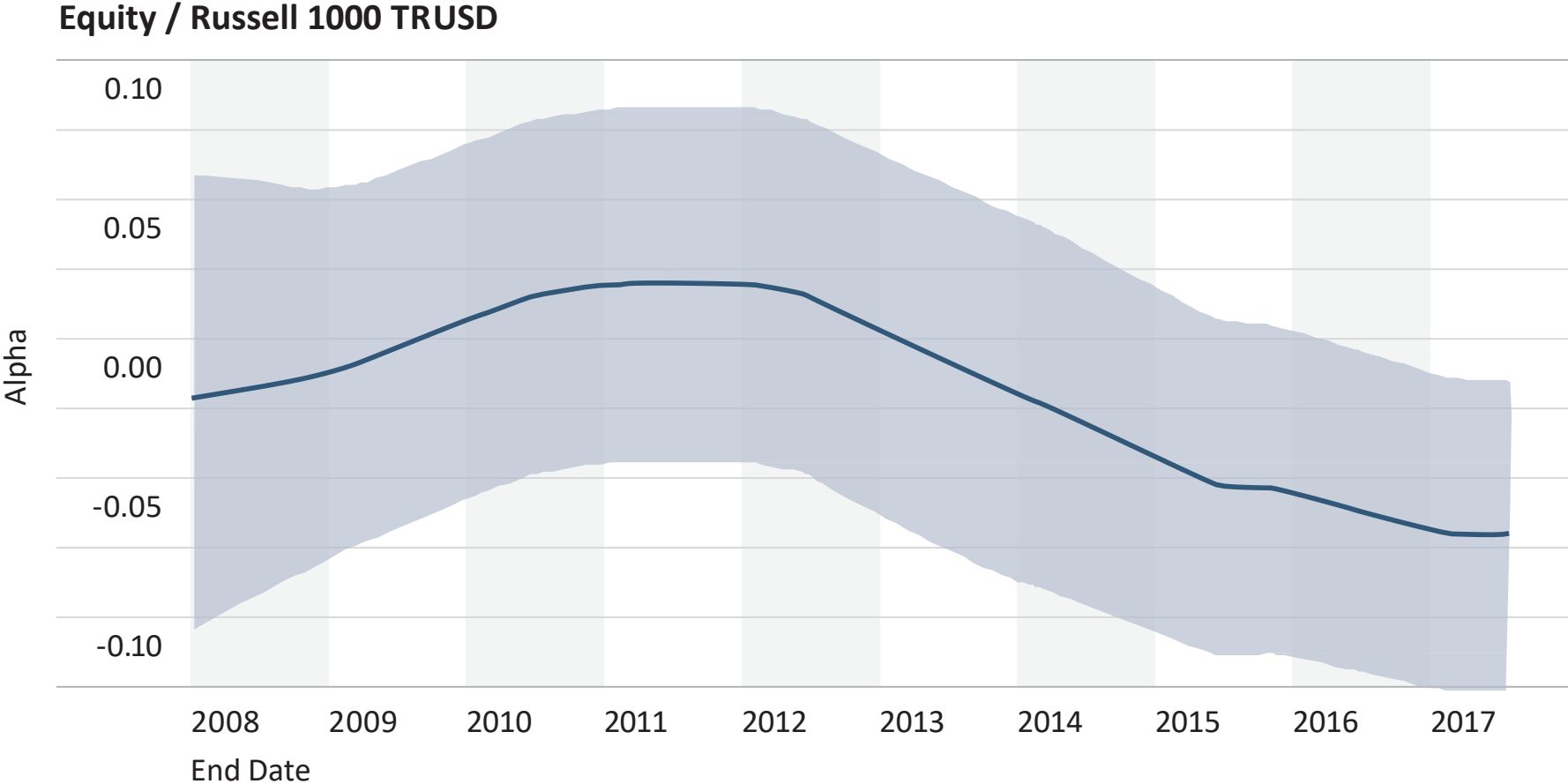
5. Estimate net-of-fee alpha of strategy being analyzed.



6. Translate net-of-fee alpha of strategy being analyzed into a Medalist Rating.

# Morningstar Medalist Rating – Assess Alpha Opportunity

Potential



For Illustrative Purposes Only. Indexes are unmanaged and not available for direct investment. Source: Morningstar.

