

THE LIPPER LEADER RATING SYSTEM US METHODOLOGY

TOTAL RETURN

CONSISTENT RETURN

PRESERVATION

TAX EFFICIENCY

EXPENSE

AN INTRODUCTION TO THE LIPPER LEADER RATING SYSTEM Overview

The Lipper Leader Rating System is a toolkit that helps guide investors and their advisors in selecting funds that suit individual investment styles and goals. The Lipper Leader Rating System uses investor-centred criteria to deliver a simple, clear description of a fund's success in meeting certain goals, such as preserving capital or building wealth through consistent, strong returns. The strength of Lipper Ratings are their use in conjunction with one another. They can be used together to identify funds that meet the particular characteristics of the investor.

The Lipper Ratings are derived from highly sophisticated formulas that analyze funds against clearly defined criteria. Funds are compared to similar funds, and only those that truly stand out are awarded Lipper Leader status. Each fund is ranked against its peers based on the metric used (such as Total Return or Expense), and the highest 20% of funds in each peer group are named Lipper Leaders, the next 20% receive a rating of 4, the middle 20% are rated 3, the next 20% are rated 2, and the lowest 20% are rated 1. While Lipper Leader Ratings are not predictive of future performance, they do provide context and perspective for making knowledgeable fund investment decisions.

The ratings are subject to change every month and are calculated for the following periods: three-year, five-year, ten-year, and overall. The overall calculation is based on an equal-weighted average of percentile ranks for each measure over three-, five-, and ten-year periods (if applicable).

* If applicable based on data available. Newer markets with insufficient data may be calculated over one and two year periods

Lipper Ratings for Total Return

Lipper Ratings for Total Return reflect funds' historical total return performance relative to 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. For more risk averse investors, Total Return ratings can be combined with Preservation and/or Consistent Return ratings to make a risk-return trade-off decision.

Lipper Ratings for Consistent Return

Lipper Ratings for Consistent Return reflect funds' historical risk-adjusted returns, adjusted for volatility, relative to 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 peer 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.

Lipper Ratings for Preservation

Lipper Ratings for Preservation reflect funds' historical loss avoidance relative to other funds within the same asset class. 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.

Lipper Ratings for Tax Efficiency

Lipper Ratings for Tax Efficiency reflect funds' historical success in postponing taxable distributions relative to 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.

Lipper Ratings for Expense

Lipper Ratings for Expense reflect funds' expense minimization relative to 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.

ABOUT LIPPER

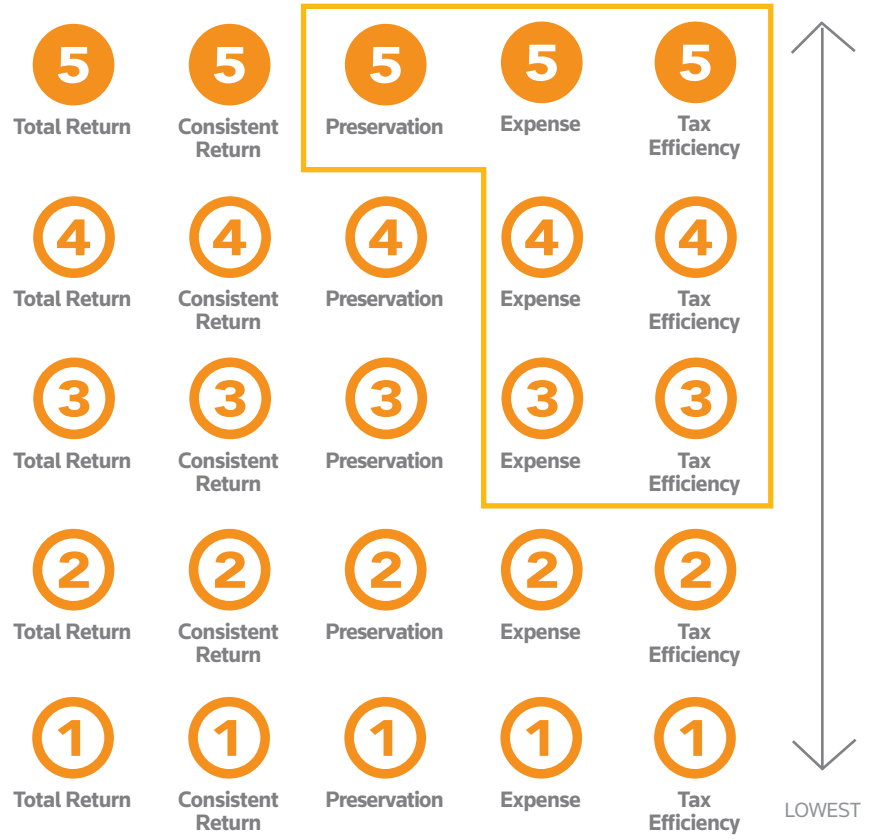
Lipper provides independent insight to asset managers and institutional investors on global collective investments, including mutual funds, retirement funds, hedge funds, and fund fees & expenses. Lipper offers premium-quality data, fund ratings, analytical tools, and global commentary through specialized product offerings. Bolstered by the resources and knowledge of our parent company Thomson Reuters, Lipper provides unparalleled expertise and insight to the funds industry. www.lipperweb.com.

