

How Expense Ratios and Star Ratings Predict Success

We've run some fresh data on expense ratios and the Morningstar Rating for funds.

I'll share the details on who, what, and when, but first a few grabbers. How often did it pay to heed expense ratios? Every time. How often did it pay to heed the star rating? Most of the time, with a few exceptions. How often did the star rating beat expenses as a predictor? Slightly less than half the time, taking into account funds that expired during the time period.

In examining the expense ratios and star ratings, I settled on three key measures that, to me, are closest to investors' bottom lines and help cut through all of the clutter.

Success Ratio

While total returns are nice, they are not the whole story. Mutual fund companies kill off their funds at a rapid rate—thus, sweeping mistakes under the rug. However, your losses are just as real if your fund is liquidated. If there's a destruction bias for a data point, then you want to factor that in. The success ratio tells you what percentage of funds in a given group survived and outperformed their peers. After all, that's what success really is. Anything short is a failure; yet too often, investors and the press act as though total returns are the same thing as the success ratio. This is the strongest of the three measures because it is not affected by survivorship bias.

Total Returns

Everyone wants to know how any measure works at predicting total returns. Because equal proportions of each category are given 5 stars and 1 star, one can safely sum up returns across categories to see how the measure has done for an asset class as a whole.

Subsequent Star Ratings

The star rating is a measure of risk- and load-adjusted returns, so naturally I want to know whether the star rating is able to predict future risk- and load-adjusted returns. Investors have long handled lower-risk funds better than higher-risk funds because lower-risk funds don't trigger strong feelings of fear or greed. Thus, lower-risk funds with slightly lower official returns actually led to better results for investors than high-risk, high-return funds.

How We Ran the Data

We took a snapshot of star ratings and expense ratios from 2005 through 2008 and then tracked their progress through March 2010. We rolled up category level data into five broad asset classes: domestic equity, international equity, balanced, taxable bond, and municipal bond.

We then measured total returns as of the end of March 2010 for the mutual funds that survived the entire period. For the success ratio, we included funds that were merged or liquidated, as well as those that survived, in order to calculate the number that both survived and outperformed. For the star rating, we recorded the five-year star rating for the data set from 2005, as well as the three-year rating. For 2006 and 2007, we recorded the ensuing three-year rating—meaning we measured the figure in March 2009 for the class of 2006 and the rating in March 2010 for