# Morningstar Medalist Rating – Our Research Framework: Assign Pillars

Conviction

Under our research framework, we review three pillars to determine their conviction in a strategy. It reinforces a consistent, long-term investment process and gives fund selectors and advisors the resources they need to provide justified client recommendations.



People



Process



Parent

Source: Morningstar, Inc. For illustrative purposes only.

# Morningstar Medalist Rating – Estimating Value-Add

Sample Calculation for Active Products:

	×		×	
<b>Potential</b>				<b>Conviction</b>
-----		-----		-----
Alpha Potential Estimate	×	0.45	×	People Pillar Rating
Alpha Potential Estimate	×	0.45	×	Process Pillar Rating
+ Alpha Potential Estimate	×	0.10	×	Parent Pillar Rating
= Estimated Pre-Fee Alpha of Strategy Being Analyzed				

**Pillar Rating =**

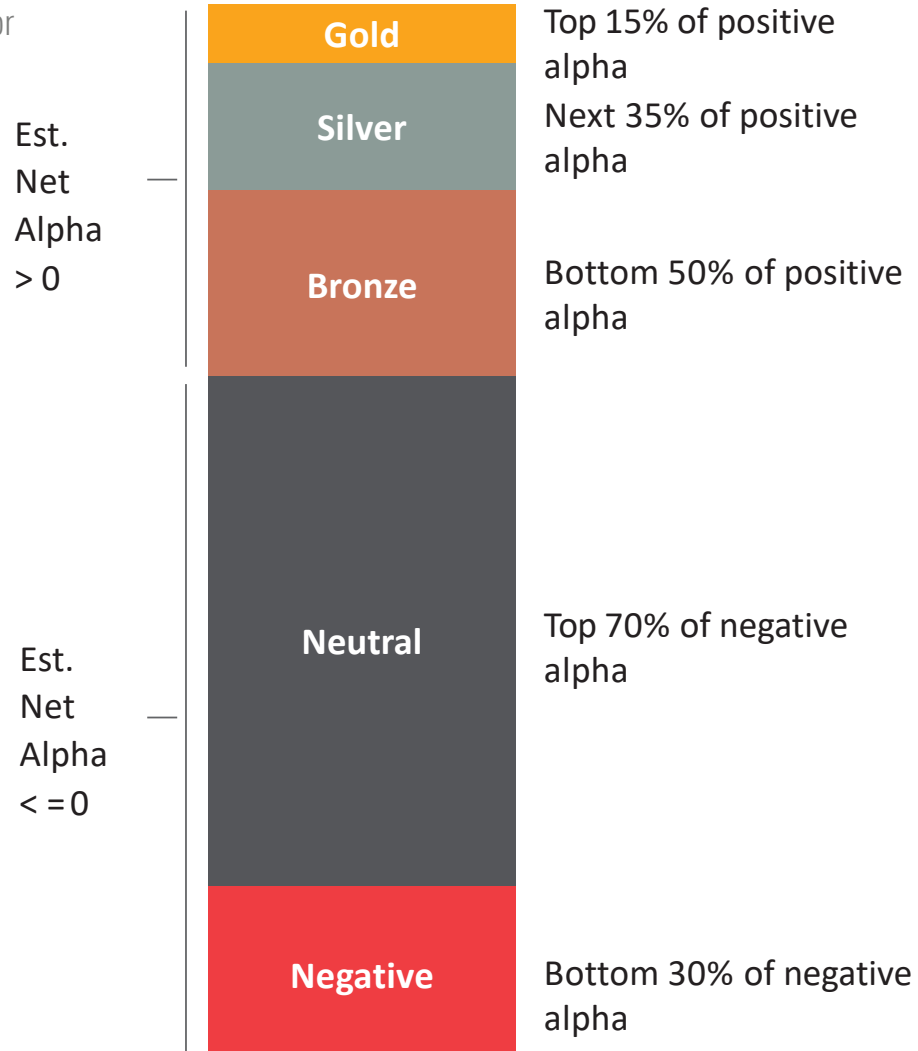
- + 2 (High)
- + 1 (Above Avg)
- 0 (Average)
- 1 (Below Avg)
- 2 (Low)

**Alpha Potential Estimate:** Derived from a range of gross alphas in the fund’s peer group to estimate the potential that funds in the peer group can generate positive gross-of-fee alpha.

Source: Morningstar, Inc. For illustrative purposes only.

