DALBAR, Inc. ... The Measurement of Success

March 2009

QAIB 2009

Extract of
Quantitative Analysis of Investor Behavior

For Advisor Use Only

Past performance is no guarantee of future results.

DALBAR, Inc.
Phone: 617-723-6400
600 Atlantic Avenue
www.DALBAR.com
Research & Communications Division
Boston, MA 02210
Fax: 617-624-7200

Introduction: A Year Like No Other

For 15 years, DALBAR's Quantitative Analysis of Investor Behavior (QAIB) has been measuring the effects of investor decisions to buy, sell and switch into and out of mutual funds. The results have shown to varying degrees that the average investor earns significantly less than mutual fund performance reports suggest. This year's report continues to support that conclusion--but it also demonstrates that simply adopting a one-size-fits-all asset allocation strategy will not suffice in the new investment paradigm. After last year's industry-shaking meltdown, financial services companies must alter their approach to product development, sales and service in order to rebuild trust and confidence among all stakeholders.

Methodology

QAIB uses data from the Investment Company Institute (ICI), Standard & Poor's and Barclays Capital Index Products to compare mutual fund investor behavior with an appropriate set of benchmarks. Covering the period from January 1, 1989, through December 31, 2008, the study utilizes the net of aggregate mutual fund sales, redemptions and exchanges each month as a measure of investor behavior. These behaviors are then used to simulate the "average investor." Based on this behavior, the analysis calculates "average investor return" on both a cumulative (total) and annualized basis. These results are compared to respective indices.

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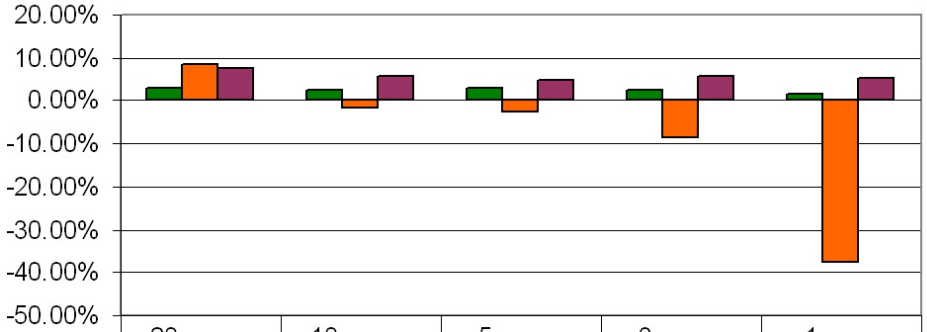
A Snapshot: Theory vs. Reality

From just about any vantage point, last year's market meltdown erased the gains of more than a decade. No sector escaped the losses. Add the effect of actual investor behavior, and the results are even more disconcerting. Consider the following two charts.

THEORETICALLY SPEAKING...

The first chart shows the performance over various time periods of the Barclays Aggregate Bond Index and Standard & Poor's Composite Index of 500 Stocks (S&P 500) versus the average inflation rate, as indicated by the Consumer Price Index.Individuals who had invested in funds that tracked the S&P 500 and the Barclays Bond Index and *held their funds for the entire 20-year time period would have theoretically* earned reasonable average rates of return, 8.35% and 7.43%, respectively. Notably, investors who chose to invest in bond index funds and held the funds for any of the examined time periods would have consistently produced a positive return. Perhaps not surprisingly, the stock market losses of 2008 erased gains made by stock investors in earlier years; therefore, stock index fund investors would have achieved average negative returns for 10-, 5-, 3- and 1-year holding periods in the study.

Benchmarks as of 12/31/08



	20 years	10 years	5 years	3 years	1 year
Inflation	2.89%	2.66%	2.95%	2.70%	1.40%
S&P 500	8.35%	-1.50%	-2.42%	-8.71%	-37.72%
Barclays Aggregate	7.43%	5.63%	4.65%	5.51%	5.24%

