Definitions

As of 5 August 2026

Filter

Below please find definitions of various terms used on the MFO Premium site. (Download pdf version here.) Typically, the definitions describe risk and performance metrics of the MFO rating system first described in our June 2013 commentary Introducing MFO Fund Ratings. They also describe terms used in the Lipper Global Data Feed (LGDF) for U.S. Mutual Funds, Exchange Traded Funds (ETFs), Closed-End Funds (CEFs), and Insurance Funds.

12b-1 Actual Fee Ratio
Historical amount of distribution-related and/or shareholder servicing expenses paid by a fund over its latest fiscal year, which was paid pursuant to the fund’s 12b-1 distribution plan. Reference Section 12b-1 of the Investment Company Act of 1940.

Adviser
Name of the company that has day-to-day responsibility of investing and monitoring the assets in the fund's portfolio in order to achieve the investment objectives of the fund. In some cases, the Adviser (or Advisor), may be referred to as a '**Subadviser**.' Also, the Adviser or Management Company may hire a Subadviser to manage a fund's portfolio.

Age
Age of fund in years based on number of whole months since fund inception (or back to 1960, typically, which is beginning of Lipper database).

- The **Age Group** categorizes a fund by its age based on reaching longest of these five fixed-period evaluation windows: 1, 3, 5, 10 and 20 years.

Allocation
Lipper provided assessment of a fund's portfolio holdings, categorized by equity, bonds, cash or other, expressed as a percentage of assets under management.

- The **Equity** allocation includes all U.S. domiciled equity securities, American Depository Receipts (ADR’s), equity mutual funds, preferred stocks (including convertibles), and foreign equity securities.
- The **Bonds** or fixed income allocation includes all government securities, corporate bonds, municipal bonds, foreign bonds, convertible bonds, and all fixed income mutual funds.
- The **Cash** portfolio asset allocation includes cash, cash equivalents (including money market funds) and assets less liabilities. All instruments with maturities of one year or less are included in this category. Investments that fall into this category include repurchase agreements.
- The **Other** portfolio asset allocation, expressed as a percentage of assets under management, contains rights, warrants, options, futures, mutual funds (that do not fit into the cash, bonds, and equity categories), and gold bullion.

Alpha
The difference between fund actual returns and expected return, given its benchmark and level of risk as measured by beta, for display period selected, %/yr, or % if period is less than 12 months. In equation form, alpha = actual return - beta * benchmark return. Alpha is often considered a measure of fund manager skill or value added.

Annualized Percent Return (APR)
A fund’s annualized average rate of total return each year over period evaluated. It is an abstract number, or so-called 'geometric return,' since actual annual returns can be well above or below the average, but annualizing greatly facilitates comparison of fund performance. APR is equivalent to CAGR, or compound annual rate of return. It reflects reinvestment of dividend and capital gain distributions, while deducting for fund expenses, fees, but **excluding any load**. The equation for APR can be found here. Units are % per year, typically, but for Display periods less than 12 months, MultiSearch does not annualize APR; in such cases, APR effectively stands for Absolute Percent Return.

- The **APR Rating** represents quintile ranking of a fund's APR within category across specified evaluation period. It uses similar methodology as MFO Rating. An APR Rating of 5 represents 'Best' in category.

APR Rank
A simple sequential ordering methodology within category of fund performance based on APR. It is less sophisticated than the APR Rating metric; therefore, funds with comparable or even identical APR values the will receive sequential ranking.

- **APR Rank Percent** represents percentile rank order of a fund's APR within category across specified evaluation period ... oldest share class only. Normally, funds with highest APR are assigned 1%, while those with lowest are assigned 100%. If there are fewer than 100 funds in category, these limits will vary. For example, if there are only 20 funds, then the fund with highest APR will be assigned 5%. So, please be aware of Peer Count when assessing this metric.

- **APR Rank Position** represents numerical rank order of a fund's APR within category across specified evaluation period ... oldest share class only. The lower the number, the better its performance; the higher, the poorer. Just how poor depends on how many peers are in the category.

APR vs Peer
Represents Annualized Percent Return (APR) of a fund versus the average in its category across specified evaluation period. Units are % per year, typically, but for Display periods less than 12 months, MultiSearch does not annualize APR, so the units are simply %.

Assets Under Management (AUM)
Unless otherwise noted, AUM is total net assets for all share classes of a fund through latest month-end in units of $M. May be abbreviated as '**Assets Under Mgmt**.' In Share Classes table of the Risk Profile page, 'AUM per share class, $M' breaks-out AUM by individual share class.

- The **AUM Position** is the numerical rank of a fund's AUM computed two ways: 1) versus all funds, and 2) versus funds in same category. An AUM Position of 1 is assigned to fund with highest AUM. When the AUM Position metrics are provided, Fund Count metrics of are also provided for both all funds and funds in category, so that relative assessments can be made. For example, Vanguard's Wellington Fund (VWELX) held an AUM Position of 15 out of 9,371 funds, month ending June 2016, and an AUM Position of 2 out of 144 funds in the Mixed-Asset Target Allocation Growth category.

Asset Universe
Name of investment vehicle or product. Lipper's Global Data Feed (LGDF) includes five products: Mutual Funds, Exchange Traded Funds (ETFs), Exchange Traded Notes (ETNs), Closed End Funds (CEFs), and Insurance Funds. For search convenience and taxonomy, MFO adds Indexes, Averages, and Models. On MFO,

- **Mutual Funds.** An investment vehicle that pools money from multiple investors and is managed by a professional investment advisor who invests in stocks, bonds, money market instruments, or other assets according to its investment objective. Shares are issued and redeemed at the net asset value ('NAV'), which is determined by the fund management company or other service provider once a day.
- **Exchange Traded Funds (ETFs).** An investment vehicle that pools money from multiple investors and is managed by a professional investment advisor who invests in stocks, bonds, money market instruments, or other assets according to its investment objective. ETFs often track a market index, commodity price or basket of assets like an index fund. It is structured like a mutual fund with a variable number of shares, but trades on an exchange at market price, rather than net asset value. The price is approximately the same price as the net asset value of its underlying assets.
- **Exchange Trade Notes (ETNs).** An investment legally organized as a note or unsecured debt securities whose shares trade on a major stock exchange. Typically such notes are linked to a commodities index.
- **Closed End Funds (CEFs).** An investment vehicle that pools money from multiple investors and is managed by a professional investment advisor who invests in stocks, bonds, money market instruments, or other investable assets according to its investment objective. The fund issues a fixed number of shares and shares are traded on an exchange at market price, which can significantly differ from the net asset value.
- **Insurance Funds (IFs).** An investment vehicle that pools money from multiple investors and is managed by a professional investment advisor who invests in stocks, bonds, money market instruments, or other investable assets according to its investment objective, offered through life insurance companies and typically linked to an insurance contract. Symbols of most insurance funds on MFO Premium are prefaced with 'IF-'.
- **Indexes.** An index that is either a security market index, a custom index for a specific client or an index created and calculated internally by Lipper.
- **Averages.** MultiSearch and the Averages tool will present the arithmetic averages of all metrics, as applicable, by categories, subtypes, types, and other categorizations across numerous evaluation periods. These averages will be based on oldest share class, typically. The symbol for these averages is 'AV-' followed by the Lipper category code, subtype code, type code, or other distinct designation. The other categorizations include averages of most asset universe products and various categorizations, all summarized below. Note that very select AV- metrics in MultiSearch are not averages but count or sums, specifically Peer Count and Assets Under Management (AUM), respectively.
  - **AV-MUTUALS.** Average of all **mutual funds**, as defined above, oldest share class only.
  - **AV-ETFS.** Average of **exchange traded funds**, as defined above, oldest share class only.
  - **AV-ETNS.** Average of **exchange traded notes**, as defined above, oldest share class only.
  - **AV-CEFS.** Average of **closed end funds**, as defined above, oldest share class only.
  - **AV-IFS.** Average of **insurance funds**, as defined above, oldest share class only.
  - **AV-ALL.** Average of **all funds** (Mutuals, ETFs, ETNs, CEFs, IFs), as defined above, oldest share class only.
  - **AV-OPEN.** Average of **open funds**, oldest share class only. Open funds are available for purchase by new investors.
  - **AV-CLOSED.** Average of **closed funds**, oldest share class only. Closed funds are not available for purchase by new investors.
  - **AV-ACTIVE.** Average of **active funds**, oldest share class only. Lipper defines as active any fund not identified as 'index pure.'
  - **AV-PASSIVE.** Average of **passive funds**, oldest share class only. Lipper defines as passive only 'index pure' funds.
  - **AV-INDEX.** Average of **index-tracking funds**, oldest share class only. Lipper defines index-tracking funds as either 'index pure,' 'index based,' or index levered.' Index funds can be passive or active.
  - **AV-NOINDEX.** Average of **non-index-tracking funds**, oldest share class only. No index funds are active funds that do not track any type of index.
  - **AV-FOF.** Average of funds designated **fund of funds**, oldest share class only.
  - **AV-ESG.** Average of **socially conscious funds**, oldest share class only. See Socially Conscious below.
  - **AV-INTERVAL.** Average of **interval funds**, oldest share class only.

- **AV-LEVERED.** Average of **enhanced strategy funds**, oldest share class only. Enhanced strategy infers a fund's use of leverage or hedging, or non-traditional holdings, as defined below.
- **AV-GENERAL.** Average of **US general equity funds**, which includes funds from 16 Lipper categories (the 12 small-, mid-, large-, multi-cap value, core and growth, plus income equity, S&P500 index, specialty diversified equity, and equity leverage), all share classes. AV-GENERAL is only average that uses all share classes.

Average Coupon
The weighted average of the fixed rate of interest paid on a portfolio's bonds. Units in annualized percentage, %/yr.

Batting Average
Percentage of months a fund beats its category average over evaluation period specified. For example, if a fund's monthly return beats the average for 8 months in a calendar year, that year's Batting Average will be 66.7%.

- The **Batting Average Rating** represents quintile ranking of a fund's Batting Average within category for display period selected. A rating of 5 represents best.

Bear Market Deviation (BMDEV)
A fund's pure downside deviation during bear market months. Pure downside deviation includes only fund returns less than zero. Basically, BMDEV indicates the typical annualized percentage decline based only on a fund's performance during bear market months. The market being represented by S&P 500 index for equity funds and U.S. Aggregate Bond index for bond funds. Morningstar defines bear market months as follows: 'a monthly drop below 3% for equity funds and a monthly drop below 1% for fixed income [bond] funds.' MFO extends the definition to mixed asset and alternative funds using a 2.2% monthly drop threshold of the US6040 Balanced index, as well as applies the 3% equity drop threshold to commodity funds. BMDEV is used in the determination of Bear Market Rating.

- The **Bear Market Rating ('Bear Rating')** represents decile ranking (1 to 10 where 1 is most bear market resistant fund) of funds of a given type (e.g., equity, bond, mixed asset) based on bear market deviation (BMDEV). Starting in October 2019, this metric is relative to other funds of a given type; previously, it was relative to other funds in category. Bear market ratings are described further in Identifying Bear Market Resistant Funds During Good Times, as well as A More Robust Down-side Market Metric.
- The **Bear Market Count (BMCNT)** is the number of bear market months over the evaluation period specified. A limitation of the BMDEV metric and in fact all downside metrics is when there is little of no downside over the evaluation period specified. BMDEV must include at least three bear market months for it to be calculated.

Benchmarks
Our Lipper Global Data Feed (LGDF) includes multiple benchmark indexes, summarized below, to help compare fund performance against expectations. Such benchmarks help 'to provide measurements of the central tendency of similar investment objectives.' In this respect, they describe returns an investor could reasonably have expected to achieve (in the past, ex-post). All benchmarks assigned to a fund can be found in the MultiSeach Results table under 'Benchmarks' group.

Users can screen for funds by specific benchmarks: either the Best-Fit or ETF Benchmarks. In MultiSearch, select More Basic Info/Best-Fit or ETF Benchmark. Similarly, users can add these benchmarks to their search by selecting 'Include Best-Fit BMs' or 'Include ETF BMs' in MultiSearch/More Basic Info.