EXAMPLES OF USE

The following examples are for demonstration purposes only. They are not exhaustive and do not represent every type of short-, medium-, or long-term investment horizon. The strength of the Lipper Leader suite of tools is that it can be used with varying degrees of relevance to arrive at a level that suits individual goals.

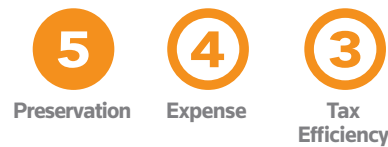
Many investors with short-term horizons list preservation of capital as their primary concern. Therefore, these investors might consider funds with a Lipper Leader for Preservation rating. They may also be concerned with tax efficiency and expenses. These Lipper Ratings could be included in an investor's screen with varying degrees of importance. For instance, Investor A, an investor with a short-term horizon who is primarily interested in preservation of capital and, to a lesser degree, taxes and expenses, might screen for funds with a Lipper Leader for Preservation distinction and for funds listed as 3 or better for Tax Efficiency and Expense..

Investor A: Selection Criteria

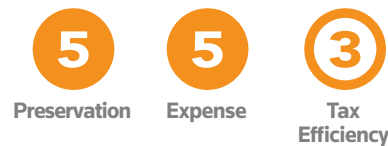


Sample Funds That Meet Investor A's Selection Criteria

FUND A:



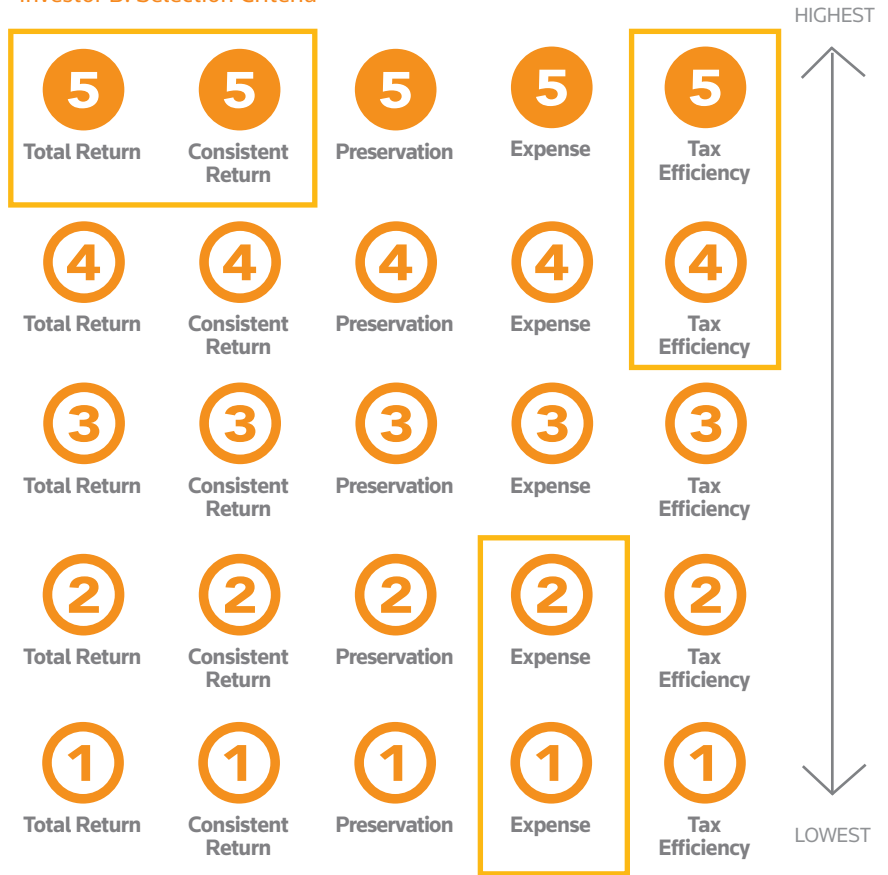
FUND B:



EXAMPLES OF USE

Or consider a long-term investor (Investor B) in a taxable account who believes, “you get what you pay for,” and doesn’t mind paying relatively more for fund management. In this case, screening for funds with an Expense rating of 1 or 2 would be appropriate. This investor may place higher emphasis on measures of performance, thus selecting funds that are Lipper Leaders for Total Return and Consistent Return. Since Investor B is tax conscious, top ranking funds in the Tax Efficiency area are also screened.