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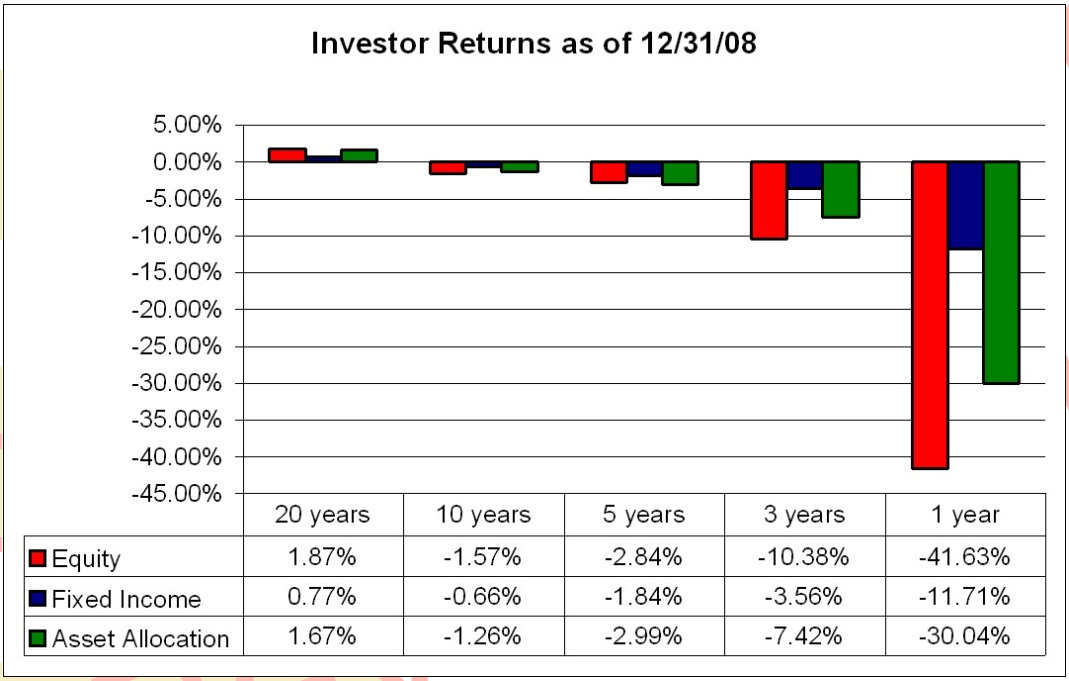
REALITY PRESENTS A DIFFERENT PICTURE

In reality, however, *the average equity and bond fund investor suffered more than theory would suggest*. The following chart is derived from actual mutual fund inflows and outflows over the corresponding time periods to simulate the investment behavior of the "average" equity, fixed income and asset allocation fund investor. All three categories of average investors saw negative returns in all holding periods except the 20-year time frame. And even those long-term results were paltry--less than the inflation rate, in fact.



	20 years	10 years	5 years	3 years	1 year
Equity	1.87%	-1.57%	-2.84%	-10.38%	-41.63%
Fixed Income	0.77%	-0.66%	-1.84%	-3.56%	-11.71%
Asset Allocation	1.67%	-1.26%	-2.99%	-7.42%	-30.04%

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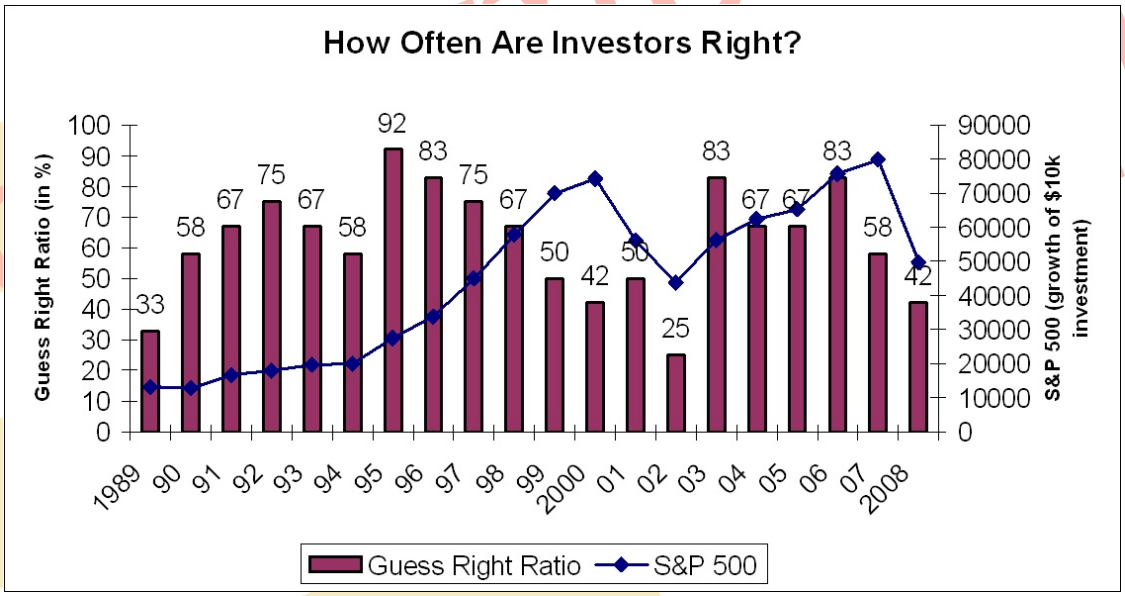
Bad Decisions Lead to Poor Results