- The **Fund Manager (FM) Benchmark** index given by the fund management company and published in the official fund documentation. Only the primary benchmark is included in the database. Some of the FM Benchmarks are not available in the database.
- The **Peer Index (PI) Benchmark** provides a way to associate a fund with the market index that best correlates to the general performance of the fund's classification. The index also gives some idea of what role a given fund might play in an investor's portfolio.
- The **Lipper Global (LG) Benchmark** index is calculated using contemporary performance data on the basis of sector peers in the Lipper Global Classification sector in which the fund is classified. This is a proprietary sector index giving unique benchmarking on the most granular global fund classification system on the market. All LG Benchmarks are included in the database.
- The **Best-Fit (BF) Benchmark** index (aka 'Technical Indicator' index) is a market-recognized index, assigned by the Refinitiv Methodology and Research team to the Lipper Global Classification sector in which the fund is classified. This combines a **broadly used market index** with the most granular global fund classification system on the market. This is not always the case when using the Fund Manager benchmark, especially in regard to the availability of the performance data. This index also gives some idea of what role a given fund might play in an investor's portfolio. As of 31 August 24 Refinitiv assigns 163 indexes as 'Best Fit' Benchmarks. To see the current list, select PreSet Screens/Benchmarks & Reference/Best-Fit Benchmarks in MultiSearch. Performance ratings based on them carry the designation APRBF, short for APR vs Best-Fit Benchmark.
- The **ETF Benchmark** was introduced in early 2024 at the suggestion of our colleague Devesh Shah. Traditional benchmarks cannot be purchased. Similarly, the category average, which is the basis for much of the ratings on MFO Premium, cannot be purchased. Establishing an ETF 'benchmark' makes for a more relevant and practical comparison. ETFs selected for these benchmarks are all index-based and passively managed. Typically, they are widely recognized (e.g., Vanguard or BlackRock), have lower ER, and enjoy larger AUM for better liquidity. Actively-managed funds in 123 categories (versus the 182 rated) have been assigned 71 ETF Benchmarks, based solely on their target category, as summarized below. You can also pull-up these benchmarks in MultiSearch by selecting PreSet Screens/Benchmarks & Reference/ETF Benchmarks. Performance ratings based on them carry the designation APRBE, short for APR vs ETF Benchmark.

Target Categories	Symbol ETF	Benchmark ETF
Large-Cap Core	SPY	State Street SPDR S&P 500 ETF Trust
Large-Cap Growth	QQQ	Invesco QQQ Trust Series 1
Large-Cap Value	VTV	Vanguard Value Index ETF

Large-Cap Value	VTV	Vanguard Value Index ETF
Mid-Cap Core	IJH	BlackRock iShares Core S&P Mid-Cap ETF
Mid-Cap Growth	IJK	BlackRock iShares S&P Mid-Cap 400 Growth ETF
Mid-Cap Value	IJJ	BlackRock iShares S&P Mid-Cap 400 Value ETF
Multi-Cap Core, Equity Income, Diversity Equity, Alternative Active Extension	VTI	Vanguard Total Stock Market Index ETF
Multi-Cap Growth	IWF	BlackRock iShares Russell 1000 Growth ETF
Multi-Cap Value	IWD	BlackRock iShares Russell 1000 Value ETF
Small-Cap Core	VB	Vanguard Small-Cap Index ETF
Small-Cap Growth	VBK	Vanguard Small-Cap Growth Index ETF
Small-Cap Value	VBR	Vanguard Small-Cap Value Index ETF
Emerging Markets Mixed-Asset	VE5050	Emerging Markets Mixed-Asset [VWO/EMB 50/50]
Mixed-Asset Target Alloc Agg Gro	VA8020	Mixed-Asset Target Alloc Agg Gro [VTI/AGG 80/20]
Mixed-Asset Target Alloc Growth, Income & Preferred Stock	VA6040	Mixed-Asset Target Alloc Growth [VTI/AGG 60/40]
Mixed-Asset Target Alloc Moderate, Convertible Securities, Flexible Portfolio, Real Return, Flexible Income, Absolute Return, Alternative Global Macro, Alternative Long / Short Equity, Alternative Managed Futures, Alternative Multi-Strategy	VA4060	Mixed-Asset Target Alloc Moderate [VTI/AGG 40/60]
Mixed-Asset Target Alloc Consv, Retirement Income, Multi-Sector Income, Alternative Credit Focus, Alternative Equity Market Neutral	VA2080	Mixed-Asset Target Alloc Consv [VTI/AGG 20/80]
Alternative Energy	ICLN	BlackRock iShares Global Clean Energy ETF
Basic Materials	XLB	State Street Materials Select Sector SPDR
Consumer Goods	XLP	State Street Consumer Staples Select Sector SPDR
Consumer Services	XLY	State Street Consumer Discretionary Select Sector SPDR
Energy MLP	AMLP	ALPS Alerian MLP ETF
Financial Services	XLF	State Street Financial Select Sector SPDR
Global Financial Services	IXG	BlackRock iShares Global Financials ETF
Global Health / Biotechnology	IXJ	BlackRock iShares Global Healthcare ETF
Global Infrastructure	IGF	BlackRock iShares Global Infrastructure ETF
Global Natural Resources	GNR	State Street SPDR S&P Global Natural Resources ETF
Global Real Estate	VNQVNQI	Global Real Estate [VNQ/VNQI 70/30]
Global Science / Technology	IXN	BlackRock iShares Global Tech ETF
Health / Biotechnology	XLV	State Street Health Care Select Sector SPDR
Industrials	XLI	State Street Industrial Select Sector SPDR
International Real Estate	VNQI	Vanguard Global ex-US Real Estate Index ETF
Natural Resources	XLE	State Street Energy Select Sector SPDR
Precious Metals Equity	GDX	VanEck Gold Miners ETF
Real Estate	VNQ	Vanguard Real Estate Index ETF
Science & Technology	XLK	State Street Technology Select Sector SPDR
Telecommunication	XLC	State Street Communication Services Select Sector SPDR
Utility	XLU	State Street Utilities Select Sector SPDR
Global Large-Cap Core, Global Large-Cap Growth, Global Large-Cap Value, Global Multi-Cap Core, Global Multi-Cap Growth, Global Multi-Cap Value, Global, Global Equity Income	VT	Vanguard Total World Stock Index ETF
Global Small- / Mid-Cap	VBSCZ	Global Small- / Mid-Cap [VB/SCZ 60/40]
China Region	MCHI	BlackRock iShares MSCI China ETF
		Vanguard Emerging Markets

Emerging Markets	VWO	Vanguard Emerging Markets Stock Index
European Region	VGK	Vanguard European Stock Index
Frontier Markets	FM	BlackRock iShares Frontier and Select EM ETF
India Region	INDA	BlackRock iShares MSCI India ETF
International Large-Cap Core, International Multi-Cap Core, International Equity Income, Developed Market	VEA	Vanguard Developed Markets Index
International Large-Cap Growth, International Multi-Cap Growth	EFG	BlackRock iShares MSCI EAFE Growth ETF
International Large-Cap Value, International Multi-Cap Value	EFV	BlackRock iShares MSCI EAFE Value ETF
International Small / Mid-Cap Core, International Small / Mid-Cap Growth, International Small / Mid-Cap Value	SCZ	BlackRock iShares MSCI EAFE Small-Cap ETF
Japanese	EWJ	BlackRock iShares MSCI Japan ETF
Latin American	ILF	BlackRock iShares Latin America 40 ETF
Pacific Region, Pacific Ex Japan	VPL	Vanguard Pacific Stock Index
Commodities General	DBC	Invesco DB Commodity Index Tracking
Core Bond, Core Plus Bond, Corporate Debt A Rated, Corporate Debt BBB-Rated, Corporate Debt BBB-Rated (Leveraged), General Bond, Loan Participation, Absolute Return Bond	AGG	BlackRock iShares Core US Aggregate Bond ETF
Emerging Markets Local Currency Debt	EMLC	VanEck JP Morgan EM Local Currency Bond ETF
Emerging Mrkts Hard Currency Debt	EMB	BlackRock iShares JPMorgan USD Emerging Markets Bond ETF
Global High Yield	GHYG	BlackRock iShares US & Intl High Yield Corp Bond ETF
Global Income	AGGBNDX	Global Income [AGG/BNDX 50/50]
High Yield	HYG	BlackRock iShares iBoxx $ High Yield Corporate Bond ETF
Inflation Protected Bond	TIP	BlackRock iShares TIPS Bond ETF
International Income	BNDX	Vanguard Total International Bond Index ETF
Short High Yield	SJNK	State Street SPDR Bloomberg Short Term High Yield Bond ETF
Short Investment Grade Debt, Short-Intmdt Investment Grade Debt	BSV	Vanguard Short-Term Bond Index ETF
GNMA, U.S. Mortgage	MBB	BlackRock iShares MBS ETF
U.S. Government General, U.S. Government Intermediate, U.S. Treasury General	GOVT	BlackRock iShares US Treasury Bond ETF
U.S. Government Short, U.S. Government Short-Intermediate, U.S. Treasury Short	SHY	BlackRock iShares 1-3 Year Treasury Bond ETF
Municipal California Debt, Municipal California Intermdt Debt, Municipal California Sh-Intmdt Debt	CMF	BlackRock iShares California Muni Bond ETF
Municipal General & Insured Debt, Municipal Intermediate Debt	MUB	BlackRock iShares National Muni Bond ETF
Municipal High Yield Debt	HYD	VanEck High Yield Muni ETF
Municipal New York Debt, Municipal New York Intermdt Debt	NYF	BlackRock iShares New York Muni Bond ETF
Municipal Short Debt, Municipal Short-Intmdt Debt	SUB	BlackRock iShares Short-Term National Muni Bond ETF

Beta
A measure of a fund's risk of volatility compared to the overall market. The market's beta, or beta coefficient, is 1.00. Any fund with a beta higher than 1.00 is considered more volatile than the market, and therefore riskier to hold, whereas a fund with a beta lower than 1.00 is expected to rise or fall more slowly than the market. The market in this case is the S&P500. (See Against The Herd.)

Calmar Ratio (aka Drawdown Ratio)
Another measure of risk adjusted return, but in this case it is relative to the amount of maximum drawdown (MAXDD) a fund incurs. Like Sharpe, Calmar is best used when comparing funds of same investment category over same evaluation period. The equation for Calmar Ratio is simply annualized return (APR) divided by maximum drawdown (MAXDD) for the evaluation period specified. (MFOP uses the early version of Calmar, which uses return without adjusting for the risk-free return.)

Calmar appears to have been established in 1991 by Terry W. Young, who was then the president of the Calmar Research Corporation. And it appears that Calmar is an acronym for '**Cal**ifornia **M**arket **A**ccount **R**eports.'

- The **Calmar Rating** represents quintile ranking of a fund's Calmat Ratio within category across specified evaluation period. It uses similar methodology as MFO Rating. A Calmar Rating of 5 represents 'Best' in category.

methodology as MFO Rating. A Calmar Rating of [illegible] represents 'Best' in category.

Note: Calmar Ratings are not assigned when there is no significant fund-to-fund variation of Calmar or MAXDD in categories across an evaluation period. An example is Money Market funds, which may have little if any downside deviation, especially across shorter evaluation periods. In such cases, better to simply evaluate such funds based on APR Rating. **Cap, Market Average**
The dollar-weighted average market capitalization of the equity securities within a portfolio. May be abbreviated as '**Cap Avg**.'

Capture
Amount of positive or negative return a fund captures relative to various indexes, measured over evaluation period specified. Currently, there are four indexes used with Capture Metrics: S&P 500 Total Return Index, Barclays US Aggregate Total Return Index, US Balanced SP500/USBond 60/40 Total Return Index, and MSCI All Country World minus US Gross Dividends Reinvested Index. The MFO Symbol short-cuts for these indexes are SP500, USBOND, US6040, and ACIXUS, respectively.

Here are the specific Capture Metrics:

- **Upside Capture** compares the positive return of a fund, comprised of positive month ending returns, to one of four indexes, over evaluation period specified, measured in percentage. So, compared to SP500, an Upside Capture of 120% means the fund returned or 'captured' 20% more positive return than SP500 over the evaluation period specified.
- **Downside Capture** compares the negative return of a fund, comprised of its negative month ending returns, to one of four indexes, over evaluation period specified, measured in percentage. So, compared to SP500, a Downside Capture of 80% means the fund returned or 'captured' only 80% of downside that the SP500 over the evaluation period specified.
- **Capture Ratio** is simply the ratio of Upside To Downside Capture. Values greater than 1.0 means that a fund capture more upside than downside compared to its reference fund ... a good thing!
- **Up Months** is simply number of months with positive returns of index over evaluation period specified.
- **Down Months** is simply number of months with negative returns of index over evaluation period specified.

Note: It is possible to have 'negative capture' when, for example, a fund returns positively compared to a negatively returning index, or vice versa.

- The **Capture Ratings** represent quintile ranking of a fund's upside, downside or overall capture ratio, respectively, within category across specified evaluation period. It uses similar methodology as MFO Rating, except in the case of DSDEV, lower is better. A rating of 5 represents 'Best' in category for both upside and overall capture ratios, while a rating of 1 represents 'Best' in category for downside capture. Note: Overall Capture Rating is based on the combination of upside and downside ratings, since their ratios can be negative.

