

How Investors Miss Big Profits

By Louis S. Harvey

Article Highlights

- Individual investors underperform the mutual funds they invest in, missing out on up to 11% in annualized returns.
- Rather than maintaining long-term positions, investors sold in down markets and waited for recoveries to reinvest.
- Purpose-based asset management takes advantage of psychological behaviors by segmenting investments according to their goals.

Back in 1993, a curious thought crossed my mind while analyzing the federal regulations that were new at the time.

Mutual funds were permitted to report investment returns for one, three, five and 10 years (“alpha”), but how many investors actually kept their investments unchanged for those specific periods? If all investors did not hold on to their investments for those precise periods, then they had to be doing better or worse than was being reported.

Alpha is a measure of performance on a risk-adjusted basis. Alpha takes the volatility (price risk) of a mutual fund and compares its risk-adjusted performance to a benchmark index. The excess return of the fund relative to the return of the benchmark index is a fund’s alpha. Simply stated, alpha represents the value that a portfolio manager adds to or subtracts from a fund’s return. Investors’ alpha is the value a retail investor adds to or subtracts from the alpha delivered by the portfolio manager. The return of the respective index is considered to be zero alpha, so any excess over the index is considered positive investor alpha.

I developed a calculation that would measure whether mutual fund investors were actually earning more or less than the reported alpha. In 1994, DALBAR issued the first Quantitative Analysis of Investor Behavior (QAIB), showing that investors had severely underperformed the average mutual fund alpha! This underperformance continues to this day.

Investors were actually missing much of the alpha that



mutual funds had earned. Using the S&P 500 index to approximate the returns that equity mutual funds produced, investors were leaving between 10.97% and 4.32% on the table, as Table 1 shows.

This shocking finding of underperformance led to research to understand how and why millions of investors were missing so much of the alpha and, ultimately, what they could do to capture more of the profits that

funds were earning.

Buying High and Selling Low

The first breakthrough came when we discovered how long investors kept their money in equity mutual funds. If the money was not invested, then the profits would be lost. We found that instead of holding investments for 20 years or more, investors were in and out in as little as two to three years. It was clear that investors had to remain invested for a longer time period if they were to capture more of the alpha of mutual fund managers.

We then discovered the pattern of behavior that led to the short time horizon. It was simple enough. We found that investors withdrew funds in greater volume following a market decline, thus losing much of the profits they had earned. This meant that mutual fund investors were selling investments long after the large institutions had taken their profits!

Almost as destructive as withdrawing in a down market

Table 1. Investors Underperform the Market by Big Margins

20-Year Period Ending	S&P 500 (%)	Average Equity Fund Investor (%)	Difference (%)
1998*	17.18	6.71	(10.47)
1998*	17.90	7.25	(10.65)
1999*	18.01	7.23	(10.78)
2000*	16.29	5.32	(10.97)
2001*	14.51	4.17	(10.34)
2002*	12.22	2.57	(9.65)
2003	12.98	3.51	(9.47)
2004	13.20	3.70	(9.50)
2005	11.90	3.90	(8.00)
2006	11.80	4.30	(7.50)
2007	11.81	4.48	(7.33)
2008	8.35	1.87	(6.48)
2009	8.20	3.17	(5.03)
2010	9.14	3.83	(5.31)
2011	7.81	3.49	(4.32)

*The analysis begins in 1984 so that from 1997–2002, the period covered is less than 20 years. Since 2003, the long-term analysis has covered a 20-year time frame.

was waiting for the market to recover to start investing again. Yes, we proved by our investigations that investors were adding to their investments when the prices were highest and withdrawing when prices were low.

This pattern was repeated month after month since 1984, which was as far back as the data we had allowed us to analyze. Months of down markets

were followed by outflows and after months of up markets, the inflows accelerated.

Reasons for the Irrational Behavior

But why would mutual fund investors act so irrationally? Were they being advised to do this? After interviewing several hundred investors after market downturns, the finding was clear. Investors decided to get out of their investments to avoid further losses. They lacked the confidence that the market would rise again and restore the value that once was theirs. This phenomenon was later described as the psychological behavior of “loss aversion.”

On the other hand, confidence was restored after months of rising markets and at that point the inflows resumed. This phenomenon was later attributed to the psychological behaviors of “herding” and “media response.”

Further research showed that loss aversion, herding and media response were not the only forces that caused the loss of profits. In all, we found that there were nine psychological behaviors that were to blame for the underperformance in one way or another. Table 2 defines the nine psychological behaviors that affect investor returns.