Throughout the 15-year history of QAIB, which encompassed periods of unprecedented market upswings as well as last year's drop, the "average investor" has continuously achieved 20-year results that have lagged what the oft-quoted return statistics would lead investors to believe are achievable. Why? There is one simple reason:

è *When the going gets tough, investors panic.*

The following table illustrates the DALBAR "Guess Right Ratio," which measures how often the average equity investor makes an appropriately timed investment decision--i.e., how often he buys low and sells high.

Net mutual fund inflows and outflows are used to determine if investors made short-term gains by correctly anticipating the direction of the market. The average investor guesses right when there is either net inflow each month followed by a market rise, or net outflow each month followed by a market fall.



In general, profits are made when the Guess Right Ratio exceeds 50%, indicating that investors must be right more than half the time to make money. [1]

An analysis of the 20-year period ended December 31, 2008, shows that investors made money in 14 out of the 20 years. Unfortunately, in most cases, those six years when poor decisions reigned were trying times for investors. Market declines caused panic, and panic led to bad decisions. And bad decisions combined with declining markets resulted in exacerbated losses.

[1] *Note that the Guess Right Ratio is not dollar-weighted so it cannot be used to measure returns.*

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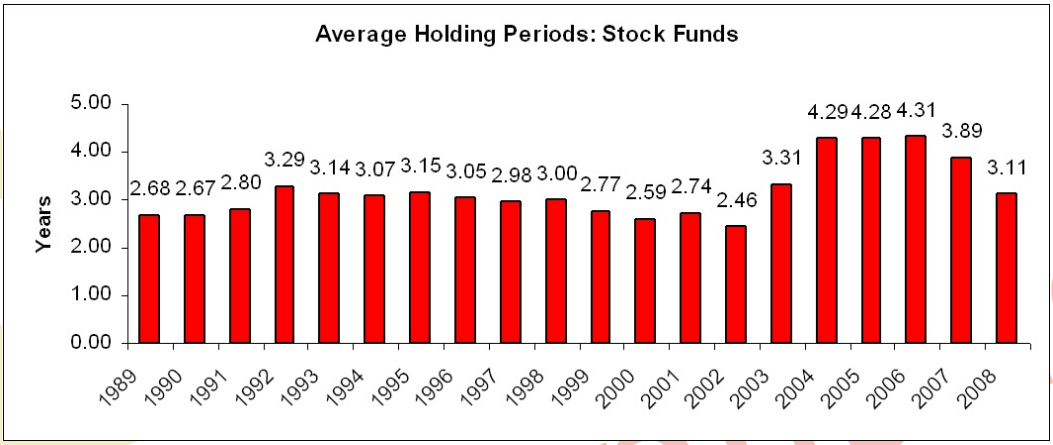
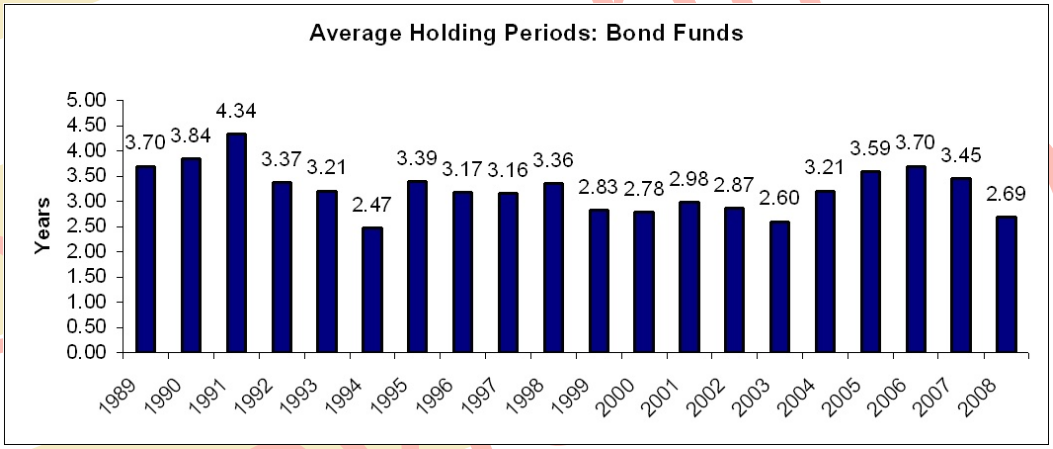
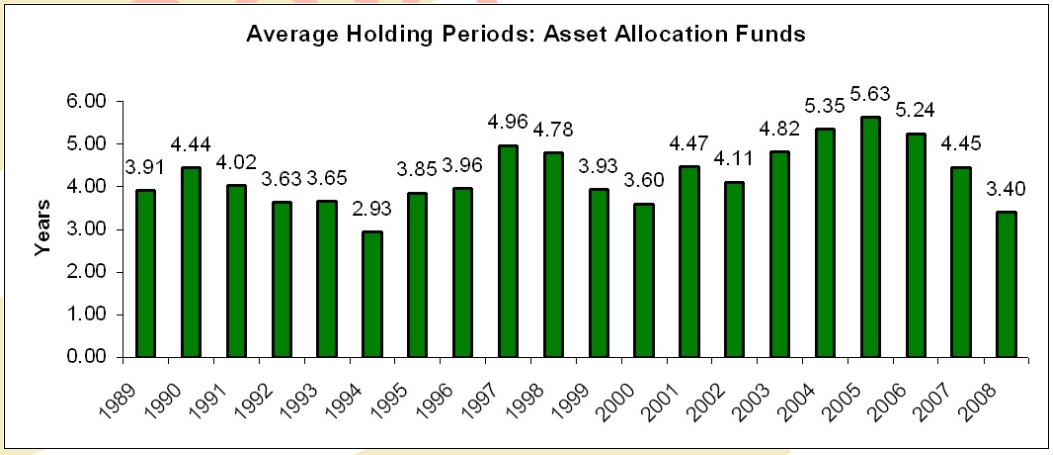
Moreover, regardless of their investment time frames, investors simply don't have the patience necessary to ride out the rough periods.