Category
Typically, a fund's current investment style as defined by Lipper. We include 182 classifications or categories, like Large-Cap Value, Core Bond, and Alternative Long/Short Equity in our rating system. A convenient reference table of most category options is MFO Category Summary. A detailed description can be found here and here , as well as a nice, if dated, comparison against Morningstar categories here. A detailed description of Morningstar categories can be found here.

Composite Ratings
Attempt to distill a fund's risk and return ratings across multiple fixed periods into single rating, in a way similar to Morningstar's 'Overall' star rating. Where Morningstar's metrics are a weighted across 3, 5 and 10 year periods, MFO's Composite Ratings are weighted across 1, 3, 5, 10 and 20 year periods, as applicable.

The four MFO Composite Ratings are: **MFO Risk**, **MFO Rating** (i.e., Martin Rating), **APR Rating**, and **Sharpe Rating**. It is interesting to note that MFO Risk tends to be more consistent across evaluation periods than MFO Rating. That said, the Composite MFO Risk may get elevated, temporarily at least, if a fund, especially a younger fund, experiences a rough patch in say the past 12 months.

The weightings are based on fund Age Group:

- 20: 30% for 20-year ranking, 25% for 10-year, 20% for 5-year, 15% for 3-year, and 10% for 1-year.
- 10: 40% for 10-year, 30% for 5-year, 20% for 3-year, and 10% for 1-year.
- 5: 50% for 5-year, 30% for 3-year, and 20% for 1-year.
- 3: 75% for 3-year, and 25% for 1-year.
- 1: 100% for 1-year

Correlation Coefficient
Found on the MultiSearch Correlation Matrix page, and often denoted '**R**', attempts to measure the tendency of two funds (their monthly total returns) to move together. Values of **r** can range from -1.00 to 1.00. The closer to 1.00, the more two funds have behaved similarly. The closer to -1.00, the more two funds have behaved opposite to each other. Values closer to 0.00 mean the funds are uncorrelated and have behaved independent of each other. A more detailed description can be found here and here. (See also The Diversified Portfolio of Less Correlated Asset Classes and Against The Herd.)

Current Drawdown (CDD)
The percentage of current month's drawdown, if any, in fund value below its previous maximum over period evaluated. A CDD of zero means the fund has recovered any drawdown over period evaluated. This good scenario occurred with many funds in 2020, which was a surprising year-end result after market reactions to COVID-19 hammered most funds in March. If the Display (or evaluation) period is set to a period that does not end with the current month (e.g., GFC) than CDD will be the drawdown at end of last month in period.

CUSIP
Is a 9-character/number designation. Per the SEC, it stands for Committee on Uniform Securities Identification Procedures. A CUSIP number identifies most financial instruments, including: stocks of all registered U.S. and Canadian companies, commercial paper, and U.S. government and municipal bonds.

David's Take
A one-word take-away of the MFO in-depth fund profile, nearly all written by David: **'Positive'**, **'Mixed'**, **'Negative'**. Did the profile recommend the fund is worth considering, perhaps because of thoughtful execution and successful track record of its manager(s)? If so, it gets a **'Positive'**. Or, is the profile more along the lines of better wait-and-see or hmmm ... not much manager investment in the fund? Then, it gets a **'Mixed'**. Or finally, did the profile say the investment methodology was confused or illogical? That then translates to **'Negative'**. It's not a recommendation to buy or sell, but to further consider ... or not.

Debt-To-Equity (D/E)
Ratio representing total debt to total equity, which forms a measure of the extent to which a firm's capital is provided by owners or lenders. A higher total debt to total equity ratio means that a company has chosen to finance its growth through debt rather than equity. It is calculated by dividing the most recent quarter total debt by the most recent quarter shareholder’s equity. The weighted average is then calculated by summing the products of portfolio % value and debt/equity ratio as shown in the following example.

- The **D/E Rating** represents quintile ranking of a fund's Debt-To-Equity ratio within category. A rating of 1 represents lowest debt ratio.

Display Period
The evaluation period over which screening criteria is applied. MultiSearch users can select from dozens of evaluation periods (lifetime, ytd, multi-year and multi-month, decadal, calendar decade, other unique, plus full, bear, and bull market cycles). Some of the latest are described here. The values of the risk and return metrics in the MultiSearch Results table are for the period selected, unless otherwise specified.

Here's a summary of Market Cycle Dates, which mark the start and stop of evaluation periods for the full, bear, and bull market cycle periods. (See MFO Commentary - Nov '14, MFO Commentary - Apr '20, and MFO Commentary - Jul '23.) Early cycles [E1, E2, and E3], which refer to periods prior to those depicted in previous studies (circa 1968) and are applicable to S&P 500 and Long US Government Bond indexes, were added to MultiSearch in November 2021. (See MFO Commentary - Nov '21 and Early Cycle Metrics.)

Cycle	Full	Bear Market	Bull Market
E1 - Great Depression	Sep 1929 - May 1946	Sep 1929 - May 1932	Jun 1932 - May 1946
E2 - Post WWII	Jun 1946 - Dec 1961	Jun 1946 - Nov 1946	Dec 1946 - Dec 1961
E3 - JFK-LBJ	Jan 1962 - Nov 1968	Jan 1962 - Jun 1962	Jul 1962 - Nov 1968
1 - Vietnam	Dec 1968 - Dec 1972	Dec 1968 - Jun 1970	Jul 1970 - Dec 1972
2 - OPEC-Reagan	Jan 1973 - Aug 1987	Jan 1973 - Sep 1974	Oct 1974 - Aug 1987
3 - Black Monday-Clinton	Sep 1987 - Aug 2000	Sep 1987 - Nov 1987	Dec 1987 - Aug 2000
4 - Dotcom Bubble	Sep 2000 - Oct 2007	Sep 2000 - Sep 2002	Oct 2002 - Oct 2007
5 - GFC	Nov 20007 - Dec 2019	Nov 2007 - Feb 2009	Mar 2009 - Dec 2019
6 - CV-19	Jan 2020 - Dec 2021	Jan 2000 - Mar 2020	Apr 2020 - Dec 2021
7 - TGN	Jan 2022 - Present	Jan 2022 - Sep 2022	Oct 2022 - Present

And, here's a summary of other unique evaluation (aka Display) periods:

Nick Name	Evaluation Period	Description
Life	Fund Launch To Present	Life, yr - Life of fund in years based on number of whole months since fund inception [or back to 1960, typically, which is beginning of our Lipper database].
LOPF	Fund Launch [Back To Best-Fit Benchmark Launch] To Present	LOPF, yr - Practical comparative life of fund as far back as Best-Fit benchmark, in years. [Same as LOBF if fund life is older than Best-Fit benchmark.]
LOPE	Fund Launch [Back To ETF Benchmark Launch] To Present	LOPE, yr - Practical comparative life of fund as far back as ETF benchmark, in years. [Same as LOBE is fund life is older than ETF benchmark.]
LOBF	BF BM Launch To Present	LOBF, yr - Life of Best-Fit benchmark, in years.
LOBE	ETF BM Launch To Present	LOBE, yr - Life of ETF benchmark, in years.
LOF	FM Start To Present	LOF, yr - Tenure of current senior manager, measured in years. [Unfortunately, manager start date is only to nearest whole year. If group managed, same as fund life.]
LOT	Turnover Start To Present	LOT, yr - Life of Turnover, which is inversely proportional to Turnover of portfolio, measured in years.
LOD	David's Take To Present	LOD, yr - Life of David's Take, since last published profile in MFO, measured in years.
Iran War	202603 To Present	Iran War [2026] - Period since US and Israel began military campaign Iran, which resulted in the closing and blocakge of Straight of Hormuz from Mar 26 to present.
Since Liberation Day	202504 To Present	Iran War [2026] - Period since Trump adminsitration delcared sweeping tarrifs on all countries that import goods to the US from Apr 25 to present.

		countries that import goods to the US from Apr 25 to present.
Trump 2.0	202501 To Present	Trump 2.0 - Period since President Trump began his 2nd term from Jan 25 to present.
Since COVID	202001 To Present	Since COVID - Period since COVID infected USA and world from Jan 20 to present.
Since ETF Act	201910 To Present	ETF Act [SEC 6c-11] - Period since inception of SEC Rule 6c-11, which modernizes the regulation of exchange-traded funds ETFs. Previously, ETFs have operated under an SEC exemption, but ETFs have become the norm (ETFs), from Oct 19 to present.
Chair Powell	201802 To 202604	Chair Powell - Period when Jay Powell was Chairman of Board of Governors of the Federal Reserve System from Feb 18 to Apr 26.
Chair Yellen	201402 To 201801	Chair Yellen - Period when Janet Yellen was Chair of Board of Governors of the Federal Reserve System from Feb 14 to Jan 18.
Chair Bernanke	200602 To 201401	Chair Bernanke - Period when Ben Bernanke was Chairman of Board of Governors of the Federal Reserve System from Feb 06 to Jan 14.
Chair Greenspan	198708 To 200601	Chair Greenspan - Period when Alan Greenspan was Chairman of Board of Governors of the Federal Reserve System from Aug 87 to Jan 06.
Chair Volcker	197908 To 198707	Chair Volcker - Period when Paul Volcker was Chairman of Board of Governors of the Federal Reserve System from Aug 79 to Jul 87.
QE4 2020	202003 To 202203	QE4 2020 - Quantitative Easing 4 2020 (aka QE Infinity). A term coined for the monetary policy used to help financial markets during CV-19 from Mar 20 to Mar 22.
QE3 2012	201209 To 201410	QE3 2012 - Quantitative Easing 3 2012. The 3rd round of quantitative easing under then Fed Chairman Ben Bernanke in response to GFC from Sep 12 to Oct 14.
QE2 2010	201110 To 201106	QE2 2010 - Quantitative Easing 2 2010. The 2rd round of quantitative easing in response to GFC where fed bought long-term treasuries from Nov 10 to Jun 11.
QE1 2008	200812 To 201003	QE1 2008 - Quantitative Easing 1 2008. Per Forbes quantitative easing [QE] is a monetary policy strategy used by central banks to purchase securities in an attempt to reduce interest rates, increase the supply of money and drive more lending to consumers and businesses. The first round [QE 1] was during the beginning of GFC from Dec 08 to Mar 10.
Taper 2 2021	202112 To 202205	Taper 2 - Period when Fed announces and then begins tapering of unprecedented bond buying programs initiated during CV-19 from Dec 21 to May 22.
Taper 1	201305 To 201309	Taper 1 - Period when Fed first announced and then began tapering of bond buying programs of QE initiated during GFC from May 13 to Sep 13, causing to so-called Taper Tantrum.
QT2 2022	202206 To 202512	QT2 2022 - Quantitaive Tightening 2 [aka Normalization 2]. Period when Fed announces intention to raise interest rates closer to normal, while reducing bond purchases and balance sheet from Jun 22 to Dec 25.
QT1 2015	201512 To 201812	QT2 2015 - Quantitative Tightening 1 [aka Normalization 1] - Period when Fed attempted to raise interest rates closer to historical norms, while reducing bond purchases and balance sheet from Dec 15 to Dec 18.
Rate Hikes 2022	202203 To 202307	Rate Hikes 2022 - Period when raised rates closer to normal levels after CV-19. Part of QT 2. Fed funds rates rose to 5.50% from 0.25%, causing large retractions in bond funds, from Mar 22 to Jul 23.
Rate Hikes 2004	200406 To 200602	Rate Hikes 2004 - Another rare period since 1981 when Fed raised rates to 5.25% from 1.25%, from Jun 04 to Feb 06.
Rate Hikes 1994	199402 To 199502	Rate Hikes 2022 - Period when raised rates closer to normal levels after CV-19. Part of QT 2. Fed funds rates rose to 5.50% from 0.25%, causing large retractions in bond funds, from Mar 22 to Jul 23.
ZIRP	200812 To 201511	ZIRP - Zero Interest Rate Policy. Per Investopedia, ZIRP [Zero Interest Rate Policy] is a method of stimulating growth while keeping interest rates close to zero. It represents a likely precursor to quantitative easing from Dec 08 to Nov 15.
Trump Bump	201701 To 201912	Trump Bump - Bull market during President Trump's 1st term from Jan 17 to Dec 19.
Obama Bull	200903 To 201612	Obama Bull - Bull market during Obama presidency from Mar 09 to Dec 16.
Dec '18 Selloff	201812 To 201812	Dec 18 Selloff - Per Washington Post, America's trade war with China, interest rates and uncertainty in government policy all helped to create the December sell-off, wiping out the year's S&P 500 gain.
Shiller's Irrational	200003 To 202112	Shiller's Irrational - Period since date Prof. Robert Shiller published Irrational Exuberance through beginning of The Great Normalization bear market from Mar 00 to Dec 21.
Super Bull 2	200903 To 202112	Super Bull 2 - Bull market ignoring CV-19 Bear from Mar 09 to Dec 21.
Super Bull 1	197410 To 200008	Super Bull 1 - Bull market ignoring Black Monday Bear from Oct 74 to Aug 00.
40-Year Bond Bull	198106 To 202111	40-Year Bond Bull - A long period of generally falling rates from Jun 81 to Nov 21.
20-Year Bond Bear	196001 To 198105	20-Year Bond Bear - A long period of generally rising rates from Jan 60 to May 81.
40-Year Bond Bear	194001 To 198105	40-Year Bond Bear - A very long period of generally rising rates from Jan 40 to May 81.
Dodd-Frank Enacted	201007 To Present	Dodd-Frank Enacted - Period since inception of Dodd-Frank Wall Street Reform and Consumer Protection Act, which imposed a sweeping overhaul of the United States financial regulatory system in response to the 2008 Great Financial Crisis from Jul 10 to present.
Sarbanes-Oxley [SOX] Enacted	200207 To Present	SOX Enacted - Period since inception of Sarbanes-Oxley [SOX] Act to improve the accuracy and reliability of corporate disclosures, helping protect investors against fraud, like the Enron scandal from Jul 02 to present.
Buy-Backs [SEC 10b-18] Allowed	198211 To Present	Buy Backs [SEC 10b-18] - Period since inception of SEC Rule 10b-18, which provides safe harbor and reduces liability for companies when repurchasing their own shares, if certain conditions are met from Nov 82 to present.
Lipper Database [Since 1960]	196001 To Present	Lipper Database - Since start of Lipper Database used by MFO Premium from Jan 60 to present.
Act 40 Enacted	194008 To Present	Act 40 Enacted - Period since inception of Investment Company Act of 1940, which enables federal regulation of investment trusts and counselors to help protect