# Morningstar Medalist Rating – Translate Net-of-Fee Alpha Estimate Into a Rating

Sample Calculation for  
Active Products:



Est.  
Net  
Alpha  
> 0

Est.  
Net  
Alpha  
< = 0



To be eligible for a Gold, Silver, or Bronze rating, we must expect an active strategy to have a high likelihood of generating positive alpha after fees.

Of those, we award Gold ratings to the top 15% of active vehicles within their Morningstar Category, Silver ratings to the next 35%, and Bronze to the remaining 50%.

We assign Neutral and Negative ratings to vehicles not expected to produce positive alpha.

Hurdle

Alpha



# Pillar Assignments

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## Morningstar Assigns Pillars to Funds in Three Ways:

- Directly, by Analyst
- Indirectly, by Analyst
  - Using “inheritance rules”
- Directly, by Algorithm
  - Using the machine-learning algorithm: “random forest”



Directly, by Analyst

# Morningstar Medalist Rating – Our Research Framework

**Under our research framework, our analysts review three pillars to determine their conviction in a strategy. It reinforces a consistent, long-term investment process and gives fund selectors and advisors the resources they need to provide justified client recommendations.**



**People**

Team Quality/Experience

Team Depth

Team Continuity

Alignment of Interests



**Process**

Security Selection/Idea Generation

Valuation Discipline

Portfolio Construction/  
Risk Management

Capacity



**Parent**

Structure/Ownership

Organization Stability/  
Financial Strength

Culture/Stewardship

Regulatory/Compliance

Source: Morningstar, Inc. For illustrative purposes only.

Indirectly, by Analyst: Inheritance Rules

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## When Available, Pillars Are Assigned Using an Analyst Decision

- Parent:
  - Branding Id: When a firm has at least one fund under analyst coverage, all funds under that brand receive the analyst-assigned Parent rating.
- People
  - Strategy Id: All funds under the same strategy id receive the same People and Process rating.
  - Person Id: All teams (defined by the same set of Person Id) receive the same People rating. If an analyst has a view about a manager, their People rating is cascaded to all funds managed by Sally Smith.
  - Passive – Firm – Asset Class: All passive products within an asset class at a firm receive the same People rating.

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# When Available, Pillars Are Assigned Using an Analyst Decision

- Process
  - Strategy Id: All funds under the same strategy id receive the same People and Process rating.
  - Passive Benchmark Mapping: All passive products tracking the same benchmark, receive the same Process rating.

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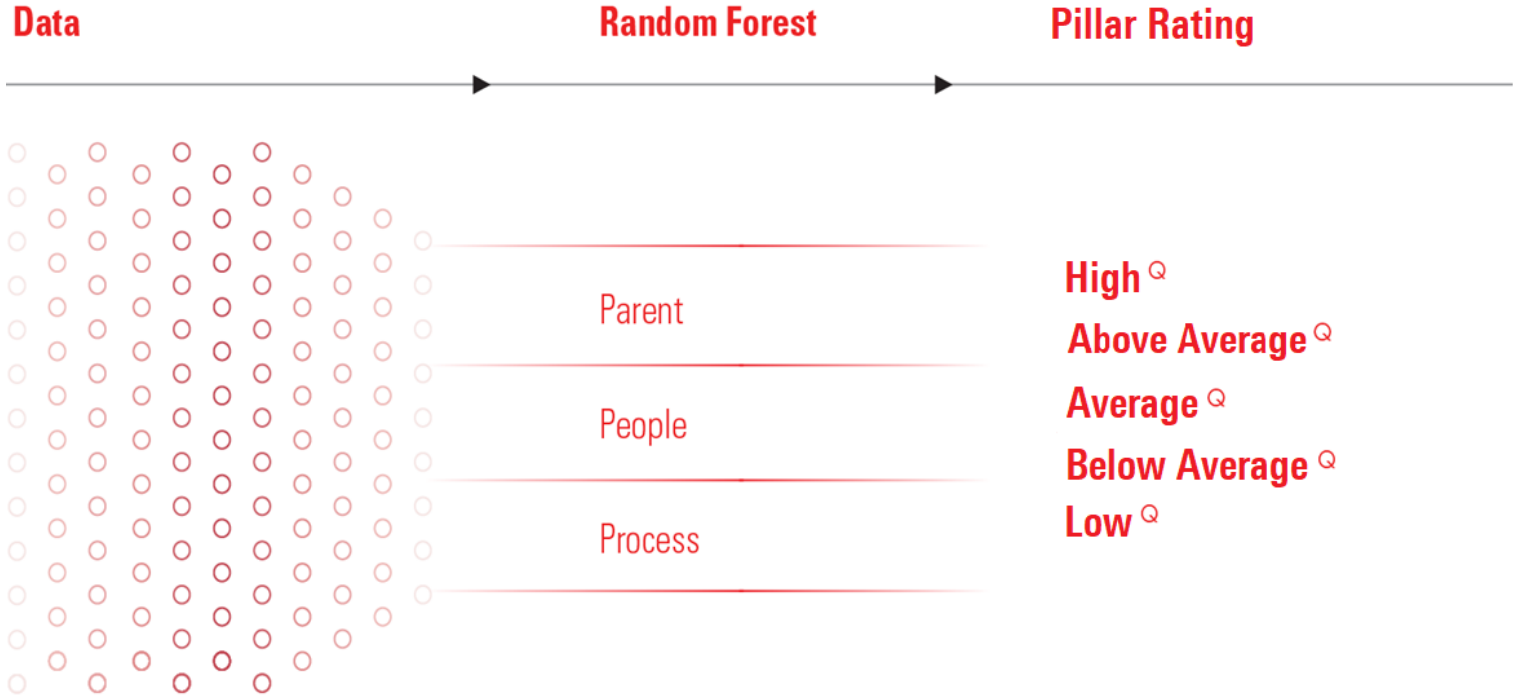
## Inheritance Rules Extend the Analyst Reach Beyond Their Coverage List