However, asset allocation investors seem to have more patience than others.

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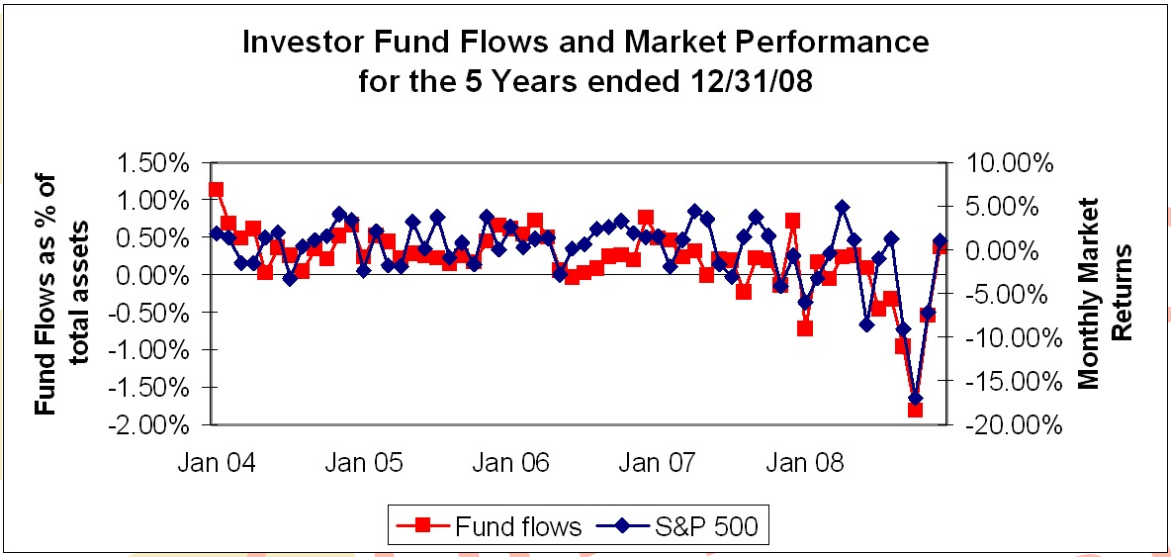
The chart below presents a closer view of how investors have reacted to market changes during the past five years. This further supports the finding of the Guess Right Ratio: Investors buy when the market rises and sell when the market drops.