		investors from Aug 40 to present.
SEC Established	193406 To Present	SEC Established - Period since inception of U.S. Securities and Exchange Commission [SEC], a large federal agency created in the aftermath of the Wall Street Crash of 1929 and intended to help prevent market manipulation from Jun 34 to present.

Dividend Growth
Compound annual dividend per share [DPS] growth of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **Div Growth Rating** represents quintile ranking of a fund's DPS Growth within category. A rating of 5 represents highest growth.

Dividend Payout
Ratio representing the percentage of earnings paid out as dividends. It is calculated by dividing the current annual dividends per share by trailing twelve-month earnings per share for each holding in a fund's portfolio. A weighted average is then calculated by summing these individual contributions. A fund with payout ratios greater than 100% is likely skewed by some of its holdings paying out more than their earings, which is unsustainable. Funds with portfolios made up of established companies will likely have higher ratios versus funds with portfolios of young, start-up companies, which will likely have low ratios or even zero. See Dividend Payout Ratio.

- The **Div Payout Rating** represents quintile ranking of a fund's Dividend Payout ratio within category. A rating of 5 represents highest payout ratio.

Down Market Deviation (DMDEV)
A fund's pure downside deviation during negative market months. Pure downside deviation includes only fund returns less than zero. Basically, DMDEV indicates the typical annualized percentage decline based only on a fund's performance during negative market months. The market being represented by S&P 500 index for equity and commodity funds, U.S. Aggregate Bond index for bond funds, and the US6040 Balanced index for mixed asset and alternative funds. This metric is a companion to Bear Market Deviation (BMDEV).

- The **Down Market Rating ('Down Rating')** represents decile ranking (1 to 10 where 1 is most down market resistant fund) of funds of a given type (e.g., equity, bond, mixed asset) based on down market deviation (DMDEV). For more, see A More Robust Down-side Market Metric.
- The **Down Market Count (DMCNT)** is the number of down (negative) market months over the evaluation period specified. A limitation of the DMDEV metric and in fact all downside metrics is when there is little of no downside over the evaluation period specified. DMDEV must include at least three down market months for it to be calculated.

Downside Deviation (DSDEV)
Another measure of fund volatility, but it measures only downward variation. Specifically, it measures a fund's return below the risk-free rate of return, which is the 90-day T-Bill rate (aka cash). Money market and very short-term bond funds typically have downside deviations very close to zero, since they normally return T-Bill rate or higher. Stock funds typically have the highest downside deviations, especially in bear markets. In the MFO rating system, DSDEV indicates the typical percentage decline below its average excess return a fund has experienced in a year's time. The equation for DSDEV can be found here.

- The **DSDEV Rating** represents quintile ranking of a fund's Downside Deviation (DSDEV) within category across specified evaluation period. It uses similar methodology as MFO Rating, except in the case of DSDEV, lower is better. So, a DSDEV Rating of 1 represents 'Best' in category.

Duration
Duration is a measure of a bond's interest rate sensitivity expressed in years. Generally, the longer the duration, the more sensitive the bond's price is to interest rate changes and the higher the price volatility it faces. On the contrary, bonds with shorter duration are less sensitive to interest rate change and subject to lower price volatility. Duration measures the time it takes to repay the investor and it is not equal to bond maturity. Duration is usually shorter than bond maturity as bonds pay coupon interest.

Earnings/Share (EPS) Growth
Compound annual growth of earning per share (EPS) of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **EPS Growth Rating** represents quintile ranking of a fund's Earnings/Share Growth within category. A rating of 5 represents highest earnings.

Effective Duration
This is a curve duration measure and indicates the percentage change in price for a bond given a 100 basis point parallel shift of the benchmark yield curve. Effective Duration is the only appropriate duration measure for bonds with embedded options, it also works for bonds without embedded options. Units in years. Uses the weighted average when calculating the portfolio-level effective duration. Only uses the fixed income securities in the portfolio.

Effective Maturity
Effective maturity is the measure of maturity of a portfolio's bonds, taking into consideration the bonds may have call or put provisions. Years to maturity is calculated from next call date and data date for callable securities and from maturity date and data date for non-callable securities. Uses the weighted average when calculating the portfolio-level effective maturity. Only uses the fixed income securities in the portfolio.

Enhanced Strategy
Infers a fund's use of leverage or hedging, or non-traditional holdings. Such funds do **not** comprise long-only portfolios of traditional holdings in stocks, bonds, or cash. Lipper's database does not include an explicit 'short' or hedged allocation, unfortunately; therefore, the method generally used to infer Enhanced Strategy is if the 'Other' portfolio allocation exceeds 1%, or if the allocation of equity, bonds, or cash exceeds 101% or is below -1%. By default, funds with the following Types are flagged as having Enhanced Strategy: Alternative and Commodities. For funds found on the Dashboard of Profiled Funds, the Enhanced Strategy assessment is based on a fund's prospectus and/or manager's interview.

ESG Score
ESG stands for environmental, social and governance. The ESG factors include: corporate governance and business ethics, employee benefits and

corporate culture, stakeholder relations, product, customers and supply chain, and environmental impact. Lipper now provides an overall ESG score, as well as scores for individual 'pillars' and more. The scores range from 'D-' (lowest) to 'A+' (highest). The complete methodology can be found here. (See also 'Socially Conscious Fund' definition.) Here are the ESG metrics provided:

- **ESG Coverage Percentage.** Percentage of total market value received an ESG score in a given portfolio. May be abbreviated as 'ESG Cover, %.'
- **ESG Coverage Count.** How many securities in a given portfolio received ESG scores. May be abbreviated as 'ESG Cover, cnt.'
- **ESG Score.** Weighted average of the companies held, based on the self-reported information in the environmental, social and governance pillars.
- **Environment Score.** Weighted average of the companies held, based on the self-reported information in the resource use, emissions and environmental innovation categories. May be abbreviated as 'Environ Score.'
- **Social Score.** Weighted average of the companies held, based on the self-reported information in the workforce, human rights and community categories.
- **Governance Score.** Weighted average of the companies held, based on the self-reported information in the management, shareholders, and corporate social responsibilities [CSR] categories.
- **Controversies Score.** Weighted average of the companies held, based on their exposures to controversies and negative events reflected in global media.
- **Combination Score.** Weighted average of the companies held, based on the ESG Score and discounted by the ESG Controversies Score.

Excess Return, Annualized Percent (APER)
Annualized return above the risk-free return over period evaluated. More specifically, it is calculated by subtracting APR of US 3-Month Treasury Bill (TBILL) from a fund's APR. Units are % per year, typically, but for Display periods less than 12 months, MultiSearch does not annualize APR; in such cases, APER effectively stands for Absolute Percent Excess Return.

Expense Ratio (ER)
The total fees and expenses charged annually by a fund, expressed as a percentage of assets, for all the various services needed to run the fund, as reported in the Prospectus net of waivers and reimbursements. It is a forward-looking value and may include unaudited statements. It may reflect voluntary caps and these caps may be temporary. It excludes expense offsets or brokerage service arrangements, like 'soft dollars,' as applicable. The expense ratio is already reflected in the Lipper-provided monthly total returns used to calculate MFO's risk and performance metrics. May be abbreviated as '**Exp Ratio**.'

- The **ER Rating** represents quintile ranking of a fund's ER within category. As returns tend to be inversely correlated to ER, lower is better. An ER Rating of 1 represents 'Best' in category.

Fee Waiver Identifies if the fund share class has a waiver or reimbursement, documented in prospectus, expressed in %/yr. There is an associated: Fee Waiver **Type**: Contractual, Voluntary, Both or Not Provided. The value Both represents that the fund has a Contractual and Voluntary waiver or reimbursement. Fee Waiver **Date**: The expiration date of the Prospectus Fee Waiver when applicable. And, Fee Waiver **Time Limit**: If there is no Prospectus Fee Waiver or the waiver is currently not being used this will contain At Will, Indefinite or Not Provided.

Ferguson Metrics
These metrics help identify funds with equity-like returns but volatility that makes them 'easier for investors to own through turbulent times,' describes Brad Ferguson of Halter Ferguson Financial, a fee-only independent financial adviser based in Indianapolis. They serve as a starting point for delving deeper, but also as litmus test when salespeople offer him funds to include in the firm's portfolios. Please see Introducing Ferguson Metrics.

- **Outperformance Metric (FOM)** – Measures fund outperformance based on annualized absolute return versus peers for the past 3, 5, and 10 calendar years, plus any year-to-date YTD partial year. FOM is in units of percentage per year, %/yr.
- **Consistency Index (FCI)** – Measures fund consistency based on how a fund performs each calendar year relative to its peers and hurdle rate. If a fund's absolute return beats its peers by its hurdle rate, the fund scores a win. If it underperforms its hurdle rate, it scores a loss. Anything in-between is a push. An FCI of 1.00 is the best possible value and means the fund beat its peers by at least its hurdle rate each calendar year across the evaluation period, while an FCI of -1.00 is the worst possible value.
- **Hurdle Rate (FHR)** – Sets the absolute return percentage that a fund must beat its peers to score a win or loss in a calendar year. For funds that track to SP500 volatility, this value is (or close to) 1.00 %/yr. FHR is higher or lower based simply on the ratio of annualized standard deviation of the fund to that of the SP500 over the same evaluation window. FHR is effectively in units of percentage per year, %/yr.
- **Mega Ratio (FMR)** – Measures consistency, risk, and expense adjusted outperformance, similar to other adjusted return ratios, like Sharpe. 'Mega' because it represents a distillation of key metrics Brad et al. use to help maintain a core group of attractive candidate funds suitable for their clients. Typically, FMR = (FOM * FCI) / (FHR * ER). [Since Brad focuses on finding the best actively managed funds, he generally ignores funds with ER < 0.25; therefore, MFO imposes a 0.25 ER lower limit in the FMR calculation and rating determination. Similarly, if FOM < 0, FCI is set to 1.]
- **Relevant Life (FRL)** – Evaluation period setting 'life-time' Ferguson Metrics for fund. Will be minimum of 3 years, but not older than period back to CY 2008, plus any YTD, denoted in whole years. [In 2022, if a fund dates back to 2008, then FRL will be 14.]

Fund Alarm Rating
Derived from a ratings system developed by Roy Weitz in 1996 and published monthly on the MFO predecessor site Fund Alarm. Three ratings are possible: Three Alarm **TA** for worst performing funds within category, Honor Roll **HR** for best performing funds, and 'None' for all in-between. Only funds at least 5 years can receive a Fund Alarm rating. Please see Three Alarm Funds Redux for more information, as well as definitions for Honor Roll Fund, Three Alarm Fund, Return Score and Risk Score.

Fund Family
A collection of funds run (or offered) by the same management company. Note that while for example Vanguard Wellington (VWELX) is part of the

Vanguard family, it is actually run (or advised) by Wellington Management Company LLP.

