

Critical Math Advisors

Adaptive Asset Allocation



Asset Management through Adaptive Allocation

A MULTI-STRATEGY, ACTIVELY-MANAGED APPROACH to INVESTING which seeks to adapt to any given market environment, reducing market exposure when risk is deemed high and investing aggressively when risk is considered low.

Critical Math Advisors was founded in 2006, primarily to serve as advisor to the Adaptive Allocation Fund and Adaptive Allocation Portfolio. The firm is led by co-portfolio managers, Lew Arno and Derek Bilcik. Lew began his career in financial services in 1967. In 2003, he was named one of the top ten managers of the year by Roger Schreiner's Select Advisors, BTS Asset Management, S&P Investment Advisory, and Rydex Global Advisors. Derek began his career in financial services in 1993 and for the past 15 years, has worked with Lew to provide clients with innovative investment strategies. We offer hedge-fund like investment strategies with the transparency and liquidity of a regulated mutual fund. We believe our management techniques and strategies are very unusual, even possibly unique, and so, we thought we would try to provide some insight into what we do, how we do it and why we do it.

CONVENTIONAL "WISDOM"

Most investment advisors follow what has become known as "modern portfolio theory" or "the efficient frontier." In the real world, this translates into "ASSET ALLOCATION." The idea is that risk can be reduced by diversifying into various asset classes. If some lose value, others may not, while still others may gain value – the idea being not to keep all of one's eggs in one basket.

We see major difficulties with this static model.

- **What percentages should be put in which asset classes?** If the classes chosen are too conservative, the portfolio might underperform in an up market. If the portfolio is too aggressive, it might significantly underperform in a down market. If it is "balanced," returns would tend to be mediocre.
- **What might the future correlation be?** There have been times when different asset classes have been highly correlated; where they go up and down pretty much in lockstep. However, there have been other times when they go in essentially opposite directions. How can one tell how asset classes will be correlated going forward? If the assets ARE highly correlated and those classes go down together, all the eggs in your basket will be scrambled.

WHAT WE DO

Surveys have shown that average mutual fund investors substantially underperform the market because they react emotionally to market performance, causing them to sell after markets decline and to buy after markets rise. They are afraid to buy after a decline, fearing further losses, thereby missing the significant advances that often follow. They fail to sell after a market advance, fearing that they will miss additional gains, thereby holding too long when markets collapse.

Our strategy is designed to avoid these emotional traps by providing an investment that is responsive to virtually any market condition by using non-emotional and rule-based techniques, while providing complete liquidity in a regulated and transparent environment. Thus, investors don't have to decide when to buy or sell, or what assets to own. Our strategy does that for them, all within one mutual fund.

We have concluded, after decades of research, that the best way to attempt to reduce risk and enhance returns is by first asset allocating and then applying risk management. First we choose from a wide variety of asset classes in order to provide diversification. Then we use our proprietary, mathematical, rule-based models to determine when to buy or sell each individual asset class.

We currently use the following asset classes: S&P 500 Index, Russell 2000 Index, Emerging Market Equities, Real Estate Investment Trusts (REITs), High Yield Corporate Bonds, High Yield Municipal Bonds, Convertible Bonds, Treasury Inflation Protected Securities (TIPS), Foreign Bonds (US \$ Hedged). Using our proprietary models, we try to be invested in those asset classes that are trending up. If they are trending down, we tend to avoid them. As a consequence, there will be times when we will be invested in some asset classes but not in others. We can be invested in any combination of asset classes, at any percentage (from 0-100) at any point in time. In addition, we have developed fundamental models to select individual stocks to provide even greater diversification.

We believe using these strategies to select the investments for our funds makes us quite different from the typical mutual fund. Being different can make it difficult for the media and ratings agencies to properly put into context certain aspects of our fund.

STYLE BOX

Many ratings companies that categorize mutual funds like to describe a fund by "style" (such as large cap or small, growth or value, etc). Since we are so flexible and adaptable, in that our investments can be allocated in almost any combination of assets at any point in time, we believe it is impossible to fit the Adaptive Allocation Fund/Portfolio into any particular "style box." Furthermore, we believe we have effectively eliminated the "all of your eggs in one basket" problem, because all of our eggs and our overall basket can change at any time. We are never locked into a static position.