- Analysts make three decisions: Parent, People, Process.
- Ratings can be entirely analyst-driven, entirely algorithmically generated, or somewhere in the middle.

# of Inherited Pillars	Counts: Core Universe	Counts: Overlay Universe
0	77,831	42,958
1	75,879	2,160
2	51,436	1,796
3	26,322	148,766

Directly, by Algorithm

# Pillars Assigned Directly, by Algorithm, Uses a Statistical Technique Called "Random Forest" to Make Rating Predictions





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## Pillar Ratings Assigned Directly, by Algorithm, Utilizes Data on Three Levels: **Brand**, Manager, Share Class

- Brand (Branding Id)
  - Calculations include all share classes rolling up to a global brand.
    - If fund does not report required data, they are excluded from calc.
  - Intuition: If a new fund or fund is missing data, firm data is a good proxy for how we might expect the fund to behave.
    - For example: If we know it is from a firm with high turnover or low experience, using global firm data is a better proxy than generic median.

## 22 Brand (Branding Id) Data Points Fall Into 4 Buckets

<b>Manager</b>	<b>Fee</b>	<b>Performance</b>	<b>Other</b>
Manager Tenure - AW	Account Mgmt Fee Rank	Mstar Rating (3 Yr, 5, 10, Overall)	Firm Age
Manager Tenure	Max Mgmt Fee Rank	Success Ratio (3 Yr, 5, 10)	Portfolio Transparency TTV
# Months Since Manager Change	Net Expense Ratio Rank	Risk Adjusted Success Ratio (3 Yr, 5, 10)	
% Funds Manager Change TTM	Prospectus Op. ER Rank		
% AUM Team Managed			
Retention 5 Yr			

\* All Equal Weighted Unless Otherwise Noted

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## Directly, by Algorithm, Utilizes Data on Three Levels: Brand, **Manager**, Share Class

- Manager (Person Id)
  - Calculations include all funds manager named to, current and historical.
  - Based off Manager History.

Name	Manager Name	Manager History
Product A	Person D	[2015-03-15 -- ] Person D
Product B	Person E	[2006-09-26 -- 2022-10-03] Person H; [2022-10-03 -- ] Person E
Product C	Person F, Person G	[2019-12-10 -- ] Person F, [2019-12-10 -- ] Person G

- Intuition: If new to a fund, use track records for prior funds to proxy how we might expect them to perform.

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## 6 Data Points Are Derived From the Manager History Data Point

- *Cumulative Excess Return (3, 5 Yr)* – Creates monthly gross ex category average based on funds manager listed historically. Compounds to create a measure of manager out/underperformance over three to five years.
- *Manager Experience* – Looks across all funds manager has been listed on historically and counts number of months since earliest start date.
- *Number of Months Since Management Change* – Counts the number of months since a manager has left the fund.
- *Team Size* – Counts current number of listed managers.
- *Team Managed* – Is team size > 1.