- The **Fund Family Rating** represents quintile ranking of percentage of funds in family that have beaten their peers since inception (or back to 1960), based on absolute return, oldest share class only. A rating of 5 represents 'Top' family, while 1 represents 'Bottom.' Ratings apply to families with at least 5 funds (up from 3 as of June 2023), age 1 calendar month or more. Since January 2022, families are also rated for the past 1, 3, and 5-year performance periods (ala Fund Alarm) to better assess near-term performance of more established families.

Fund SubFamily
A fund subfamily comprises subset of funds run (or offered) by the same management company, but managed by independent or semi-independent adviser or subadviser or promoted as such [e.g., Allianz PIMCO and Natixis Oakmark].

Fund of Funds
A fund whose investment objective and policies are to invest in other mutual funds or ETFs. These funds could be outside of their own management company or within their own company.

Great Owl GO Fund
A fund that has delivered top quintile risk-adjusted returns, based on Martin Ratio [aka MFO Rating], in its category for evaluation periods of 3, 5, 10, and 20 years, as applicable. An MFO 10-year Great Owl (GO) fund, for example, has delivered top quintile risk-adjusted returns for evaluation periods of 3, 5, and 10 years. It was introduced with the MFO Rating System in June 2013 Commentary.

Honor Roll HR Fund
A fund that has delivered top quintile absolute returns in its category for evaluation periods of 1, 3, and 5 year evaluation periods. It is derived from the ratings system developed on the MFO predecessor site Fund Alarm. Please see Three Alarm Funds Redux for more information.

Index Fund
A fund designed to match returns of or based on a stock market index. With the proliferation of indexes, Lipper defines all 'index tracking' funds as Index Funds, either 'pure,' 'based,' or 'leveraged.' Lipper's methodology follows. (See also Management Approach below.)

- **Index Pure.** An Index Pure fund is a passively managed fund that seeks to track, match, replicate, approximate, or correspond to the performance of its underlying index. It does not employ any further approach, weighting adjustments, or active management to exceed or outperform the index. Index Pure funds include only full replication, optimized replication, and synthetic (or swapped-based) replication methods. They cannot use leverage and cannot have an actively managed component.
- **Index Based.** An Index Based fund is an actively managed fund that aims to outperform a specific securities market index by using a replication method and a quasi-active investment strategy. It differs from an Index Pure fund, which follows a passive management approach of full physicals index constituent replication, and an Index Leveraged (Enhanced) fund, which uses leveraged strategies to multiply investment exposure to an index. Index Tracking refers to a fund that aims to replicate the performance of a specific index, and can include both passively and actively managed funds.
- **Index Leveraged.** An index leveraged fund is a type of investment vehicle that aims to exceed the performance of a specific index by a given multiple, typically using derivatives such as futures or options. The Leveraged Fixed Factor (LFF) is the multiple employed by these funds, such as 2x or 3x. These funds attempt to deliver the desired returns over pre-specified periods, usually one day. Leveraged funds can be identified by keywords in their names, such as 'Bull,' 'Bear,' 'Long,' 'Short,' 'Ultra,' 'UltraPro,' 'UltraShort,' and 'UltraPro Short.' The LFF may also be indicated in the fund name. funds, which are classified as passive investments. The investment style of such as Index - Pure, Index - Based, or Index - Leveraged.

Information Ratio
Another measure of risk adjusted return, like Sharpe, but in this case the excess return is versus the fund's benchmark (as assigned by Lipper) and it is is normalized to the deviation from that same benchmark (also known as Tracking Error). Basically, it provides insight into how much a fund gains or losses relative to its benchmark per unit of deviation from that benchmark.

- The **Info Rating** represents quintile ranking of a fund's Information Rating within category across specified evaluation period. A rating of 5 represents best performance in category.

Initial Buy, Minimum
The minimum dollar amount required for an initial investment in a fund.

Interval Funds
A hybrid mutual fund structure that falls between an open-end and a closed-end fund. Allows investors to purchase shares daily, but permits funds to set longer intervals between redemptions.

Investment Fee
Investment expenses paid by the fund, expressed as a percentage of the fund's assets, per year. Typically applies to leveraged funds, especially CEFs, adding to overall expense ratio.

Launch Alert
Hundreds of new funds are launched annually (e.g., 590 in 2020), but most are not worth mentioning. David highlights just a dozen or so each year. The Launches Dashboard compiles and tracks funds first appearing in our “Launch Alert” feature of the monthly MFO commentary. It follows a format similar to the Profiles Dashboard, but lists funds by alert date, most recent on top to oldest on the bottom, since MFO launched in May 2011. See Dashboard of Launch Alerts.

Launch Date
First full calendar month of fund's existence, as far back as January 1960, the beginning of Lipper's database. May be also be called '**Inception Date**' and abbreviated as '**Incep Date**.'

Legal Structure
Legal structure of fund, including Exchange-Traded Notes, Grantor Trusts, Commodity Pools, Exchange-Traded MLP C-Corporations, Exchange-Traded Managed Funds, Exchange-Traded Open-end Funds, Exchange-Traded Unit Investment Trust Funds.

Leverage Ratio, Effective
A percentage that represents the total of all leverage (preferred shares, debt leverage/borrowings, and non-structured leverage) divided by the total managed assets of the fund. Applies to CEFs typically.

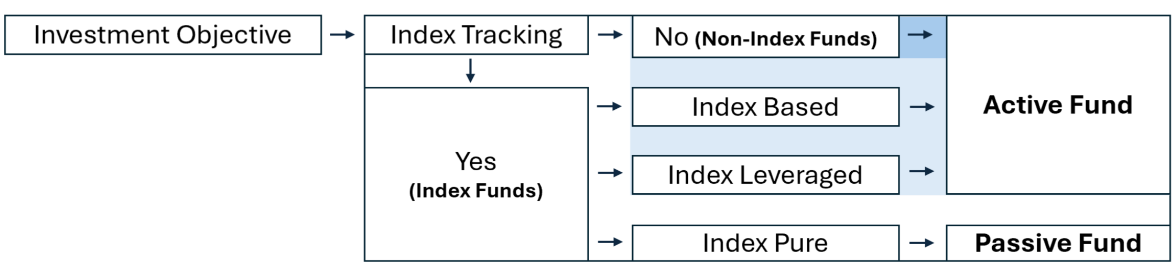
Lipper Leaders
The Lipper Leaders Rating System provides quintile ranking of Total Return, Consistent Return, Expense, and Tax Efficiency of funds versus their category peers, as well as a fund's Preservation rating, which is relative to type peers [e.g., Equity, Bond]. Scale: 5 is top; 1 is bottom. Ratings are provided for the past 3, 5, and 10-year periods, as applicable. An 'Overall Rating' is a simple average of the applicable periods. See Lipper Leaders Methodology.

- **Total Return** rating reflects a fund's historical total return performance relative to category peers. 'A Lipper Leader for Total Return may be the best fit for investors who want the best return, without looking at risk. This measure alone may not be suitable for investors who want to avoid downside risk.'
- **Consistent Return** rating reflects a fund's historical risk-adjusted returns, relative to category peers. 'A Lipper Leader for Consistent Return may be the best fit for investors who value a fund's year-to-year consistency relative to other funds in a particular group. Investors are cautioned that some peer groups are inherently more volatile than others, and even a Lipper Leader for Consistent Return in a volatile group may not be well-suited to shorter-term goals or less risk-tolerant investors.'
- **Preservation** rating reflects a fund's historical loss avoidance relative to other funds within the same asset class (type peers, e.g. Equity). 'Investors are cautioned that equity funds have historically been more volatile than mixed equity or fixed income funds and that even a Lipper Leader for Preservation in a more volatile asset class may not be well-suited to shorter-term goals or less risk-tolerant investors.'
- **Expense** rating reflects a fund's expense minimization relative to category peers with similar load structures. 'A Lipper Leader for Expense may be the best fit for investors who want to minimize their total cost and can be used in conjunction with Total Return or Consistent Return ratings to identify funds with above average performance and lower-than-average cost.'
- **Tax Efficiency** rating reflects fund's historical success in postponing taxable distributions relative to category peers. 'A Lipper Leader for Tax Efficiency may be the best fit for tax-conscious investors who hold investments that are not in a defined benefit or retirement plan account.'

Load, Maximum Front
The fee an investor pays when purchasing shares of a fund, expressed as percentage of the purchase amount. The fee may decrease size of purchase and may be waived by certain offerors, like Fidelity or Schwab, as part of No Fee Transaction agreements. May be abbreviated simply as '**Load**.'

Managed Volatility
Funds that by prospectus language utilize a managed volatility strategy within their primary investment strategy. Managed volatility strategies include but are not limited to risk parity, minimum volatility and fundamental.

Management Approach
Indicates whether a fund investment style is active or passive. Lipper distinguishes the difference using the depiction and descriptions below. May be abbreviated as '**Mgmt Approach**'.



- **Active.** If the firm manages its portfolio using a 'hands-on' approach, making decisions based on company/sector analysis and fundamental research, it is considered an active fund. An active investor would be tagged if at least 1% of the firm's investment strategy is based on traditional styles like growth, value, income, etc. As depicted above, **active funds** are 'index based,' 'index leveraged,' or do not track an index at all (non-index).
- **Passive.** If the firm manages its portfolio using a 'hands-on' approach, making decisions based on company/sector analysis and fundamental research, it is considered an active fund. An active investor would be tagged if at least 1% of the firm's investment strategy is based on traditional styles like growth, value, income, etc. As depicted above, **passive funds** track a pure market index. These are so-called 'index pure' funds.

Management City
Typically, the US city where the fund Management Company resides. This location is often not the same as the fund's adviser or subadviser. May be abbreviated as '**Mgmt City**.'

Management Company
The name of the company responsible for managing all legal and financial aspects of the fund, including appointing the adviser, administrator, custodian, and other support companies. The fund management company is also responsible for managing the assets of the fund in case no investment adviser or subadviser is appointed. May be abbreviated as '**Mgmt Co.**'

subadviser is appointed. May be abbreviated as '**Mgmt Co**.'

Management State
Typically, the US state where the fund Management Company resides. This location is often not the same as the fund's adviser or subadviser. May be abbreviated as '**Mgmt State**.'

Manager
Name of the current fund manager(s). Up to three will be listed, if managed by team.

Martin Ratio
Another measure of risk adjusted return, this one named after our friend Peter Martin. (See An Alternative Approach to the Measurement of Investment Risk & Risk-Adjusted Performance.) Like Sharpe and Sortino, it measures excess return, but relative to its typical drawdown. After the 2000 tech bubble and 2008 financial crisis, which together resulted in a “lost decade” for stocks, investors have grown very sensitive to drawdowns. Martin excels at identifying funds that have delivered superior returns while mitigating drawdowns. It too is best used when comparing funds of same category over same evaluation period – this very comparison is the basis for determining a fund’s MFO Rating metric. The equation for Martin Ratio can be found here.

Maximum Drawdown (MAXDD)
The percentage of greatest reduction in fund value below its previous maximum over period evaluated. MAXDD can be the most frightening of a fund’s many statistics, but surprisingly it is not widely published. Many top rated and renowned funds incurred maximum drawdowns of -60% or worse in 2009. The date (month/year) of MAXDD occurrence is also tabulated in the MFO rating system (Date MAXDD).

- The **MAXDD Rating** represents quintile ranking of a fund's MAXDD within category across specified evaluation period. It uses similar methodology as MFO Rating, except in the case of MAXDD, 'lower' is better. So, a MAXDD Rating of 1 represents 'Best' in category. [Please note: Liberty is taken to use the absolute value of MAXDD (instead of its actual negative values) when assigning MAXDD Ratings so that lower is indeed better, like other risk ratings.]

MFO Rank
A simple sequential ordering methodology within category of fund performance based on Martin. It is less sophisticated than the MFO Rating metric; therefore, funds with comparable or even identical Martin values the will receive sequential ranking.

- **MFO Rank Percent** represents percentile rank order of a fund's Martin Ratio within category across specified evaluation period ... oldest share class only. Normally, funds with highest Martin are assigned 1%, while those with lowest are assigned 100%. If there are fewer than 100 funds in category, these limits will vary. For example, if there are only 20 funds, then the fund with highest Martin will be assigned 5%. So, please be aware of Peer Count when assessing this metric.
- **MFO Rank Position** represents numerical rank order of a fund's Martin within category across specified evaluation period ... oldest share class only. The lower the number, the better its performance; the higher, the poorer. Just how poor depends on how many peers are in the category.