Investor B: Selection Criteria



Sample Funds That Meet Investor B’s Selection Criteria

FUND A:



FUND D:



HIGHEST



LOWEST

5

4

3

2

1

LIPPER RATINGS FOR TOTAL RETURN

Introduction

The Total Return measure is primarily a decision making tool for advisors and individual investors.

Total return is defined as the return after (net of) expenses and includes reinvested dividends. Total return is commonly used to evaluate performance and is part of the risk-return trade-off in Modern Portfolio Theory (MPT). Fund managers use it in conjunction with fundamental or quantitative analysis when choosing stocks, and individuals who engage in momentum investing frequently use total return as their primary screen.

Lipper Ratings for Total Return can be used as a standalone tool or in conjunction with other Lipper Ratings.

Calculation and Rating

Lipper Ratings for Total Return reflect funds' historical total return performance relative to peers. Ratings for Total Return are computed for all Lipper Global Classifications with five or more distinct portfolios and span both equity and fixed income funds (e.g., large-cap core, general U.S. Treasury, etc.). The ratings are subject to change every month and are calculated for the following periods: three-year, five-year, ten-year, and overall. The overall calculation is based on an equal-weighted average of percentile ranks for the Total Return metrics over three-, five-, and ten-year periods (if applicable). The highest 20% of funds in each classification are named Lipper Leaders for Total Return, the next 20% receive a rating of 4, the middle 20% are rated 3, the next 20% are rated 2, and the lowest 20% are rated 1.

LIPPER RATINGS FOR CONSISTENT RETURN

Introduction

The Consistent Return measure is a richer risk-adjusted mutual fund return performance measure than others currently available in the marketplace. It takes into account both short and long-term risk-adjusted performance relative to fund classification, together with a measure of the fund's consistency. The measure, which is based on the computation of the Hurst-Holder (H) exponent and Effective Return, helps answer the question, "When is it profitable to hold a certain fund?"

The H Exponent

The H exponent is a measure of risk or the jaggedness of the price series line. Funds with high H exponents tend to be less jagged (less volatile) than funds with low H exponents (which are more jagged or more volatile). H, then, identifies funds that are consistent in terms of volatility or risk.

At Lipper, we have identified three types of volatility behavior when it comes to funds: Funds with high H values (greater than or equal to 0.55) tend to be less jagged—less volatile—than funds that have a medium H exponent (an H between 0.55 and 0.45), while funds that have low H exponents (H less than 0.45) tend to be the most jagged or most volatile funds.

This difference in volatility may be best understood with comparison to a stereo tuner. Those funds with high H exponents are similar to those radio stations with a strong signal and little static. Low H funds are similar to those stations with a weak signal and lots of static or noise. Those stations that are in between are similar to medium-level H funds. The H value, then, is similar to a signal-to-noise ratio—the stronger the signal and the lower the noise, the higher the H value. The weaker the signal (and the stronger the noise), the lower the H value.

Effective Return

The H exponent alone, however, is not enough to answer the question: when is it profitable to hold a certain fund? To answer that, we need to look at returns as well as H. The H exponent can be used on any price series 100% of the time. However, the most desirable profit and loss (P&L) pattern is one that shows steadily increasing profitability. But this occurs only intermittently. What we need to look for, then, is a smoothly upwardsloping P&L over a variety of periods to locate a profitable fund. This is where effective return comes in.

Effective Return is a risk-adjusted return measure that looks back over a variety of holding periods (measured in days, weeks, months and/or years) and helps us decide if the H exponent can or cannot profitably characterize the behavior of a fund.

If a fund has a high H exponent and a positive Effective Return, this is an indication of a good fund to purchase. If a fund has a high H exponent and a negative Effective Return, then the fund is probably exhibiting a negative P&L and the investor should probably continue looking.