Use, Instead of Fighting, Psychological Behaviors

With the problem clearly identified, the solution seemed simple, at first. If investors were taught to make rational decisions, they could avoid the psychological traps. After years of investor education, there was some improvement, as can be seen in Figure 1, but the basic problem remained. The market meltdown of 2008 was solid evidence that investors still reacted to their psychological instincts.

Further research was clearly necessary. This research led to another way of making better investment decisions. Instead of trying to change psychological behaviors, this new approach takes advantage of them. Specifically loss aversion, narrow framing and mental accounting are deployed. The psychological strategy is to protect the portions of investments that are most critical to the investor, while permitting risks with portions where time will permit losses to be recovered.

The term for this strategy is purpose-based asset management (PBAM), in which investors subdivide investments and associate each subdivision with a specific purpose. In this way, each subdivision can be assigned a different risk tolerance and invested accordingly. For example, one subdivision might be “minimum acceptable retirement income,” which would be very conser-

Figure 1. Loss of Investor Profit

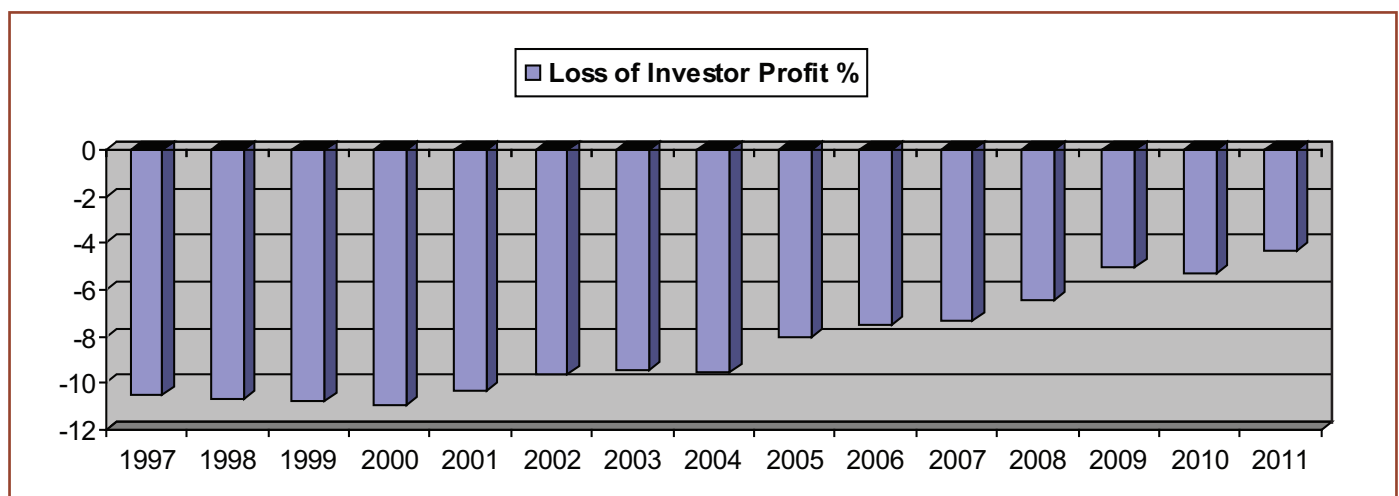


Table 2. Psychological Behaviors Affecting Investor Returns

1	Loss Aversion	Expecting to find high returns with low risk. Loss aversion causes the investor to search for investments that don't exist and results in either taking no action or later discovering that the selected investment fails to meet the expectation. The effect is often selling the investment at an imprudent time, which adversely affects the alpha that professional investment managers create.
2	Narrow Framing	Making decisions without considering all implications. The result is quick decision-making with the consequence that facts are uncovered after inappropriate investments are made. Investors make precipitous investment changes, which can lose alpha.
3	Anchoring	Relating to the familiar experiences, even when inappropriate. Anchoring is a very powerful communication method but can mislead investors unless it is used with caution. For example, investors can be misled about the stability of an investment if analogies are used to represent stability. Analogies of growth can also lead to unrealistic beliefs and expectations. Alpha can be lost by selecting investments that cannot reasonably be expected to produce the expected alpha.
4	Mental Accounting	Taking undue risk in one area and avoiding rational risk in others. Used wisely, mental accounting can permit an investor to achieve high alphas in one area, while protecting assets for other purposes. Imprudent use of mental accounting can be as damaging to alpha as any other psychological factor since investors can be misled into inappropriate investments.
5	Diversification	Seeking to reduce risk, but simply using different sources. This extremely valuable investment strategy can also be misused to create a false sense of protection that results in alpha-killing actions.
6	Herding	Copying the behavior of others even in the face of unfavorable outcomes. Investors who go along with the crowd simply because there is a crowd tend to avoid catastrophic errors, but seldom achieve above-average results. Alpha is not achieved by herding.
7	Regret	Treating errors of commission more seriously than errors of omission. Investors who fear decision-making lose alpha through inaction or reversals. Inaction can prevent losses caused by poor decisions, but is unlikely to produce alpha for the investor.
8	Media Response	Tendency to react to news without reasonable examination. Familiar media sources have become less reliable as they compete with newer, faster and lower-cost outlets. At the same time, new media outlets seldom have very thorough authentication. This question of reliability raises the concern about reacting to news.
9	Optimism	Belief that good things happen to me and bad things happen to others. Optimistic investors hold on to investments after it becomes evident that losses are not likely to be recovered. Holding on to poor investments is yet another way psychological factors can reduce alpha.