MFO Rating
The principal performance ranking metric used in the MFO rating system and found across most of the MFO Premium pages. It ranks a fund’s performance based on risk adjusted return, specifically Martin Ratio, relative to other funds in same investment category over same evaluation period. Evaluation periods include lifetime, 20, 10, 5, 3, and 1 year, plus full, down, and up market cycles, as applicable. Funds in the top 20 percentile (top quintile) are assigned a 5 for 'Best,' while those in bottom 20 percentile (bottom quintile) are assigned a 1 for 'Worst.' MFO “Great Owl” distinction is assigned to funds that have earned top performance rank for evaluation periods 3, 5, 10, and 20 years, as applicable.

Note: Prior to March 2016, this metric was called 'Return Group.'

Note: MFO Ratings are not assigned when there is no significant fund-to-fund variation of Martin or Ulcer in categories across an evaluation period. An example is Money Market funds, which rarely have any drawdown. In such cases, better to simply evaluate such funds based on APR Rating.

MFO Risk
The principal risk ranking metric used in the MFO rating system and found across most of the MFO Premium pages. It designates a fund’s risk relative to overall market, defined by SP500 index. It is strictly (if conveniently) volatility based:

- Funds with volatility less than 20% of market are assigned MFO Risk of **1** and deemed “Very Conservative.”
- Funds with volatility between 20 and 50% of market are assigned MFO Risk of **2** and deemed 'Conservative.'
- Funds with volatility between 50 and 75% of market are assigned MFO Risk of **3** and deemed 'Moderate.'
- Funds with volatility between 75 and 125% of market are assigned MFO Risk of **4** and deemed 'Aggressive.'
- Funds with volatility greater than 125% of market are assigned MFO Risk of **5** and deemed “Very Aggressive.”

Three volatility metrics (Standard Deviation, Downside Deviation, and Ulcer Index) are used in determining MFO Risk. Evaluation periods include lifetime, 20, 10, 5, 3, and 1 year, plus full, down, and up market cycles, as applicable.

Probably good to emphasize here that risk is fundamental to producing excess return and many top rated funds are also very aggressive. The reference market itself in the MFO system is deemed 'Aggressive” by definition.

Note: Prior to March 2016, this metric was called 'Risk Group.'

Momentum (MoM)
Measures a fund's recent return performance. Specifically, it measures past 3, 6, 9, and 12-month annualized percent return (APR), but ignores most

Measures a fund's recent return performance. Specifically, it measures past 3, 6, 9, and 12 month annualized percent return (APR), but ignores most current month. (So, effectively, it is simply last month's 2, 5, 8, and 11-month APR!) This measure attempts to capture in funds the same premium seen in stocks. Per the folks at Alpha Architect: 'Researchers have found that, on average, stocks with strong recent performance relative to other stocks in the cross section of returns tend to outperform in the future ...' They've documented the so-called 'momentum effect' in several articles, including: How To Measure Momentum?, Momentum Investing: Ride Winners and Cut Losers. Period., and How Portfolio Construction Affects Momentum Funds. Even though values are for periods one year or less, the units are annualized to facilitate comparison.

- **Momentum (MoM) Rating** represents quintile rating of momentum values relative to Category peers. A MoM Rating of 5 represents 'Best' in category. It's good practice to set MoM values to Positive with a Rating of **5** to screen for funds with most **positive momentum** in a category; similarly, set values to Negative with a Rating of **1** for funds with most **negative momentum**.

Name
Fund name assigned by MFO based on Lipper provided abbreviated name and legal name. The latter tends to be too long (e.g., 'RiverPark Funds Trust: RiverPark Short Term High Yield Fund; Retail Class Shares'), while the former tends to be too short (e.g., 'RvrPrk:Sh-Tm HY;Rtl'). MFO attempts to maintain a master list of fund names of just the right length (e.g., 'RiverPark Short Term High Yield Fund Retail').

- The **Legal Name** is provided by Lipper and often includes a fund's **Trust** identify and **Share Class** designation, as applicable.
- **Trust** designates the organizational entity overseeing regulatory aspects of most mutual funds and ETFs. Typically, it is a registered investment company under the Investment Company Act of 1940 ('40 Act), thereby regulated by the Securities and Exchange Commission (SEC) and the Financial Industry Regulatory Authority (FINRA).
- **Share Class** associates a particular mutual fund share with its fee structure. Different share classes can have different expense ratios, minimum investments, redemption fees, and sales loads. Some fund companies, like Vanguard, often categorize ETFs as a share class.

No. of Holdings
Typically, the number of stocks and bonds in a fund's portfolio, reflecting its concentration.

Nominal Maturity
The dollar weighted average maturity, weighted by market value, calculated to nominal (stated) maturity. Units in years. Only uses the fixed income securities in the portfolio.

Objective
A categorization based on a fund's stated investment objective and policies as set forth in its prospectus.

Oldest Share Class (OSC)
Typically, the fund share class with earliest First Public Offering (FPO) date. If there is a tie, then OSC designation goes to the fund with lowest expense ratio. And, if tied again, then the fund with largest assets under management.

Open (or Closed)
A designation indicating whether a fund is available for purchase by new investors.

Operating Cash Growth
Total cash from operating activities as reported on the cash flow statement over the past 12 months. The 3-year growth rate will be calculated as a compound average growth rate and expressed as a percentage.

- The **Op Cash Growth Rating** represents quintile ranking of a fund's Operating Cash Growth within category. A rating of 5 represents highest growth rate.

Peer Count
The number of unique funds (aka oldest share class only) in given category across specified evaluation period.

Pre-Set Screens
An option found on the MultiSearch page. Each screen is simply a collection of screening criteria. Organized is six groups: Allocation, Reference, Model, Sector, Largest, and Unique.

Preset Screens - Allocation
Select for a risk and results table of mixed-asset performance, basically mix of equity and bond indexes for display period selected. Four different mixed allocation indexes are available, which produce risk and return metrics for equity/bond combinations in 10% increments. The symbol convention used here is two letters followed by the percent equity/bond combination. So, for 60/40 allocations, you will find the symbols US6040, UL6040, GB6040 and GX6040, respectively.

- **SP500/USBOND** - S&P500 [S&P 500 Monthly Reinvested Index] with US Aggregate Bond [Bloomberg Barclays U.S. Aggregate Bond TR (Modified)], back to January 1960. Values of USBond before 1976 use an average of four bond funds (LAGVX, SCSBX, PINCX, NTHEX), which actually correlates quite well with USBond subsequently.
- **SP500/LGOVBND** - S&P500 [S&P 500 Monthly Reinvested Index] with Long US Government Bond [Bloomberg Barclays U.S. Government Bond Long TR], back to January 1926. Values before 1960 use data derived from Goyal and Shiller websites.
- **GLOBAL/GBLBND** - Global Equity [MSCI World NR USD] with Global Bond [Bloomberg Barclays Global Aggregate TR USD], back to February 1990.
- **GLOBALXUS/GBLBNDXUS** - Global xUS Equity [MSCI World ex USA NR USD] with Global xUS Bond [Bloomberg Barclays Global Aggregate ex U.S. TR], back to January 1990.

Preset Screens - Reference

Select for a risk and results table of popular indexes or funds across Display period selected.

- **Reference Indexes** enables quick review of popular indexes across many segments of global market, as well as provide placeholders for cash and annuity portions of portfolio [e.g., CASH, RATE0350]:

MFO Convenience Symbol	Index Name
ACI	MSCI AC World NR USD
ACIXUS	MSCI AC World ex USA NR USD (Modified - Values before February 2001 are MSCI AC World ex USA TR USD.)
BALANCE	60% S&P 500/40% Barclays US Aggregate TR
BRKA	Berkshire Hathaway Class A (Courtesy of MacroTrends.)
BUYBACK	S&P 500 Buyback TR USD
BUYWRITE	CBOE S&P 500 Buywrite (BXM)
CASH	Cash, uninvested portion of portfio, yielding no interest.
COMMODITY	S&P Goldman Sachs Commodity Index Total Return Ind
CORPBND	ICE BofAML U.S. Corporate Master TR
CPIU	Consumer Price Index for All Urban Consumers
DAX	DAX Index USD
DIVIDEND	S&P 500 High Dividend TR USD
DJI	Dow Jones Industrial Daily Reinvested Avg TR
DJT	Dow Jones Transportation Average TR
DOLLAR	US Dollar Currency Index
DRAGON	MSCI Golden Dragon NR USD
EAFE	MSCI EAFE NR USD
EMI	MSCI EM (Emerging Markets) NR USD
FALLEN	ICE BofA US Fallen Angel High Yield TR
GBLBALANCE	60% MSCI World Net/40% BC US Agg TR
GBLBND	Bloomberg Barclays Global Aggregate TR USD
GBLBNDXUS	Bloomberg Barclays Global Aggregate ex U.S. TR
GBLHIYLD	Bloomberg Barclays Global High Yield TR
GLOBAL	MSCI World NR USD
GLOBALXUS	MSCI World ex USA NR USD
GNMA	Bloomberg Barclays GNMA TR
GOLD	Gold London PM Fixing
GROWTH	MSCI USA Growth TR USD
HEDGE	Credit Suisse Hedge Fund USD
HIGHYLD	Bloomberg Barclays U.S. Corporate High Yield TR
HIYLDLQD	Bloomberg Barclays HY Very Liquid TR
LGOVBND	Bloomberg Barclays U.S. Government Bond Long TR
LONGSHORT	Lipper US Index - Alternative Long/Short Equity Fd
MBS	Bloomberg Barclays US MBS TR
MICRO	Russell Micro Cap TR
MINVOL	S&P 500 Minimum Volatility TR
MOMENTUM	S&P 500 Momentum TR
MONEY	Lipper US Index - Money Market Funds
MUNIDEBT	Bloomberg Barclays Municipal Bond TR
NASDAQ	NASDAQ Composite TR (Modified - Values before April 1999 are NASDAQ Composite CR.)
NIKKEI	Nikkei 225 CR
OILGAS	S&P 500 Energy TR
PLATINUM	Platinum Index
QUALITY	S&P 500 Quality TR USD
RATEXXXX	Fixed Rate Return where XXXX is interest in basis points, bps, meant to emulate annuity portion of a portfolio: 0050, 0100, 0150, 0200, 0250, 0350, 0400, 0450, 0500, 0600, 0700, 0800, 0900, 1000, 1200, 1400, 1600, 1800, 2000.
REALESTATE	S&P U.S. Real Estate Investment Trust TR
RUSS1000	Russell 1000 TR USD
RUSS2000	Russell 2000 TR
RUSS3000	Russell 3000 TR

SILVER	Silver Index
SGOVBND	ICE BofAML Treasury 1-3 Year TR
SP400	S&P Mid Cap 400 TR
SP500	S&P 500 TR
SP500EW	S&P 500 Equal Weighted TR
SP500X	S&P 500 CR
SP600	S&P 600 Small Cap TR
STOXX50	EURO STOXX 50 NR USD
TBILL	US Treasury Bill 3 Months TR
TBILL1Y	US Treasury Bill 1-Year Rate Index
TBOND30Y	US Treasury Bond 30-Year Rate Index
TNOTE5Y	US Treasury Note 5-Year Rate Index
TNOTE10Y	US Treasury Note 10-Year Rate Index
USBOND	Bloomberg Barclays U.S. Aggregate Bond TR (Modified - Values of USBond before 1976 use an average of four bond funds [LAGVX, SCSBX, PINCX, NTHEX], which correlates quite well with USBond subsequently.
VALUE	MSCI USA Value TR USD

- **Reference Funds** enables quick review of five Vanguard funds that David often uses for comparison purposes, his version of 'benchmarks.' The five funds are: Vanguard Total Bond Market Index Inv (VBMFX), Vanguard Balanced Index Inv (VBINX), Vanguard STAR Inv (VGSTX), Vanguard Total Stock Market Index Inv (VTSMX), and Vanguard Total International Stock Index Inv (VGTSX). The Risk Profile tool uses all five, along with some of the reference indexes above.

Preset Screens - Model
The beginning of a collect of so-called 'model portfolios,' which generally are fund portfolios that various industry advocates and authors believe will give satisfactory returns based on an investor's risk tolerance and time horizon. No endorsement implied, and, as always, no prediction of how these portfolios will perform going forward, regardless of how well they may have delivered in the past. Organized by Dodge & Cox Allocation and Unique portfolios.

The Unique portfolio tickers are:

- **SPYTLT** - Simply 50/50 split between the S&P500 ETF SPY and 20-year plus US Bond ETF TLT, which had historically been uncorrelated, mostly.
- **MEBIVY** - Even split between five market-based ETFs: SPY (equity), VEU (foreign), BND (bond), GSG (commodity), and VNQ (real estate). Based on Mebane Faber's Book "The Ivy Portfolio."

