CFRA

Mutual Fund Ratings & Research

A forward-focused and predictive mutual fund ratings approach gives investors a differentiated approach and insights to make informed investment decisions.



Independent, differentiated analysis



Forward-focused, actionable research



Proven methodology

INDEPENDENT, FORWARD-FOCUSED AND PREDICTIVE RATINGS

CFRA has been rating mutual funds since 2010, providing investors with insights into fund holdings, cost drivers, and key fund statistics. Using advanced machine-learning techniques, our model blends CFRA's proprietary forensic and fundamental approaches. CFRA mutual fund ratings include both top-down fund level statistics as well as bottom-up holdings metrics and interpret a wide array of investment signals related to the expense ratio, expected return, and downside risk.

CFRA's mutual fund ratings combine holdings-level analysis and cost factors not used by other rating agencies, with a star rating to support an independent opinion.

Rating by Asset Class		Model Parameters
Equity	U.S. Global	 Considers CFRA proprietary earnings quality scores and STARS Incorporates a fund's expense ratio and management tenure Holdings metrics incorporate investor sentiment and financial statement analysis
Fixed Income	Credit Focused Government Municipal	 Uses yield, credit quality and duration to provide risk-adjusted income analysis Incorporates expense ratio and management tenure Credit Focused and Municipal fixed income fund ratings incorporate credit ratings to support risk analysis

CFRA provides differentiated insights on more than 15,000 fund share classes, supported by robust research and analysis.

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Overall Star Ratings

Mutual funds are rated from fivestars (highest) to one-star (lowest), to identify those with the highest and lowest probability of outperformance relative to similar mutual funds over the next 12 months.

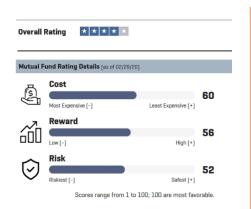
Sub-category Scores

Parameters reflect valuation and risk considerations of the underlying holdings, leveraging CFRA expertise along with analysis of performance and cost factors.

Scoring Universe

Mutual fund ratings are first separated based on the holding's asset class, with equity and fixed income funds categorized separately.

MUTUAL FUND RATINGS APPROACH



CFRA's mutual fund ratings model is built to predict the probability that a mutual fund will outperform a similar group of mutual funds over the next twelve months. The model prioritizes strong and consistent performance and penalizes weak and highly volatile performance. This probability is translated into five-star categories, where five-stars represents the highest rating and one-star represents the lowest rating.

CFRA considers critical factors across **Reward**, **Risk** and **Cost** subcategories, using a relative percentile ranking from 0-100. Scores of 100 are most favorable and imply the fund is positioned favorably relative to a similar group of mutual funds.

REWARD	The reward subcategory is a relative percentile ranking between 0-100, comparing model parameters related to the fund's central tendency of expected return. A high reward score of 100 is most favorable and implies the fund is positioned favorably relative to a similar group of mutual funds.	
RISK	The risk subcategory is a relative percentile ranking between 0-100, comparing model parameters related to the fund's negative tail risk or fund's likelihood of extreme losses. A risk score of 100 is most favorable and implies the fund is positioned favorably relative to a similar group of mutual funds.	
COST	The cost subcategory is a relative percentile ranking between 0-100, comparing model parameters related to the total cost of ownership for the fund. A cost score of 100 is most favorable and implies the fund is positioned favorably relative to a similar group of mutual funds.	

For more information about CFRA research, please contact us: +1 800-220-0502 or visit www.cfraresearch.com

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