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## Directly, by Algorithm, Adjustments for Missing Manager Information

- Manager Name is cleaned. Data is removed if they are not a person (Wellington Fixed-Income Team, Not Disclosed, and so on).
- People High & Low are restricted for funds without a listed Manager.
- People scores are ported over by Strategy Id so a local country version could not report manager, but we look globally for more information.

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## Directly, by Algorithm, Utilizes Data on Three Levels: Brand, Manager, Share Class

- Performance

- All performance statistics are derived from monthly net returns, category index, or category average performance.

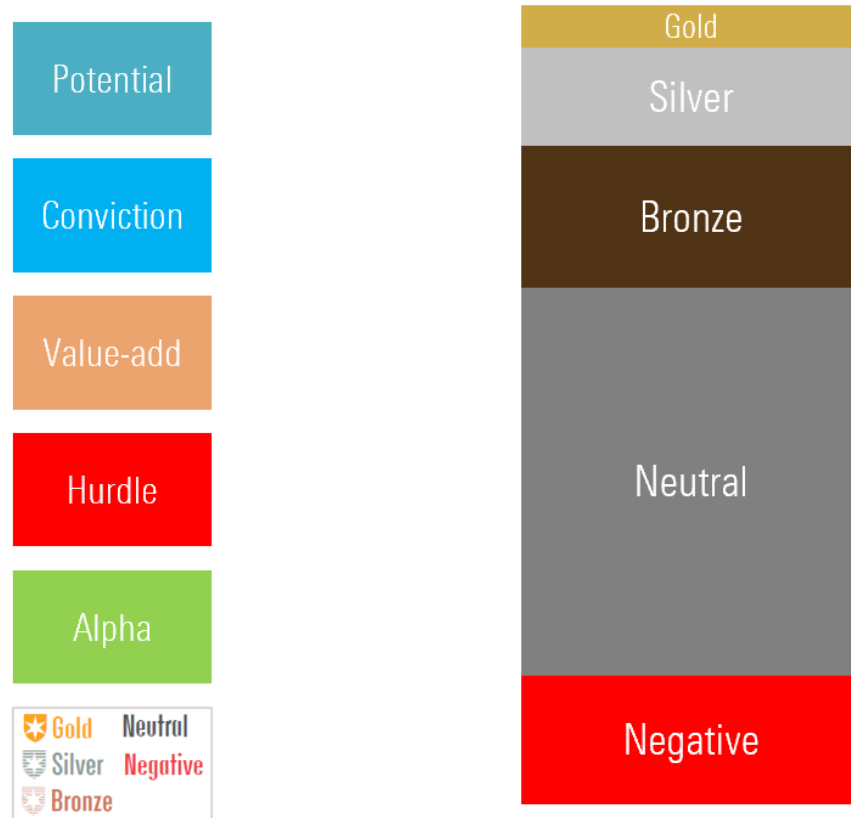
Name	Monthly Return 2022-10 USD	Monthly Return 2022-11 USD	Monthly Return 2022-12 USD	Morningstar Category	Morningstar Category Index
Product A	6.73	8.71	-5.51	US Fund Target Date-2030	Morningstar Lifetime Mod 2030 TR
Product B	8.94	6.32	-3.12	US Fund Global Allocation	Morningstar Gbl Allocation TR USD
Product C	4.06	5.67	-6.98	US Fund Allocation -- 70% to 85% Equity	Morningstar Mod Agg Tgt Risk TR

- Fees

- MQR uses Representative Cost, which has country-specific methodology.