Preset Screens - Sector
Enables quick review of risk and return metrics for funds that represent industry sectors, investing style, global regions, and developed and emerging markets.

- **Fidelity Select** funds are a series of sector-focused, actively managed funds advised by and available through Fidelity.
- **State Street Sector ETFs or SPDRs** enables quick review of sector performance using some of the more popular ETFs. Cool to run in conjunction with Analyze, specifically Correlate and Trend. (See How To Trade The 11 S&P 500 Sector ETFs and The Global Industry Classification Standard (GICS).)
- **Vanguard Regional** funds are a series of Vanguard index-based ETFs targeting regional markets around the world, like Europe or the Pacific region.
- **iShares Developed Markets** funds are a series of BlackRock index-based ETFs targeting developed markets around the world, excluding the United States.
- **iShares Emerging Markets** funds are a series of BlackRock index-based ETFs targeting emerging markets around the world.
- **Morningstar Barometer ETFs** are nine BlackRock iShares ETFs, each tracking a Morningstar index of US companies depicted by a 3x3 capitalization/valuation matrix; specifically, large/mid/small-cap versus value/core/growth companies. In 2020 especially, large cap growth funds have significantly outperformed small cap value funds.

Preset Screens - Largest
Enables quick review of risk and return metrics for the funds with largest assets under management (AUM) in each category, organized by the subtypes (e.g., U.S. Equity, Mixed Asset, Bond).

Preset Screens - Unique
Finds funds with screening criteria generally unique to MFO.

- **Best Performing Rookie Funds** generates a list of funds that are between the age of 1 and 2 years old and have delivered top quintile risk adjusted return based on Martin Ratio *in their respective categories* (MFO Rating of 5) since their inception. (The resulting list will initially show lifetime metrics from first full month since inception through present month.)
- **Dual Great Owl & Honor Roll Funds** will generate a list of funds that have received both the Great Owl distinction as well as the Honor Roll designation, across all ages and categories, as applicable.
- **Smallest Drawdown Bond Funds** generates a list of Bond funds that have incurred smallest Maximum Drawdown (MAXDD) *in their respective*

categories for Display Period requested. More specifically, they are in the quintile of funds with smallest MAXDD values among their peers. Best to set Display Period for direct comparison of risk/return metrics across fixed evaluation period of interest, like Full Cycle 5 (November 2007 to Present) or 10 Years.

- **Shortest Recovery Time Small Caps** generates a list of Small Cap (Small Core, Small Value, Small Growth) funds that have incurred shortest Recovery Times (number of months a fund retracts from previous peak) *in their respective categories* for Display Period requested. More specifically, these funds have incurred Recovery Times in the lowest quintile among their peers. (Funds still experiencing drawdown in present month or at end of Display Period will not be included.) Best to set Display Period for direct comparison of risk/return metrics across fixed evaluation period of interest, like Full Cycle 5 (November 2007 to Present) or 10 Years.
- **Lowest Ulcer Moderate Allocation Funds** generates a list of Mixed Asset Moderate Allocation funds that have incurred the lowest Ulcer Indices *in their respective categories* for Display Period requested. More specifically, these funds have incurred Ulcer Index values in the lowest quintile among their peers. Best to set Display Period for direct comparison of risk/return metrics across fixed evaluation period of interest, like Full Cycle 5 (November 2007 to December 2019) or 10 Years.

Each screen listed above is 'Preset' by definition, but similar screens can be generated by selecting multiple criteria. For example, to screen for best performing rookie U.S. equity funds, select: SubType = U.S. Equity Funds, Age - Rookies (1 To 2 Years Old), and MFO Rating - 5, then Submit Search.

Price-To-Book (P/B)
Calculated by multiplying the price-to-book ratio for each individual security by the ratio of the security's market value in the portfolio to the total market value of the equity holdings of the portfolio. Prices and book values are as of most recent reporting date.

- The **P/B Rating** represents quintile ranking of a fund's Price-To-Book ratio within category. A rating of 1 represents lowest valuation.

Price-To-Cash (P/C)
Ratio representing the latest closing price divided by trailing twelve-month cash flow per share. The weighted average is then calculated by summing the products of portfolio % value and the capped (60) Price-to-Cash Flow Ratio.

- The **P/C Rating** represents quintile ranking of a fund's Price-To-Cash Flow ratio within category. A rating of 1 represents lowest valuation.

Price-To-Earnings (P/E)
Calculated by multiplying the price-to-earnings ratio for each individual security by the ratio of the security's market value in the portfolio to the total market value of the equity holdings of the portfolio. Prices are as of most recent reporting date. Earnings are based on the trailing 12 months (TTM) from most recent reporting date, excluding extraordinary items.

- The **P/E Rating** represents quintile ranking of a fund's Price-To-Earnings ratio within category. A rating of 1 represents lowest valuation.

Price-To-Sales (P/S)
Weighted average of ratios representing company market capitalization (share price) divided by company revenue (revenue per share) for the most recent year. Generally, a smaller ratio (less than 1) is considered a better investment because the investor is paying less for each unit of sales. Because the calculation only uses revenue and does not factor in items like expenses or debt, it does not give a complete view of the company.

- The **P/S Rating** represents quintile ranking of a fund's Price-To-Sales ratio within category. A rating of 1 represents lowest valuation.

Profiled Funds
Each month, David (and occasionally another member of MFO's staff), typically provides in-depth analysis of two to four funds, continuing a FundAlarm tradition. Through November 2015, 117 profiles are available on MFO legacy site, as summarized on the Dashboard. 'David's Take' precariously attempts to distill the profile into one word: Positive, Negative, or Mixed.

Quality
Relative credit quality for the bond portion of a fund's portfolio, based on dollar weighted average. Ratings are provided by leading bond rating services such as Moody's, Standard & Poor's, Duff & Phelps/MCM, and Fitch. There are three main levels:

- Investment Grade: AAA, AA, A, BBB.
- Non-Investment Grade (aka high-yield, aka junk): BB, B, CCC, CC, C.
- In Default: D.

Real Return, Annualized Percent (APRR)
Annualized return above inflation over period evaluated. More specifically, it is calculated by subtracting APR of Consumer Price Index for All Urban Consumers US City Average (CPIU) from a fund's APR. Units are % per year, typically, but for Display periods less than 12 months, MultiSearch does not annualize APR; in such cases, APRR effectively stands for Absolute Percent Real Return.

Reamer Ratio
A specific rolling batting average named after Brian Reamer, a Wisconsin-based financial adviser, who uses it to help assess fund performance consistency. Specifically, it is the percentage that a fund's 3-year rolling returns *beat the rolling returns of its category peers* over the past 10 years. There are 85 such 3-year periods per decade.'

- The **Reamer Rating** represents quintile ranking of a fund's Reamer Ratio within category. A rating of 5 represents best.

Recovery Time
The time taken for a fund to recover from a maximum drawdown (MAXDD) occurrence to the original level, including both descent and ascent periods. Please see Recovery Time, published in August 2014 commentary for good depiction. Measured in months. Funds still incurring drawdown in present month or at end of evaluation period are denoted with a '+' next to the Recovery metric. Recovery Time may be abbreviated as '**Recvry**' or '**Rcvry**' on

MFO datatables.

- The **Recovery Rating** represents quintile ranking of a fund's Recovery Time within category across specified evaluation period. It uses similar methodology as MFO Rating, except in the case of Recovery Time, lower is better. So, a Recovery Rating of 1 represents 'Best' in category.
- The **Ascent Time** is the time taken for a fund to climb from month of maximum drawdown (MAXDD) to previous peak value. Measured in months.
- The **Descent Time** is the time taken for a fund to fall from peak value to month of maximum drawdown (MAXDD). Measured in months.

Redemptions
The actual amount of withdrawals out of a fund as of fiscal year-end. This information is retrieved directly from the fund’s audited annual report. Totals are reported in millions.

- **Redemption Ratio** Annual redemptions from a fund expressed as a percentage of Average Net Assets (ANA).
- **Average Net Assets (ANA)** A calculation representing average assets for the fund's fiscal year.

Redemption Fee
Maximum fee percentage charged when withdrawing from a fund within a specified time period after purchase. May be abbreviated '**Redem Fee**.'

Return
Typically, the total or cumulative return percentage over evaluation period specified, un-annualized. It reflects reinvestment of dividend and capital gain distributions, while deducting for fund expenses, fees, but **excluding any load**.

Return After Tax (RAT)
Estimate of after tax return derived by subtracting an amount based on the fund's Tax Cost Ratio (TCR) from annualized return (APR), pre-liquidation and post-liquidation, based on past 1, 3, 5, and 10 years, %/yr. Most accurate for no-load funds. (See also Tax Cost Ratio below.)

- The **RAT Rating** represents quintile ranking of Return After Tax (RAT), relative to Category peers. Higher is better. A RAT Rating of 5 represents 'Best' in category.

Return On Assets (ROA)
Average annual return on assets (ROA, net income divided by total assets) of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **ROA Rating** represents quintile ranking of a fund's ROA within category. A rating of 5 represents highest return.

Return On Capital (ROC)
Average annual return on capital (ROC, earnings before interest and taxes divided by capital employed plus short-term loans minus intangible assets) of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **ROC Rating** represents quintile ranking of a fund's ROC within category. A rating of 5 represents highest return.

Return On Earnings (ROE)
Average annual return on equity (ROE, net income divided by common stockholder equity) of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **ROE Rating** represents quintile ranking of a fund's ROE within category. A rating of 5 represents highest return.

Return On Investment (ROI)
Average annual return on investment [ROI, income after taxes divided by the average total long-term debt and other liabilities and shareholders equity] of equities in portfolio over past three years, dollar-weighted average, %/yr.'

- The **ROI Rating** represents quintile ranking of a fund's ROI within category. A rating of 5 represents highest return.

Return Score
A metric found on the Three Alarm page. Three Alarm **TA** Funds are the worst performers in their categories, delivering absolute returns in the bottom quintile during the past 1, 3, and 5 years. Roy Weitz first published the Three Alarm Funds list in 1996 on his legacy Fund Alarm website. The Fund Alarm system assigns a score for each of the three evaluation periods, again based on absolute return (APR). True to the original scoring system, funds receive a Return Score 2 for landing in the top quintile, while they receive a Return Score -2 for landing in the bottom quintile. For more background, please see the article published in December 2013 commentary Three Alarm Funds Redux.

Risk Score (and "TA Risk Rating")
A metric found on the Three Alarm page, as well as on the MultiSearch results page under "TA Risk Rating." A Risk Score is also assigned based a 'potential bad year' relative to other funds in its category. It uses 3-year absolute return (APR) minus twice the 3-year standard deviation (STDEV). True to the original Fund Alarm scoring system, funds get Risk Score -2 for being lowest risk and Risk Score 2 for being highest risk. **Caution:** This risk metric is relative to other funds in category, so funds can receive a low risk score but still be high volatility relative to overall market. For more background, please see the article published in December 2013 commentary Three Alarm Funds Redux.

Rolling Averages
Provide insight into how returns vary for selected rolling periods of interest. Each period overlaps the next, separated by one month, across selected display period up to life of fund. The rolling periods are 1, 3, 5, 10, 20, 30, 40 and 50 years, as applicable, based on age of fund and selected display period. They available in MultiSearch and via the MultiSearch/Analyze feature. This insight is especially important when establishing expectations based on an investor’s risk tolerance and investment horizon, as it reveals best and worst performance history. (See Rolling Averages, Finally!)

In July 2021, rolling averages were expanded to include **Rolling Batting Averages**, which essentially compares a fund's rolling period return against the

In July 2021, rolling averages were expanded to include **Rolling Batting Averages**, which essentially compares a fund's rolling period return against the **average of rolling returns within category** to determine a batting percentage. The more times a fund's rolling return beats the category average, the higher the batting average. [See also Reamer Ratio.]

- The **Rolling Average Rating** represent quintile ranking of a fund's rolling batting average, respectively, for 1-, 3-, 5-, 10-, and 20-yr rolling periods across the selected Display period. A rating of 5 represents 'Best' in category.

Sales Growth
Compound annual sales growth of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **Sales Growth Rating** represents quintile ranking of a fund's Sales Growth within category. A rating of 5 represents highest growth.

Sales/Share (SPS) Growth
Compound annual sales per share [SPS] growth of equities in portfolio over past three years, dollar-weighted average, %/yr.

- The **SPS Growth Rating** represents quintile ranking of a fund's Sales per Share Growth within category. A rating of 5 represents highest growth.

Security Lending
Indicates if a fund uses security lending as part of the investment approach.