Russel Kinney,
Director of Fund Research and Editor

How Expenses and Stars Predict Success

Broad Group	Expense Ratio Quintile Begin Year	Total Return	Total Return Success Ratio	3yr Rating as of 31-March End Year	5yr Rating as of 03/10/2010	Star Rating	Total Return	TR Success Ratio	3yr Rating	5yr Rating	Winner Expense Ratio vs. Star Success Ratio	
2005 5yr	Domestic Equity	1	3.35	47.83	3.24	3.23	★★★★★	2.79	46.60	3.09	2.96	1.23 expense ratio
		5	2.02	23.39	2.66	2.66	★	1.60	20.44	2.53	2.60	
		Difference	1.33	24.44	0.58	0.57	Difference	1.19	26.16	0.56	0.36	-1.72 stars
	International Equity	1	6.46	48.03	3.27	3.27	★★★★★	5.74	52.59	3.18	3.10	-4.56 stars
		5	5.25	29.63	2.62	2.70	★	6.53	13.01	2.35	2.45	
		Difference	1.21	18.40	0.65	0.57	Difference	-0.79	39.58	0.83	0.65	-21.18 stars
	Balanced	1	3.76	49.55	3.30	3.17	★★★★★	3.87	57.89	3.24	3.03	-8.34 stars
		5	2.87	30.26	2.48	2.52	★	3.70	13.33	2.12	2.91	
		Difference	0.89	19.29	0.82	0.65	Difference	0.17	44.56	1.12	0.12	-25.27 stars
Taxable Bond	1	5.11	63.54	3.55	3.34	★★★★★	5.36	72.43	3.43	3.47	-8.89 stars	
	5	3.82	22.82	2.11	2.30	★	3.74	21.27	2.24	2.30		
	Difference	1.29	40.72	1.44	1.04	Difference	1.62	51.16	1.19	1.17	-10.44 stars	
Municipal Bond	1	3.83	67.18	3.78	3.74	★★★★★	3.39	65.29	3.62	3.49	1.89 expense ratio	
	5	2.75	9.69	1.95	1.86	★	3.00	12.00	1.93	1.83		
	Difference	1.08	57.49	1.83	1.88	Difference	0.39	53.29	1.69	1.66	4.20 expense ratio	
2006 4yr	Domestic Equity	1	-0.27	49.40	3.13		★★★★★	-0.76	37.19	2.77		12.21 expense ratio
		5	-1.66	25.86	2.77		★	-1.09	24.18	2.92		
		Difference	1.39	23.54	0.36		Difference	0.33	13.01	-0.15		10.53 expense ratio
	International Equity	1	1.47	47.44	3.24		★★★★★	-0.17	39.84	2.36		7.60 expense ratio
		5	-0.11	26.68	2.68		★	0.90	24.86	2.96		
		Difference	1.58	20.76	0.56		Difference	-1.07	14.98	-0.60		5.78 expense ratio
	Balanced	1	2.01	41.40	3.00		★★★★★	2.83	50.00	2.69		-8.60 stars
		5	1.05	26.48	2.83		★	1.10	18.40	3.19		
		Difference	0.96	14.92	0.17		Difference	1.73	31.60	-0.50		-16.68 stars
Taxable Bond	1	5.51	60.10	3.20		★★★★★	5.62	54.84	2.67		5.26 expense ratio	
	5	4.27	27.05	2.34		★	4.26	24.20	2.51			
	Difference	1.24	33.05	0.86		Difference	1.36	30.64	0.16		2.41 expense ratio	
Municipal Bond	1	3.87	55.43	3.44		★★★★★	2.81	30.34	2.47		25.09 expense ratio	
	5	2.70	14.67	2.18		★	3.22	24.82	2.63			
	Difference	1.17	40.76	1.26		Difference	-0.41	5.52	-0.16		35.24 expense ratio	
2007 3yr	Domestic Equity	1	-3.15	52.45	3.14		★★★★★	-3.50	45.47	2.87		6.98 expense ratio
		5	-4.65	29.79	2.75		★	-4.85	26.94	2.70		
		Difference	1.50	22.66	0.39		Difference	1.35	18.53	0.17		4.13 expense ratio
	International Equity	1	-3.98	49.86	3.25		★★★★★	-5.51	49.19	2.85		0.67 expense ratio
		5	-5.52	34.62	2.71		★	-4.97	28.67	2.71		
		Difference	1.54	15.24	0.54		Difference	-0.54	20.52	0.14		-5.28 stars
	Balanced	1	-0.49	49.29	2.94		★★★★★	-1.36	38.46	2.51		10.83 expense ratio
		5	-1.29	35.06	2.59		★	-0.97	30.08	2.92		
		Difference	0.80	14.23	0.35		—	-0.39	8.38	-0.41		5.85 expense ratio
Taxable Bond	1	4.96	64.15	3.20		★★★★★	4.60	57.14	3.10		7.01 expense ratio	
	5	3.58	34.05	2.42		★	3.94	33.63	2.33			
	Difference	1.38	30.10	0.78		Difference	0.66	23.51	0.77		6.59 expense ratio	
Municipal Bond	1	3.51	70.89	3.62		★★★★★	1.55	43.22	2.67		27.67 expense ratio	
	5	2.21	26.54	2.10		★	2.86	35.38	2.22			
	Difference	1.30	44.35	1.52		Difference	-1.31	7.84	0.45		36.51 expense ratio	

2008 data continued on Page 3

How Expenses and Stars Predict Success (continued from Page 2)