What we do when the H exponent is not high but the Effective Return value is positive? Since H is the intrinsic measure of volatility for a fund, i.e., a measure of the jaggedness of the price line change, we want a low-to-medium-range H fund to have a higher Effective Return to compensate an investor for the greater risk he or she will be taking vis-à-vis a fund with a higher H value. How much higher the return needs to be is dependent on the investor's appetite for risk.

Ranking Methodology

At Lipper, we have decided to use both H and Effective Return on a classification level, so our use of H and Effective Return looks at outperformance versus a peer group. The ranking methodology is as follows:

1. All the funds in the classification are sorted in descending order based on their H exponent.
2. The funds with H values greater than or equal to 0.55 are separated out, as are those that are between 0.55 and 0.45 and those that have H less than 0.45.
3. In each group, the funds are now re-ranked in descending order based on their Effective Return.
4. The high (greater than or equal to 0.55) H funds with negative Effective Return are removed from the list of other high H funds and placed after the last fund in the less than 0.45 category.
5. The groups are now rejoined in their original order (high, medium, and low H), with the high H funds that have a negative Effective Return bringing up the rear.

The Consistent Return components have other uses beyond the Lipper Leader Rating System. Those funds that have a medium H value (an H between 0.55 and 0.45) are perfect candidates for traditional mean-variance analysis, whether that means making fund choices based on Sharpe ratios, downside risk measures such as Sortino, the Modigliani and Modigliani RAP measures, etc. Most traditional financial measures are computed assuming that the return series is normally distributed; now these valuable tools can be used with more confidence than in the past.

Calculation and Rating

Lipper Ratings for Consistent Return reflects funds' historical risk-adjusted returns, adjusted for volatility, relative to peers. Ratings for Consistent Return are computed for all Lipper classifications with five or more distinct portfolios and span both equity and fixed income funds (e.g., large-cap core, general U.S. Treasury, etc.). The ratings are subject to change every month and are calculated for the following periods: three-year, five-year, ten-year, and overall. The overall calculation is based on an equal-weighted average of percentile ranks of the Consistent Return metrics over three, five-, and ten-year periods (if applicable). The highest 20% of funds in each classification are named Lipper Leaders for Consistent Return, the next 20% receive a rating of 4, the middle 20% are rated 3, the next 20% are rated 2, and the lowest 20% are rated 1.

LIPPER RATINGS FOR PRESERVATION

Introduction

Economist Irwin Friend (1970)¹ noted that the value of a single-parameter calculation of performance rests not only on its ability to measure investment management skill and market forecasting proficiency, but also its utility to the investor in delivering pertinent and sensible information. The utility of popular tools such as the Sharpe ratio may not be high for investors whose investment decisions are a function of absolute loss avoidance. The Preservation measure aims to help investors at various levels of risk averseness by providing a distinctive one-parameter measure of downside risk.

Preserving Capital

The Preservation model is defined as the sum of negative monthly returns over three-, five-, and ten-year performance periods.

For ease of use, the Preservation model assumes that the investor is more concerned about negative performance than below-target returns (because "target" is broadly defined). In fact, a 1996 Investment Company Institute survey found that 51% of mutual fund investors think of risk as the chance of losing money.

Unlike the other Lipper measures, the Preservation measure is calculated from three broad asset classes (equity funds, mixed equity funds, and bond funds) instead of from the investment classification level.

Calculation and Rating

Lipper Ratings for Preservation reflect funds' historical loss avoidance relative to other funds within the same asset class. Ratings for Preservation are computed from three broad asset classes—equity funds, mixed-equity funds, and bond funds (e.g., equity includes U.S. diversified, sector, and world equity funds). The ratings are subject to change every month and are calculated for all the following periods: three-year, five-year, ten-year, and overall. The overall calculation is based on an equal-weighted average of percentile ranks for the Preservation metrics over three-, five-, and ten-year periods (if applicable). The highest 20% of funds in each classification are named Lipper Leaders for Preservation, the next 20% receive a rating of 4, the middle 20% are rated 3, the next 20% are rated 2, and the lowest 20% are rated 1.

LIPPER RATINGS FOR TAX EFFICIENCY

Introduction

The Tax Efficiency measure is primarily a decision making tool for advisors and individual investors. Its purpose is to rate mutual funds based on their relative tax efficiency versus their peers.

The impact of taxes on mutual fund returns has received increasing attention over the past few years, so much so that the Securities and Exchange Commission (SEC) and the Association for Investment Management and Research have issued papers outlining the preferred ways of computing tax efficiency.