Sharpe Ratio
A measure of risk adjusted return, which is to say it helps quantify whether a fund is delivering returns commensurate with the risk it is taking. Specifically, it is the ratio of the fund's annualized excess return divided its standard deviation. A fund's "excess return" is any amount above risk-free investment, which is typically 90-day T-Bill. Sharpe is best used when comparing funds of same investment category over same evaluation period. The higher its Sharpe, the better a fund is performing relative to its risk, or more precisely, its volatility. The equation for Sharpe Ratio can be found here.

- The **Sharpe Rating** represents quintile ranking of a fund's Sharpe Ratio within category across specified evaluation period. It uses similar methodology as MFO Rating. A Sharpe Rating of 5 represents 'Best' in category.

Note: Sharpe Ratings are not assigned when there is no significant fund-to-fund variation of Sharpe or STDEV in categories across an evaluation period. An example is Money Market funds, which may have little if any volatility, especially across shorter evaluation periods; therefore, no Sharpe Rating is assigned. In such cases, better to simply evaluate such funds based on APR Rating.

Share Classes, Number of
Current number of shares classes for each unique fund, as defined by its portfolio holdings. MFO ratings default to the Oldest Share Class (OSC) funds, but many funds have additional share classes that typically carry different expense ratios and loads. For example, 'Class A' shares typically charge a front-end load that is taken off your initial investment. Vanguard, known for low fees, offers so-called Admiral Shares, which maintain a higher minimum investment, but charge even lower expense ratios. Similarly, institutional share classes often waive 12b-1 fees charged by retail share classes. American Funds has some highest number of shares classes, like American Balanced (ABALX) with 17 as of March 2018.

Shares Outstanding
The number of share class level units issued, aligned to the latest observation (Shares Outstanding Date).

Smart Beta
A term used to describe alternative index construction methods. It is sometimes called 'factor investing' as the products are designed to provide greater exposure to certain characteristics of securities that traditionally have provided a source of return or limit risk. Investment strategies / factors which will be used as part of Smart Beta investment strategies (single or multiple usage). Applies to ETFs. Factors designated by Lipper are: Dividend, Beta, Growth, Liquidity, Momentum, Quality, Size, Value, Volatility, ESG, Multifactor, Credit Quality, Yield, Commodity.

Socially Conscious
A fund that has adopted investment policies that are sensitive to social concerns. An example: Parnassus Core Equity Inv (PRBLX). Its prospectus, dated 1 May 2015, states: 'The Adviser also takes environmental, social and governance factors into account in making investment decisions ... to invest in companies with positive performance on Environmental, Social and Governance (ESG) criteria. The ESG factors include: corporate governance and business ethics, employee benefits and corporate culture, stakeholder relations, product, customers and supply chain, and environmental impact.'

Sortino Ratio
Another measure of risk adjusted return, but in this case it is relative to the amount of downside volatility (DSDEV) a fund incurs. It is a modification of the Sharpe intended to address a criticism that Sharpe unfairly penalizes so-called good volatility (i.e., rising value), which investors don't mind at all. In other words, a fund that goes up much more than down may be underappreciated in Sharpe, but not Sortino. Like Sharpe, Sortino is best used when comparing funds of same investment category over same evaluation period. The equation for Sortino Ratio can be found here.

- The **Sortino Rating** represents quintile ranking of a fund's Sortino Ratio within category across specified evaluation period. It uses similar methodology as MFO Rating. A Sortino Rating of 5 represents 'Best' in category.

Note: Sortino Ratings are not assigned when there is no significant fund-to-fund variation of Sortino or DSVEV in categories across an evaluation period. An example is Money Market funds, which may have little if any downside deviation, especially across shorter evaluation periods; therefore, no Sortino Rating is assigned. In such cases, better to simply evaluate such funds based on APR Rating. **Standard Deviation (STDEV)**
A measure of fund volatility. The higher a fund's standard deviation, the more its return has varied over time. That can be both good and bad, since a rise or fall in value will cause standard deviation to increase. Typically, but not always, money market funds have lowest standard deviations, stocks funds have highest, while bond funds are in-between. In the MFO rating system, STDEV indicates the typical percentage variation above or below average return a fund has experienced in a year's time. On good or bad years, variations from average returns have been two or three times the standard deviation, and every now and then even more. The equation for STDEV can be found here.

- The **STDEV Rating** represents quintile ranking of a fund's Standard Deviation (STDEV) within category across specified evaluation period. It uses similar methodology as MFO Rating, except in the case of STDEV, lower is better. So, a STDEV Rating of 1 represents 'Best' in category.

Subadviser
Name of the company hired by the fund's legal adviser to manage the fund's portfolio and effectively have day-to-day responsibility of investing and monitoring its assets in order to achieve the investment objectives of the fund. In some cases, the Subadviser may leave the more administrative tasks, like promotion, distribution, and compliance, to the Adviser.

SubType
Is a broad grouping of categories. MFO organizes 182 Lipper categories into 20 subtypes, as depicted in our MFO Category Summary table. The SubTypes are:

- Bond (**BND**), Government Bond (**GBD**), Municipal Bond (**MBD**), State Bond (**SMBD**), World Bond (**WB**)
- Alternative (**ALTS**), Options (**OPT**), Trading (**TD**)
- Allocation (**ALLO**), Mixed Asset (**MXA**), Target Date (**TD**)
- U.S. Equity (**USEQ**), Global Equity (**GBEQ**), International Equity (**INEQ**), Regional Equity (**REQ**), Sector Equity (**SCEQ**), World Sector Equity (**WSEQ**)
- Commodity (**CO**)
- Money Market (**MMK**), Tax-Exempt Money Market (**TMMK**)

Plus, Index and Reference, added for search convenience and taxonomy. The MultiSearch tool enables screening of multiple categories, subtypes, or types along with other criteria. For search convenience and taxonomy, MFO adds Index and Reference. The latter are a series of indexes with assigned convenience ticker symbols, like SP500 and USBond. (See Reference Indexes under Preset Screens.)

Swap Counterpart Risk
Indicates if a fund uses swaps for index replication purposes, which means there is a swap counterpart risk associated.

Symbol
Typically, an arrangement of five letters that uniquely identifies each mutual fund (or mutual fund share class) for trading on a US exchange. The last letter is usually an 'X,' which distinguishes mutual fund symbols from stock ticker symbols. Virtually all mutual fund Symbols in the MFO search tools refer to the NASDAQ Symbols, which are assigned by the National Association of Securities Dealers (NASD) to individual funds eligible for listing on its Automated Quotation system (NASDAQ). Other products generally use different designations, as follows:

- CEFs typically carry a three-letter designator.
- ETFs generally carry a four-letter designation (although few have just two letters, like Vanguard Total World Stock Index ETF ... Symbol VT).
- Insurance funds typically carry a Lipper designation, prefaced with 'IF-', but some have a NASDAQ or listed ticker.
- Indexes typically carry a Lipper designation, prefaced with 'IX-'.
- Average of Metrics entries use the Lipper Category Code prefaced with 'AV-'.

Tax Cost Ratio (TCR)
Measures how much a fund's return is reduced by the taxes investors pay on income and capital gain distributions. It uses SEC Performance and After-Tax Performance as underlying data. This ratio helps explain how much value as a percentage of change is lost because of taxes, compared to pre-tax value. The periods include 1, 3, 5, and 10 years, and since inception if the fund is less than 10 years old.

Two forms are provided: **Pre-Liquidation** - Lipper derives this figure by accounting for loads, expenses, and interim distributions, which lower load-adjusted return by the tax consequences. Taxes are applied at the highest applicable rate. **Post-Liquidation** - This return figure represents the total investment experience for the investor and accounts for loads, expenses, interim distribution tax effects, and tax effects caused by the sale (or liquidation) of fund shares.

Here is helpful link to Morningstar's definition, which includes formula: TCR.

- The **TCR Rating** represents quintile ranking of a fund's Tax Cost Ratio (TCR) within category across 1, 3, 5, and 10 year periods. Lower is better. A TCR Rating of 1 represents 'Best' in category.

Tenure
Length of time fund manager (or most senior member of team) has been managing fund. Measured in (whole) years.

Three Alarm TA Fund
A fund that has delivered bottom quintile absolute returns in its category for evaluation periods of 1, 3, and 5 year evaluation periods. It is derived from the ratings system developed on the MFO predecessor site Fund Alarm. Please see Three Alarm Funds Redux for more information. Only funds within the oldest share class (OSC) can receive the Three Alarm (TA) distinction.

- **Three Alarm Risk (TA Risk)** is the metric used to compute the Risk Score in the Three Alarm methodology. It is simply the annualized absolute return (APR) minus twice the annualized standard deviation (2 times STDEV), across the specified evaluation period. In this way, it can be viewed as the return an investor might see after a bad year. Most TA Risk values for equity funds at least will be negative.
- The **Three Alarm Risk Rating (TA Risk Rating)** represents quintile ranking of a fund's Three Alarm Risk (TA Risk) within category across specified evaluation period. Like with most deviation or volatility ratings, lower is better. In keeping with rating scale of the Three Alarm methodology, a TA Risk

Rating of -2 represents 'Best' in category.

Total Monthly Return
Month ending fund return expressed in percentage provided by Lipper Global Data Feed for U.S. funds. It reflects reinvestment of dividend and capital gain distributions, while deducting for fund expenses and fees.

Tracking Error
The deviation of a fund relative to its benchmark (as assigned by Lipper). More specifically, it is the annualized standard deviation of the difference in return between a fund and its benchmark across the evaluation period specified. Measured in % per year.

Trend
Signals when a fund is performing above or below its 3-, 6-, 10- and 12-month simple moving averages (SMAs) or exponential moving averages (EMAs). The latter places more emphasis on most recent months. [Specifically, it uses the common 2/(N+1) weighted multiplier.] If Trend is positive, the strategy suggests staying invested. If negative, exiting the position. The strategy has proved effective at mitigating severe drawdown, especially during periods of longer term trends, like experienced during the financial crisis of 2008.

The seminal paper on trend following is Mebane Faber's 'A Quantitative Approach To Tactical Asset Allocation,' which is the most downloaded paper by far on the Social Science Research Network (SSRN) as of November 2019. You might also see 'Method Performance Over Ten Decades' and '10 mo SMA Method In Down Markets'.

The values of **SMA** and **EMA** are based absolute month ending total returns, which include dividends, and are in units of percentage, %. The values of **Trend** represent 3-, 6-, 10-, and 12-month fund performance relative to their respective SMAs or EMAs, and are also in units of percentage, %. They are highlighted in blue if positive and red if negative.

- The **Trend Ratings** represent quintile ranking of a fund's Trend or SMA, respectively, within category across 3- and 10-mo periods. A rating of 5 represents 'Best' in category for both Trend and SMA ratings.

Turnover
The percentage of the fund's assets in its portfolio that were sold during the most recent fiscal year.

Type
A fund's broad investment approach. Lipper groups funds into six types: Bond (**BD**), Alternative (**ALT**), Mixed Asset (**MA**), Equity (**EQ**), Commodity (**COM**), and Money Market (**MM**). For search convenience and taxonomy, MFO adds Index (**IX**)).

Ulcer Index
A third measure of fund volatility and the most direct measure of a fund's bouts with declining (and uncomfortable, hence its name) performance. It measures both magnitude and duration of drawdowns in value. A fund with high Ulcer Index means it has experienced deep or extended declines, or both. Ulcer Index for money market funds is typically zero. During bull markets, stock funds too can have a low Ulcer Index, but when the bull turns, watch out. In the MFO rating system, Ulcer indicates the typical percentage decline in value a fund has experienced at some point during the period evaluated. Its units are %. The equation for Ulcer can be found here. (See An Alternative Approach to the Measurement of Investment Risk & Risk-Adjusted Performance for more about Ulcer Index).

- The '**Ulcer Rating**' represents quintile ranking of a fund's Ulcer Index within category across specified evaluation period. It uses similar methodology as MFO Rating, except in the case of Ulcer, lower is better. So, an Ulcer Rating of 1 represents 'Best' in category.

Volatility, Maximum
Is the maximum of three risk measures (Standard Deviation, Downside Deviation, and Ulcer Index) across the specified evaluation period. Its units can be either %/yr or %, depending on which deviation drives the maximum.

Yield
Fund rate of return based on the income distributions in the past 12 months. The yield is computed by dividing the sum of the income dividends paid during the previous twelve months (or the previous 52 weeks for periods ending at any time other than month-end) by the latest net asset value (NAV) or market price adjusted for capital gains distributions. Expressed in terms of percentage.

- The **Yield Rating** represents quintile ranking of a fund's Yield within category. An rating of 5 represents 'Best' in category.

Yield To Maturity
The rate of return anticipated on a portfolio's bonds if they are held until the maturity date. Units in annualized percent, %/yr. Uses the dollar weighted average of the fixed income securities in the portfolio.