Why Investors Do What They Do

The principles of behavioral finance help explain why investors often make buy and sell decisions that may not be in their best interests, in both the long and short term:

- **Loss aversion:** Expecting to find high returns with low risk
- **Narrow framing:** Making decisions without considering all implications
- **Anchoring:** Relating to familiar experiences, even when inappropriate
- **Mental accounting:** Taking undue risk in one area and avoiding rational risk in others
- **Diversification:** Seeking to reduce risk by simply using different sources, giving no thought to how such sources interact
- **Herding:** Copying the behavior of others even in the face of unfavorable outcomes
- **Regret:** Treating errors of commission more seriously than errors of omission
- **Media response:** Reacting to news without reasonable examination
- **Optimism:** Believing that good things happen to "me" and bad things happen to "others"

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Although innovations in investment products may be of some help to investors, three other strategies can work well together to rebuild investor trust and confidence in the financial services industry. They are:

- The time-honored tactic of easing back into the market through Dollar Cost Averaging (DCA)
- A new approach to viewing client portfolio management called Purpose-Based Asset Management, or "PBAM"
- An enhanced model for examining potential investment opportunities that gives greater weight to the risks of leverage in portfolio holdings

The next three sections examine these strategies in further detail.

Dollar Cost Averaging: Easy Does It

Dollar cost averaging allows investors to slowly make their way back into the markets, and can even make market swings work to their advantage. Consider the following:

- Stock index fund investors would have earned 57% more through a systematic investing program over the 20-year period than the average equity fund investor, and 80% more than the average asset allocation fund investor.

The charts on the next few pages illustrate how DCA investors fared versus the average fund investors in the equity and asset allocation funds.

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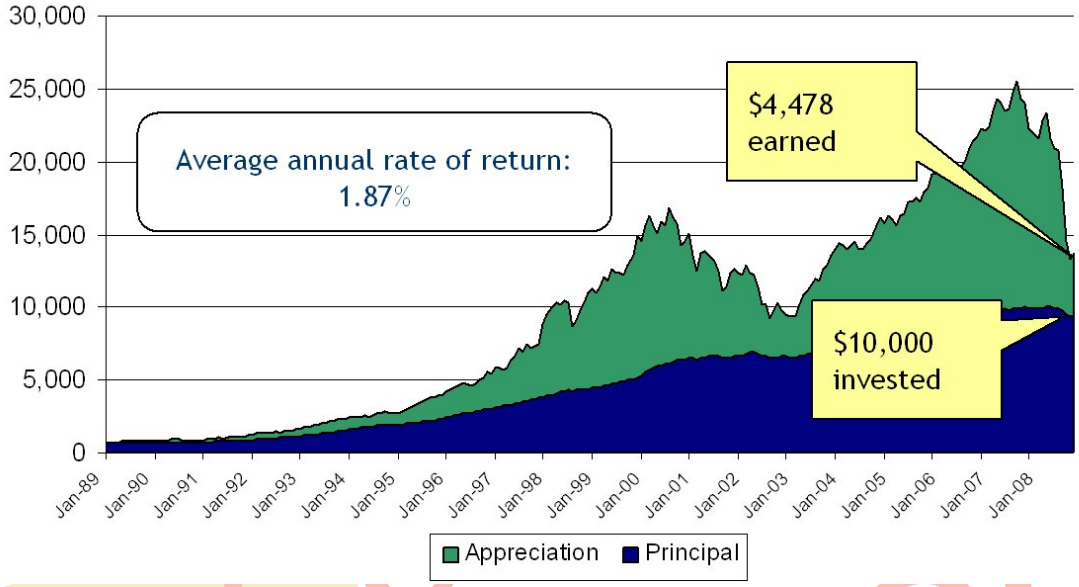
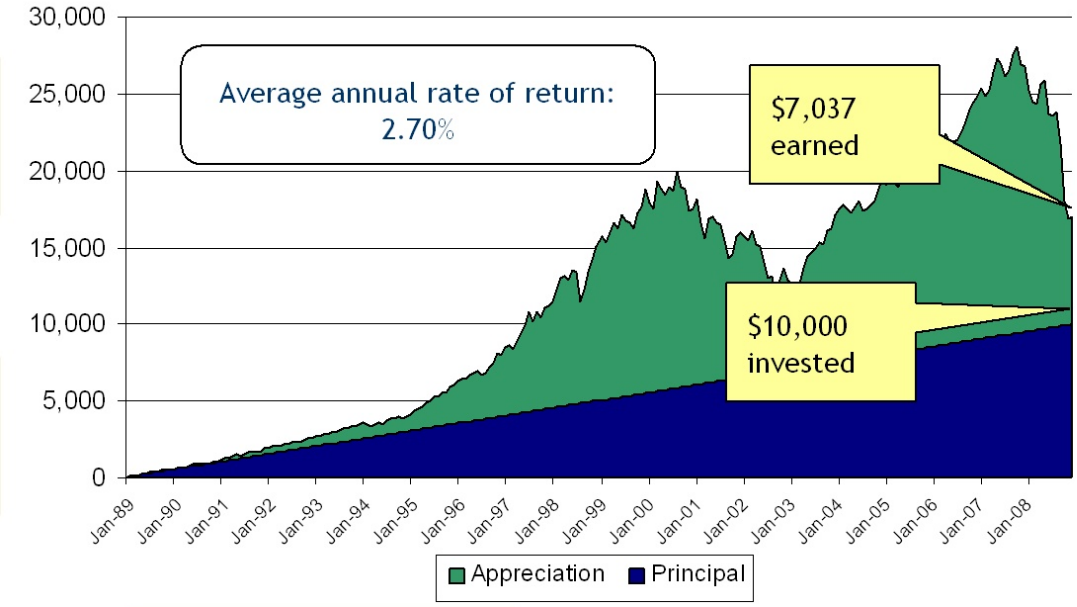
Average Equity Fund Investor for the 20 Years Ended 12/31/08