Relative Wealth

Lipper has chosen one of these preferred methodologies—relative wealth—as the measure to compute tax efficiency. Lipper calculates relative wealth over three-, five-, and ten-year periods. Relative wealth is defined as:

$$\text{Relative Wealth} = \left[\frac{1 + R_{at}}{1 + R_{bt}} - 1 \right] * 1,000$$

Rat=pre-liquidation after-tax return

Rbt=load-adjusted or SEC standardized return

Relative wealth is a way of looking at both before- and after-tax returns in an intuitive and powerful manner. The actual numerical result of the relative wealth calculation explains how much value, as a percentage of change, is lost because of taxes as compared to pre-tax value (net of all expenses and loads). The relative wealth measure is really a modified percentage-change calculation and, as such, if divided by 10 would be presented in a standard percentage format.

As an example if a fund returned minus 9.69% over a three-year period and after taxes, the fund returned minus 11.09% over the same period, then we can interpret the pre-liquidation result of negative 1.55% as the loss in value due to interim taxes compared to our pre-tax value. Conversely, the fund kept 98.45% of its pre-tax value.

As a side note, relative wealth can be computed on a pre-liquidation or a post-liquidation basis. From an investor's standpoint, pre-liquidation relative wealth is a computation of the percentage lost to taxes prior to liquidating or cashing out the fund. Post-liquidation calculates the percentage lost to taxes including the gain (or losses) realized at liquidation. Lipper uses pre-liquidation relative wealth as the methodology for computing Lipper Ratings for Tax Efficiency, since we believe most investors are long-term investors by nature and are not interested primarily in cashing out their fund holdings at a particular time.

Calculation and Rating

Lipper Ratings for Tax Efficiency reflect the funds' historical success in postponing taxable distributions relative to peers. Ratings for Tax Efficiency are computed for all Lipper classifications with five or more distinct portfolios and span both equity and fixed income funds (e.g., large-cap core, general U.S. Treasury, etc.). The ratings are subject to change every month and are calculated for the following periods: three-year, five-year, ten-year, and overall. The overall calculation is based on an equal-weighted average of percentile ranks for the Tax Efficiency metrics over three-, five-, and ten-year periods (if applicable). The highest 20% of funds in each classification are named Lipper Leaders for Tax Efficiency, the next 20% receive a rating of 4, the middle 20% are rated 3, the next 20% are rated 2, and the lowest 20% are rated 1.

LIPPER RATINGS FOR EXPENSE

Introduction

The Expense measure is primarily a decision making tool for advisors and individual investors. Its purpose is to rate mutual funds in terms of their level of expenses relative to peers with similar load structures.

Investors often use expenses as a criterion to choose or sort funds. One of the reasons given for looking at expenses (in conjunction with other measures such as total return, risk-adjusted return, etc.) is that higher costs could lead to lower net returns and hence poorer performance, unless they are more than offset by higher gross performance.

In an unpublished study (available at his Web site: <http://www.stanford.edu/~wfsarpe/home.htm>), Nobel laureate and Stanford professor William Sharpe found that the average Sharpe ratio for funds with the smallest expense ratios was over 75% greater than that of funds with the greatest expense ratios. Though Professor Sharpe's study was not exhaustive (it did not include funds that were in existence at the start of the test period but "died" before the end of the test period), it is fair to say that at least directionally, funds with higher expenses add more (and possibly far more) to expenses than they add to performance.

Lipper Ratings for Expense, then, differentiate funds that have minimized expenses compared to competing funds. These costs are subtracted directly from a fund's return, so if two funds have equal returns before expenses, the lower cost fund will deliver higher net returns to an investor.

Methodology

To rate an individual fund, Lipper first looks at the classification the fund is in and then at the load structure (funds within a classification are grouped into one of three load classifications— no-load/front-end load, back-end load/level load, and institutional load). The fund is then ranked against its peers (similar classification, similar load structure) so a fund that has the lowest expense levels within a given classification and time period is designated as a Lipper Leader for Expense.

Calculation and Rating

Lipper Ratings for Expense reflect the funds' expense minimization relative to peers with similar load structures. Ratings for Expense are computed for all Lipper Global Classifications with 5 or more distinct portfolios and span both equity and fixed income funds (e.g., large-cap core, general U.S. Treasury, etc.). The ratings are subject to change every month and are calculated for the following periods: three-year, five-year, ten-year, and overall. The overall calculation is based on an equal-weighted average of percentile ranks for Expense metrics over three-, five-, and ten-year periods (if applicable). The highest 20% of funds in each classification are named Lipper Leaders for Expense, the next 20% receive a rating of 4, the middle 20% are rated 3, the next 20% are rated 2, and the lowest 20% are rated 1.

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