vatively invested. The subdivision for the purpose of “inheritance” could be more aggressively invested.

The result of this purpose-based system is that the loss aversion is avoided for the minimum retirement income, while the short-term ups and downs of the inheritance portfolio are tolerated

without the temptation to sell at the worst-possible times.

Implementing PBAM is actually quite simple, but it does require some discipline to start. Here are the steps:

1. Identify Purposes

Define each major purpose of funds

and for each determine:

- Approximate time frame when funds will be needed;
- Minimum needs:
 - i. Lump sum that will be needed,
 - ii. Monthly payments that will be needed and

(continued on page 20)

than their share of trading volume, a bullish indicator for the market. When the TRIN is greater than one (1.0), declining shares are getting the bulk of the trading volume, which is a bearish indicator. Readings near one (1.0) are interpreted as being neutral.

When the market makes a strong upward move on high volume, for example, advancing volume will overwhelm declining volume. Even though the number of advancing issues may far outpace the number of declining issues, the large ratio of advancing volume to declining volume will offset the advance/decline ratio, and the TRIN will fall.

Figure 5 is a six-month daily price chart for the Dow Jones industrial average as well as the TRIN for the NYSE. The solid red line is the daily closing value for the Dow Jones industrial average and the solid blue line is the daily closing TRIN for the NYSE. The gray bars represent the 10-day

simple moving average for the TRIN.

Conclusion

By gaining an understanding of the direction of the overall market, investors and traders alike can gain the upper hand. However, there is more to gauging the movement and strength of the market than just following the major market indexes. Market breadth statistics like those discussed here provide additional insight into the direction and strength of markets as well as the typical stock.

Wayne A. Thorp, CFA, is senior financial analyst at AAIL and editor of Computerized Investing. Follow him on Twitter @CI_Editor.

Portfolio Strategies

(continued from page 15)

- iii. Duration of monthly payments that will be needed; and
- Optimum needs: How much more than the minimum would be needed for desired results:
- iv. Lump sum that will be needed, and
- v. Monthly payments that will be needed.

2. Prioritize

Arrange purposes in order of importance, taking each minimum and maximum separately—for example, minimum retirement income may be more important than minimum education, but optimum retirement income may not be.

3. Fund

Identify the available sources of funds:

- Capital such as cash, investments, real estate;
- Loans, including lines of credit, mortgages, other debt facilities; and

- Earnings that can be used to accumulate capital or fund monthly payments.

Using the prioritized list, assign funds to each purpose in order of priority from available sources. Stop when funds are exhausted. Only those purposes that are funded can be considered.

If necessary, repeat Step 2.

4. Invest

Develop an investment plan that includes:

- Setting a risk level for each funded purpose;
- Grouping purposes with similar risk levels;
- Selecting investment vehicles; and
- Laying out a transaction plan as needed:
- vi. Redeploy existing capital and debt,
- vii. Make investments, and
- viii. Initiate accumulation plan.

Investors using PBAM have selected a variety of purposes to allocate invest-

ments, including:

- retirement income,
- education,
- health,
- debt payment,
- real estate,
- home improvements,
- automobiles,
- vacation/travel,
- purchase a business interest,
- transfer to heirs,
- charity,
- speculation and
- other major purchases.

Adopting PBAM assures that investments are properly deployed and the panic of market volatility can be weathered with the confidence of knowing that you are not losing alpha and that the essential funds are protected.

It is hoped that over the next decade, investors will use prudent investment strategies, such as purpose-based asset management, to avoid the tragic loss of reacting emotionally without the safety net of a program that incorporates investor psychology. ▲

Louis S. Harvey is the president of DALBAR Inc., the financial community's leading independent expert for evaluating, auditing and rating business practices, customer performance, product quality and service. Find out more at www.aail.com/authors/louis-harvey.