Broad Group	Expense Ratio Quintile Begin Year	Total Return	Total Return Success Ratio	3yr Rating as of 31-March End Year	5yr Rating as of 03/10/2010	Star Rating	Total Return	TR Success Ratio	3yr Rating	5yr Rating	Winner Expense Ratio vs. Star Success Ratio
Domestic Equity	1	-1.85	49.93			★★★★★	-2.85	39.35			10.58 expense ratio
	5	-3.13	30.34			★	-2.28	33.07			
	Difference	1.28	19.59			Difference	-0.57	6.28			13.31 expense ratio
International Equity	1	-6.72	52.65			★★★★★	-6.94	52.70			-0.05 stars
	5	-8.01	35.34			★	-7.44	39.35			
	Difference	1.29	17.31			Difference	0.50	13.35			3.96 expense ratio
Balanced	1	-0.04	54.21			★★★★★	0.33	65.96			-11.75 stars
	5	-1.13	39.04			★	-1.04	31.75			
	Difference	1.09	15.17			Difference	1.37	34.21			-19.04 stars
Taxable Bond	1	5.37	59.33			★★★★★	6.18	78.31			-18.98 stars
	5	4.41	39.43			★	1.99	17.97			
	Difference	0.96	19.90			Difference	4.19	60.34			-40.44 stars
Municipal Bond	1	4.69	70.72			★★★★★	5.04	82.56			-11.84 stars
	5	3.72	22.15			★	3.27	15.48			
	Difference	0.97	48.57			Difference	1.77	67.08			-18.51 stars

This table shows how the lowest- and highest-cost quintiles in each category fared from a point in time forward through March 2010. We then subtract the results from the priciest quintile from the cheapest quintile to see what the difference was. A positive figure indicates that lower expense ratios performed better than higher expense ratios. Total return figures are annualized. We did the same for the star rating, with 5 stars on top and 1 star below. Again, a positive figure indicates that 5-star funds performed better than 1-star funds. Finally, on the far right we compare 5-star funds with cheapest-quintile funds and say which did better. We also compare the differences in success ratio of 5- and 1-star funds and cheap and expensive funds to see which measure did a better job of separating winners from losers. For example, you can see that for the class of 2005 domestic equity, cheap funds did slightly better than star ratings. However, the gap in success from 5-star and 1-star funds was greater than that for expense ratios, so it did a better job of separating winners from losers. Overall, you can see that the star rating fared better in the periods beginning in 2005 and 2008 but expenses were the better guide in 2006 and 2007.

the class of 2007. For the class of 2008, we don't yet have a star rating.

For the purpose of this article, I focus on the gap between 1- and 5-star funds and cheapest and most expensive quintiles.

How Expense Ratios Performed

If there's anything in the whole world of mutual funds that you can take to the bank, it's that expense ratios help you make a better decision. In every single time period and data point tested, low cost funds beat high-cost funds.

Expense ratios are strong predictors of performance. In every asset class over every time period, the cheapest quintile produced higher total returns than the most expensive quintile.

For example, the cheapest quintile from 2005 in domestic equity returned an annualized 3.35% versus 2.02% for the most expensive quintile over the ensuing five years. The gap was similar in other categories such as taxable bond, where cheap funds returned 5.11% versus 3.82% for pricey funds. That

same relationship held up dependably in the other time periods we measured. For 2008, the cheapest quintile of balanced funds lost 0.04% over the next two years, while the most expensive shed 1.13%.

The gap was also impressive as measured by the success ratio because high-cost funds are much more likely to have poor performance and be liquidated or merged away. For the 2005 group, we found that 48% of domestic-equity funds in the cheapest quintile survived and outperformed versus 24% in the priciest quintile. Put another way, funds in the cheapest quintile of domestic equity were twice as likely to succeed as those in the priciest quintile. It was a similar story in other categories, although in munis the advantage was greater than 6 to 1. The same basic relationship held up for the other years we looked at. Although I think of expense advantages as taking a long time to compound to your advantage, even the 2008 group saw low-cost funds with nearly a 2 to 1 success advantage.

