
Fund Scorecards Calculation Guide



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“How does the scoring work?”

Score

Description

The total score is the result of aggregating the 12 scoring factors using a weighted average calculation. The scores range from 1 to 100.

- Funds with low scores have a higher likelihood of **outperforming** similar funds in the future
- Funds with high scores have a higher likelihood of **underperforming** similar funds in the future

Fund Name	Scoring Group	Scorecard Results			Factor Quartile	Hidden Calculations		
		Score	Rank	Quartile		Factor #1 (Expense Ratio)	Percentile Rank	Weighted Standardized Value
T. Rowe Price Blue Chip Growth	Large Growth	20	12	1	1	0.58	14	5.6

Example

The T. Rowe Price Blue Chip Growth fund receives a score of 20.

Rank

Description

Next to the Score, we rank each fund within its peer group.

- The fund with the best Score receives a ranking of 1.
- The fund with the second-best score receives a ranking of 2, and so on.

Fund Name		Scoring Group		Scorecard Results			Hidden Calculations		
Fund Name		Score	Rank	Quartile	Factor Quartile	Factor #1 (Expense Ratio)	Percentile Rank	Weighted Standardized Value	
T. Rowe Price Blue Chip Growth		20	12	1	1	0.58	14	5.6	

Example

This fund is ranked 12th out of 375 funds.
(There are 375 funds in the Large Growth peer group.)

Quartile

Description

Next to the Rank, we divide the peer group into quartiles to quickly identify funds of similar quality.

- Funds in the 1st or 2nd quartile are likely to **outperform** the average fund in the peer group.
- Funds in the 3rd or 4th quartile are likely to **underperform** the average fund in the peer group.

		Scorecard Results			Hidden Calculations		
Fund Name	Scoring Group	Score	Rank	Quartile	Factor #1 (Expense Ratio)	Percentile Rank	Weighted Standardized Value
T. Rowe Price Blue Chip Growth	Large Growth	20	12	1	0.58	14	5.6

Example

This fund's rank (no. 12) places it in the peer group's top quartile.

Scoring Factors

Description

The scoring factors are on full display next to the results.

Transparency is important and the scores are not a black box calculation. If a fund receives a high or low score, you will immediately know why.

The factors are color-coded to highlight each fund's strengths and weaknesses.

Fund Name	Scoring Group	Scorecard Results				Hidden Calculations		
		Score	Rank	Quartile	Factor Quartile	Factor #1 (Expense Ratio)	Percentile Rank	Weighted Standardized Value
T. Rowe Price Blue Chip Growth	Large Growth	20	12	1	1	0.58	14	5.6

Example

This fund's expense ratio (Factor #1) falls in the best quartile of its peer group.

“How are the factor scores calculated?”

Scorecard Calculation: Step 1

Description

Since we have never been able to identify a single variable that fund performance hinges on, we solve the problem by combining the most predictive measures, each with minimal predictive power, and extrapolate a total score.

The whole is greater than the sum of its parts.

Step 1 begins by retrieving the raw data for each of the scoring factors.

Fund Name	Scoring Group	Scorecard Results			Factor Quartile	Hidden Calculations		
		Score	Rank	Quartile		Factor #1 (Expense Ratio)	Percentile Rank	Weighted Standardized Value
T. Rowe Price Blue Chip Growth	Large Growth	20	12	1	1	0.58	14	5.6

Example

The expense ratio (Factor #1) for this fund is 0.58%.

At face value, we cannot tell if this is expensive, relative to other Large Growth funds.

Scorecard Calculation: Step 2

Description

Each fund is ranked within its peer group on all 12 factors, and the rankings across each factor are converted into percentiles. In other words, this creates percentile ranks for each fund in its peer group.

Consistent with Morningstar's research methodology, a lower number is better.

Fund Name	Scoring Group	Scorecard Results			Factor Quartile	Hidden Calculations		
		Score	Rank	Quartile		Factor #1 (Expense Ratio)	Percentile Rank	Weighted Standardized Value
T. Rowe Price Blue Chip Growth	Large Growth	20	12	1	1	0.58	14	5.6

Example

This fund's expense ratio (0.58%) falls in the 14th percentile in the peer group. Now we can confidently determine that this fund's fee is relatively low.

Scorecard Calculation: Step 3

Description

Weightings are assigned to all 12 factors, and the most important factors receive a proportionately higher weighting.

The percentile ranks are multiplied by their respective weightings to create a weighted percentile-rank value.

Finally, these values are aggregated to create a total score for each fund.

Fund Name	Scoring Group	Scorecard Results			Factor Quartile	Hidden Calculations		Weighted Standardized Value
		Score	Rank	Quartile		Factor #1 (Expense Ratio)	Percentile Rank	
T. Rowe Price Blue Chip Growth	Large Growth	20	12	1	1	0.58	14	5.6

Example

The weighting assigned to Factor #1 is 40%.

Multiplying the weighting (40%) by the percentile rank (14) equals 5.6.

Appendix: A Grading Process Similar to College Rankings

The Fund Scorecards rank funds similar to the framework used by news publications when ranking colleges.

Rank	School	Employer survey rank (35%)	Alumni survey rank (30%)	Student survey rank (15%)	Salary rank (10%)	Job placement rank (10%)	Ranking index score
1	Harvard	1	3	17	2	35	100.0
2	Stanford	20	1	22	1	57	90.6
3	Duke (Fuqua)	6	11	8	13	15	90.5
4	Chicago (Booth)	3	36	6	7	14	90.0
5	Dartmouth (Tuck)	8	7	28	6	13	89.7
Rank	School	Employer survey rank (35%)	Alumni survey rank (30%)	Student survey rank (15%)	Salary rank (10%)	Job placement rank (10%)	Ranking index score
41	Ohio State (Fisher)	40	44	61	42	6	64.1

We apply the same ranking logic to funds.

This also highlights the flaw in using a single measure to make a decision. It wouldn't be the best approach to choose a college based on job-placement rank, just as its not a great approach to select funds based on past performance. It is better to evaluate multiple measures.

There isn't a college that scores high at everything, but when different measures are combined, the cream rises to the top in the overall rankings.

Image Source: [Bloomberg](#)

Questions?

Please contact Michael Laske at michael.laske@morningstar.com for more information.