# Ratings Assignments

# Medalist Rating Assignments Follow the Same Calculation, Regardless of How Pillars Were Assigned (Directly/Indirectly, Analyst/Algorithm)





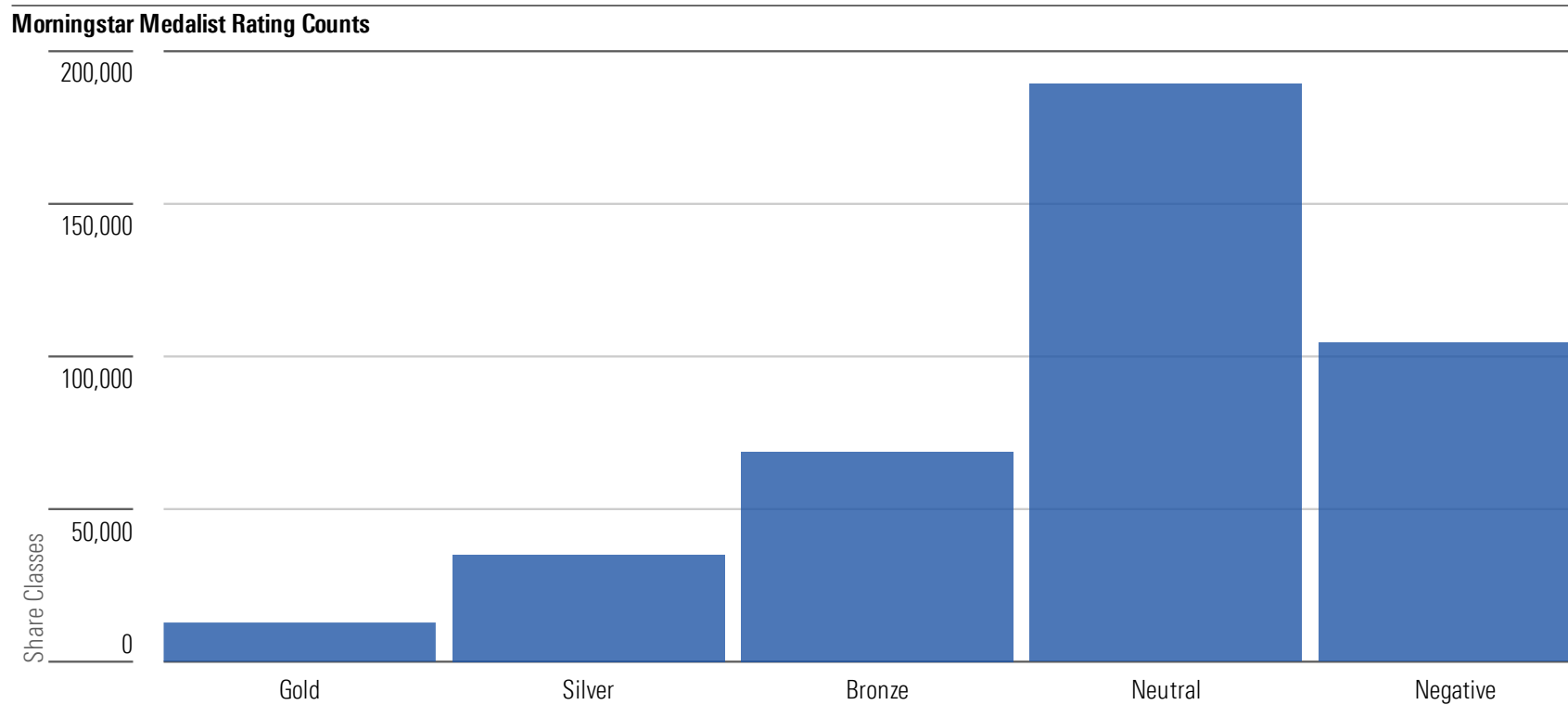
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## Minimum Data Requirements for Ratings

- Fee: Must have Representative Cost as of previous month end.
- Category:
  - Peer group must be mapped with the Analyst Rating framework.
  - Peer group must be able to generate an IQR half (requirement here: 3-year gross returns).
- Share Class Type: required for target-date funds.
- Cannot be classified as a dedicated fund, zero-fee fund, or restricted fund.

# Morningstar Medalist Ratings Distribution

- Medalists – Neutrals – Negatives take an approximate 25%, 50%, 25% distribution split



# Current Ratings Coverage Has Extensive Analyst Reach and Input Data Coverage

Coverage Level	Share Class Counts	%	Cumulative %
Analyst Rated	18,333	9.7	9.7
Full Inheritance	7,114	3.8	13.4
100% Input Data or Inherited	34,185	18.1	31.5
90% Input Data or Inherited	57,313	30.3	61.8
80% Input Data or Inherited	48,758	25.8	87.5
50-80% Input Data or Inherited	22,549	11.9	99.4
0-50% Input Data or Inherited	1,042	0.6	100

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## Disclosure

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