DCA Equity Investor for the 20 Years Ended 12/31/08



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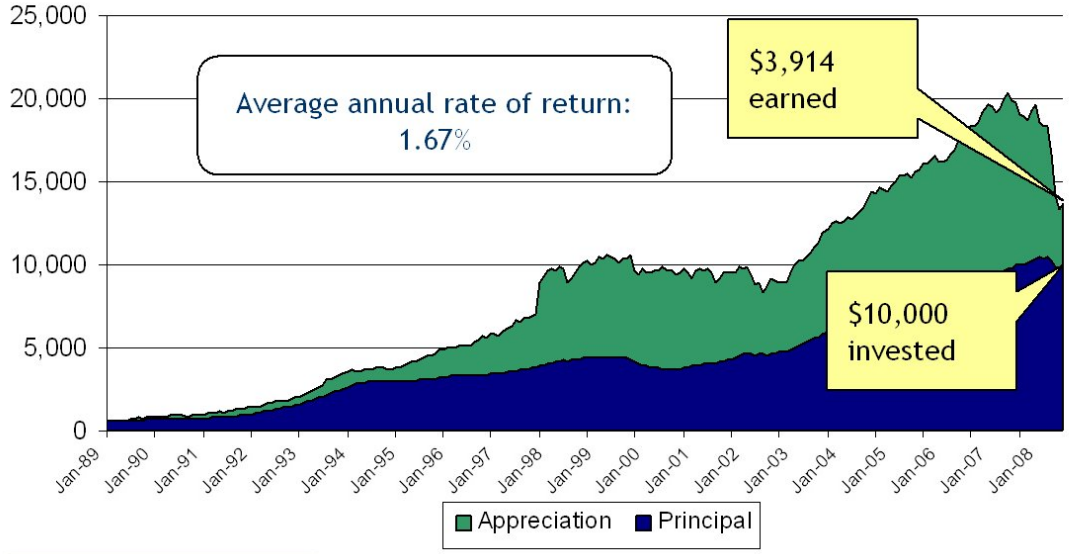
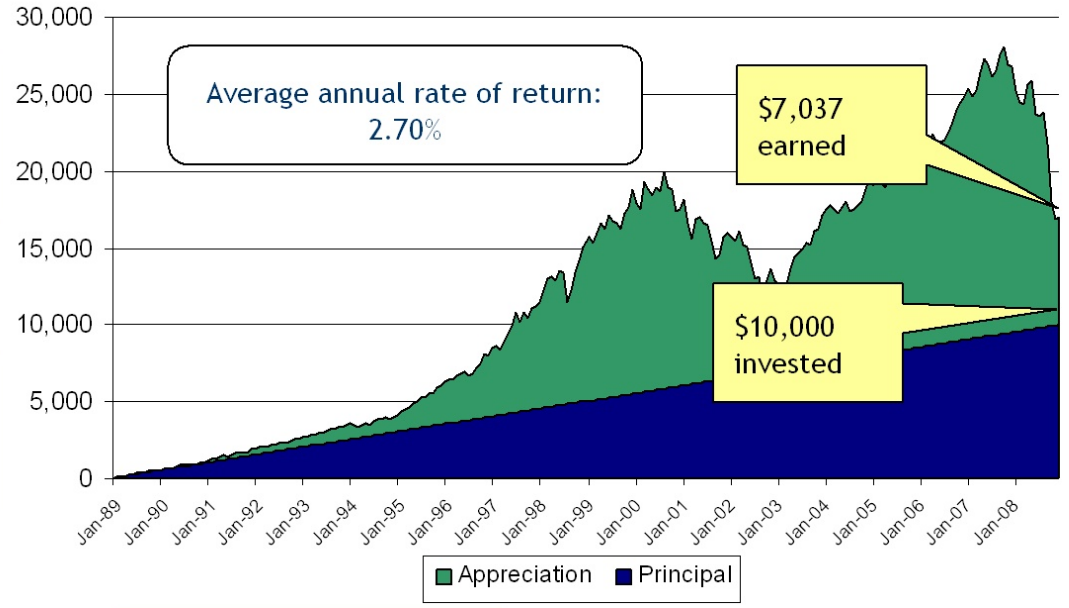
Average Asset Allocation Fund Investor for the 20 Years Ended 12/31/08