Given that performance edge, you won't be surprised to hear that low-cost funds also produced better risk- and load-adjusted performance as measured by

the star rating. For example, the 2005 group enjoyed a subsequent 3.23 average star rating compared with 2.66 for the priciest quintile in domestic equity. The edge grew in taxable bonds to 3.34 versus 2.3. The edge held up for predicting three-year ratings for the 2006 and 2007 groups.

How Star Ratings Performed

In general, 5-star mutual funds beat 1-star funds on our three measures, although there were exceptions. All told, the stars guided investors to better results in 59 out of 70 (84%) observations.

In 2005, 5-star domestic-equity funds produced a subsequent return of 2.8% versus 1.6% for 1-star funds. Balanced funds and municipal-bond funds enjoyed a slight edge, but 5-star international funds that survived actually lagged the returns of 1-star funds that survived.

But what happens when you take extinct funds into account for the success ratio? Those star-rating losses turn into victories. The star rating helped investors make better decisions in every example measured by the success ratio.

In that 2005 class, fully 53% of 5-star international equity funds survived and outperformed, whereas a mere 13% of 1-star funds survived and outperformed. How does that jibe with the outperformance of those that survived? Many 1-star funds swung for the fences, and the lucky few that survived enjoyed some strong returns, whereas most 5-star funds survived and outperformed, only less dramatically so. In fact, 5-star funds beat 1-star funds every single time as measured by the success ratio.

When it comes to predicting subsequent star ratings, the rating once again did a respectable job overall, particularly when you consider lousy funds that have been whacked.

Expense Ratios vs. Star Ratings

The expense ratio and the star rating helped investors make better decisions. The star rating and expense ratios were pretty even on the success ratio—the

closest thing to a bottom line. By and large, the star ratings from 2005 and 2008 beat expense ratios while expense ratios produced the best success ratios in 2006 and 2007. Overall, expense ratios outdid stars in 23 out of 40 (58%) observations.

For example, in the class of 2005, 5-star balanced funds produced a success ratio of 58% versus 13% for 1-star funds. Meanwhile, the cheapest quintile of balanced funds produced a success ratio of 50%, while the priciest quintile earned a success ratio of 30%. Thus, stars did a better job of separating winners from losers.

Perhaps the most compelling argument for expenses is that they worked every time—because costs always are deducted from returns regardless of the market environment. The star rating, as a reflection of past risk-adjusted performance, is more time-period dependent. When the market swings dramatically, the star rating is going to be less effective.

Conclusion

Investors should make expense ratios a primary test in fund selection. They are still the most dependable predictor of performance. Start by focusing on funds in the cheapest or two cheapest quintiles, and you'll be on the path to success. (Remember, we highlight funds with expense ratios in the cheapest quintile in the data pages in the back of *FundInvestor*.)

Stars can be helpful, too, particularly in identifying funds that might be merged out of existence. Even if a 1-star fund starts to perform better, there's always the danger that the fund company will decide that its track record is too poor and will fold the fund, forcing you to move your money elsewhere.

Be sure to go beyond both measures to brush up on a fund's other key fundamentals. Don't look for the 10-second answer. You should understand management, strategy, and stewardship, too, before you send in your check. Our Fund Analyst Picks take all of these things into account. ■■■

Contact Russel Kinnel at russel_kinnel@morningstar.com

All investing is subject to risk.

Investments in bond funds are subject to interest rate, credit, and inflation risk.

Although the income from a municipal bond fund is exempt from federal tax, you may owe taxes on any capital gains realized through the fund's trading or through your own redemption of shares. For some investors, a portion of the fund's income may be subject to state and local taxes, as well as to the federal Alternative Minimum Tax.

Foreign investing involves additional risks including currency fluctuations and political uncertainty.

Past performance is not a guarantee of future results.