EXPENSE RATIO

For a mutual fund, expense ratio is defined as “a measure of what it costs an investment company to operate the fund. An expense ratio is determined through an annual calculation, where a fund’s operating expenses are divided by the average dollar value of assets under management.” It is a little known fact that transaction costs, such as brokerage commissions paid to trade assets in a mutual fund, are **not included** in the fund’s published expense ratio. A 2009 study, reported by the Wall Street Journal, which looked at thousands of U.S. stock funds, put the average trading costs at 1.44% of total assets, which would have to be **added** to the **published “Expense Ratio”** in order to get a truer picture of a fund’s total costs. The Adaptive Allocation Fund/Portfolio’s trading costs during 2009 & 2010 were less than 0.1% of total assets.

In looking at expense ratios, investors also need to consider whether the fund manager is providing added value. If you are comparing **identical** index funds, the one with the lowest expense ratio (taking into account brokerage trading costs) would be the logical choice. However, if you invest in a mutual fund that is actively managed and provides added value, shouldn’t the real question concerning expense ratios be: are you getting value for what you paid?

TURNOVER RATIO

For a mutual fund, turnover ratio is defined as a “measure of the change in portfolio holdings; extent to which an investment company’s portfolio changes during a year. A rough calculation can be made by dividing the lesser of portfolio purchases or sales (to eliminate the effects of net sales or redemptions of fund shares) by average assets.” But what is the intended purpose of this ratio? Presumably, it is to gain insight into a fund that may be trading excessively, which could cause unnecessary costs or adverse tax consequences. However, turnover ratios are flawed. Here’s an interesting example. Let’s presume that a mutual fund is invested 99% in cash for an entire year. With the other 1%, they invest in a single stock in January, sell that stock and invest in a new one in February and continue that pattern each month. By the end of the year, their 1% was invested in 12 separate stocks, each held for one month. The turnover ratio is **1200%**. This ratio **ignores** cash positions! In 2008, we carried a significant cash position, which reduced risk during a falling stock market but led us to have a high turnover ratio. In 2009 and 2010, we maintained a smaller cash position when the markets were trending higher, and we had greater market exposure but had a lower turnover ratio. Due to the calculation ignoring cash or short term securities, we wonder how much value this ratio really has in properly evaluating actively-managed, risk-averse funds like ours.

For more information, please do not hesitate to contact

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Mutual Fund investing involves risk including loss of principal.

Derivative instruments involve risks different from, or possibly greater than, the risks associated with investing directly in securities and other traditional investments. The Fund may invest, directly or indirectly, in "junk bonds." Such securities are speculative investments that carry greater risks than higher quality debt securities. In general, the price of a fixed income security falls when interest rates rise. Investments in foreign securities could subject the Fund to greater risks including, currency fluctuation, economic conditions, and different governmental and accounting standards. As to the portion of the portfolio invested in ETFs, closed-end investment companies, equities and fixed income securities, turnover may result in higher brokerage commissions, dealer mark-ups and other transaction costs.

Mutual funds, closed-end funds and ETFs are subject to investment advisory and other expenses, which will be indirectly paid by the Fund. As a result, the cost of investing in the Fund will be higher than the cost of investing directly in other investment companies and may be higher than other mutual funds that invest directly in stocks and bonds. The Underlying Funds include high beta index funds ("HBIFs"). HBIFs are more volatile than the benchmark index they track and typically don't invest directly in the securities included in the benchmark, or in the same proportion that those securities are represented in that benchmark.

Before investing, please read the Fund's prospectus and shareholder reports to learn about its investment strategy and potential risks. An investor should also consider the Fund's investment objective, charges, expenses, and risk carefully before investing. This and other information about the Fund is contained in the fund's prospectus, which can be obtained on the web at www.unusualfund.com or by calling 1-866-263-9260. Please read the prospectus carefully before investing. The Adaptive Allocation Fund/Portfolio are distributed by Northern Lights Distributors, LLC, member FINRA www.finra.org

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The Russell 2000® Index is an unmanaged index that is a widely recognized indicator of small capitalization company performance.

The S&P 500 Index is an unmanaged composite of 500 large capitalization companies. This index is widely used by professional investors as a performance benchmark for large-cap stocks. You cannot invest directly in an index.

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