DCA Equity Investor for the 20 Years Ended 12/31/08



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PBAM Offers a New Perspective

A major contributor to the behavioral losses incurred by investors over the past 20 years has been the fact that they've been treated as having only one level of risk tolerance--when, in fact, one investor may have a variety of risk tolerances depending on his/her individual objectives and what's going on in the market at large.

As evidenced by the Guess Right Ratio, investors' risk tolerance tends to increase in exuberant times and decline during market downturns. This phenomenon has not been incorporated into traditional asset allocation models, *and as a result, investors panic and withdraw their assets at the worst possible times.*

PBAM (Purpose-Based Asset Management) is a strategy that mitigates the bad behavior. It is designed to reduce panic selling during market downturns and euphoric buying following exuberant times by actually capitalizing on the psychological principle of compartmentalization, which is the natural tendency of an investor to have multiple risk tolerances at one time.

Overview

Most investors have multiple purposes for their assets and can withstand different levels of risk for each purpose. For example, the risk tolerance for the portion of assets used to maintain the household is very different from assets intended to purchase a sailboat or second home. Investment strategies today seldom make this distinction.

The PBAM approach identifies the multiple purposes each investor has and creates separate strategic "compartments" for each. The purposes that cause fear and anxiety are isolated from those for which opportunity is the motivation.

Each compartment is treated separately so that investors can be confident about the critical needs met by one compartment while taking risks of opportunity in another. In this way, the investor behavior is modified, the overreaction is dampened and loss in the investor's overall portfolio is minimized.

Put simply, the effect of compartmentalization is to provide the structure and discipline necessary for prudent, emotion-free investment decision-making.

Weaknesses Of Current Practices

Portfolio performance during the market meltdown of 2008 is clear evidence that the current methods are ineffective, *even* independent of investor behavior. Current asset allocation and diversification strategies are based on uncorrelated asset classes that in 2008 became highly correlated, thus rendering all such strategies moot.

Purpose-Based Asset Management addresses the following specific weaknesses in traditional asset allocation techniques:

- Asset allocation with rebalancing shifts assets from classes that overperform into classes that underperform. Under normal market conditions rebalancing transfers funds from classes that have grown faster in order to maintain the target allocation. This is done to maintain a consistent level of risk but at the same time rewards underperforming classes.
- Asset allocation without rebalancing causes the allocation to shift over time to higher risk levels. This too, is undesirable since investors can take on inappropriate levels of risk by doing nothing.
- Asset allocation models have no safety net to protect the client's assets from declining below an established level. Under extreme market conditions, unbearable losses can be incurred.
- Asset allocation models cannot support multiple risk tolerances for one account. Instead, models rely on a single risk tolerance that does not recognize that the investor's risk tolerance increases in up markets and declines in down markets.
- The unitary structure of asset allocation models does not permit the investor the comfort associated with achieving different levels of gains/losses depending on the various purposes of the investment.

Leverage Completes the Overall Analysis

It may be an understatement to say that financial advisers have been on the hot seat during the past several months. The events leading up to the massive meltdown last fall raise a fundamental question about the reliance on diversification to mitigate risk in an investment strategy. Diversification has been the cornerstone of good investment practices. Diversification is the basis for Modern Portfolio Theory. Diversification is a fiduciary duty under current regulation. Congress wrote diversification requirements into the Pension Protection Act of 2006. This commitment to diversification has been given the unquestioned credence of a law of nature.

BUT WHAT IF ALL SECTORS IMPLODE SIMULTANEOUSLY?

The major lesson we can learn from last year's meltdown is that leverage can lift and lower the world, and this *is* a law of nature. The natural law of leverage should now take its place alongside diversification as a critical investment strategy. Giving leverage its appropriate emphasis will require a massive effort to monitor leverage in the private sector, in government and in all international markets.

In the private sector, true leverage includes the multiplier effect of assets that are themselves leveraged. For example, true leverage in portfolios would include the portfolio's own short positions and margins as well as the debt exposure of each of the investments held. In the case of government debt, leverage is based on all revenue available to fund its obligations. The evaluation of leverage as debt in relation to balance sheet assets or equity that is in current practice should be reviewed and possibly extended to include the ability to service the debt and an examination of the leverage in the underlying assets and equity.

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Monitoring leverage can begin with fiduciaries and investment experts requiring issuers to compute and disclose their true leverage. Such disclosure looks past the balance sheet and includes Special Purpose Vehicles.

The next step is to incorporate leverage into investment decisions. Leverage should be added to computer models that screen investments and make asset allocation recommendations. This means dramatic revision to the investment decision process. For example, if the market as a whole is too highly leveraged, diversification cannot be expected to mitigate that form of risk. What is the next step?

That question remains unanswered, which means there's a lot of room for creative "solutioneering" on the part of financial firms. However, it is clear that incorporating a much deeper analysis of leverage into investment modeling is critical to ensuring that investors receive thorough, diligent, balanced and ultimately reliable recommendations.

Conclusion

The bottom line? In today's investing environment, the same old renditions of "stay the course" ring hollow and flat--unless they're supported by strategies that allow investors to rest easy during the turbulent times. To change the historical patterns of poor investor behavior, financial advisers must work with investors' innate tendencies, acknowledging and addressing their fears rather than trying to convince them that their beliefs are irrational. Through DCA, PBAM and leverage analysis, financial firms and advisers can provide investors a measure of comfort knowing that:

- Ø They're re-entering the market cautiously.
- Ø Their critical needs will be met while they pursue discretionary growth.
- Ø Their investment options are carefully scrutinized to ensure they maintain an acceptable level of leverage.

In this way, investors will be in the appropriate frame of mind to more prudently and rationally make decisions--and hopefully will begin to change the trends that QAIB has identified and tracked for nearly two decades.

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Important Disclosures

- Average stock investor, average bond investor, and average asset allocation investor performance results are calculated using data supplied by the Investment Company Institute. Investor returns are represented by the change in total mutual fund assets after excluding sales, redemptions, and exchanges. This method of calculation captures realized and unrealized capital gains, dividends, interest, trading costs, sales charges, fees, expenses, and any other costs. After calculating investor returns in dollar terms, two percentages are calculated for the period examined: Total investor return rate and annualized investor return rate. Total return rate is determined by calculating the investor return dollars as a percentage of the net of the sales, redemptions, and exchanges for each period.

- The equity market and the systematic equity investor are represented by the S&P 500, an unmanaged index of common stock. The bond market and the systematic bond investor are represented by the Barclays Aggregate Bond Index. Inflation is represented by the Consumer Price Index. Data supplied by Barclays Global Investors and Standard & Poor's. Indexes do not take into account the fees and expenses associated with investing, and individuals cannot invest directly in any index. Past performance cannot guarantee future results.

- Systematic investing involves continues investing in securities regardless of price levels. It cannot assure a profit or protect against loss during declining markets. Past performance cannot guarantee future results.

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