The Practical Application of Behavioral Finance
By Mitchell D. Eichen and John M. Longo
July 2, 2013

Advisor Perspectives welcomes guest contributions. The views presented here do not necessarily represent those of Advisor Perspectives.

From the Dot-Com bubble onward, traditional investment models have repeatedly disappointed those who relied on them. When compared to mathematically based models, behavioral finance provides a superior foundation. Here is an alternative investment paradigm, grounded in behavioral finance, that is practical and effective over time periods that are relevant for a significant portion of investors.

The list of investment models that have failed professional investors include the following:

- Markowitz Portfolio Theory
- Capital Asset Pricing Model (CAPM)
- Efficient Market Hypothesis (EMH) (along with the unhedged-index strategies flowing from it)
- Traditional Hedge Fund Model
- Endowment Model

These models may work in specific circumstances. They may even work over the long run. But as John Maynard Keynes noted, “in the long run, we are all dead.”

Professional investors and their constituencies have more practical time horizons. The long-term models cited above require one to remain fully invested and endure losses for extended periods of time to avoid the inevitable pitfalls of market timing. Telling institutional or individual investors they may have to suffer large losses is neither practical nor satisfactory. This is particularly true for those who need to meet short- to intermediate-term obligations or for whom nearer-term results take on greater importance, for economic or emotional reasons.

Our thesis, which borrows heavily from the field of behavioral finance, makes an important contribution to the field. This article reintroduces and explains an alternative investment paradigm that has been in use since 2009. Our aim is to deliver consistent and predictable returns for specific market outlooks.
Key lessons of behavioral finance

Behavioral finance focuses on human biases that lead to illogical and irrational investment decisions. A basic tenet is that the human mind is essentially programmed to seek familiar patterns in observed events and place those patterns within a context based on past experience. We are creatures of habit and emotion, and this process leads us to act in predictable ways, often to our own detriment.

For example, psychologists believe that fear and greed, as inextricable parts of human nature, cause investors to chase performance. We greedily buy at market tops and fearfully sell at market bottoms. Figure 1 illustrates the astonishingly subpar results that the average investor achieved from 1992 to 2011. By comparing returns for investors in various mutual funds to those in the underlying asset classes, Figure 1 documents underperformance in nearly every major asset class. Any investment strategy that is to be of lasting value must include a methodology for taming and reducing behavioral biases.

Behavioral finance is not a new field of study. But the field did not receive an official endorsement from the economics and investment communities until 2002, when Daniel Kahneman and Vernon Smith won the Nobel Prize in economic sciences for their work in behavioral economics.

Today, the key question regarding behavioral finance is not, “Is it relevant to investors?” but rather, “How can its applications be of lasting practical value to investors?”
Two of the most interesting – and, for this discussion, most relevant – perspectives on investor behavior to come out of behavioral finance research are the cycle of market emotions and prospect theory. The former was developed by an investment firm based on anecdotal observations of investor behavior, and the latter represents a traditional academic undertaking. Both perspectives agree that human emotions drive bad investment decision-making.

The cycle of market emotions provides an excellent overview of the stages an investor passes through during market gains and losses. Prospect theory examines why investors chase performance, why changes in wealth matter as much as wealth accumulation and why losses hurt twice as much as gains. Both theories help explain why the average investor experienced the subpar performance shown in Figure 1.

The cycle of market emotions

The cycle of market emotions, generally attributed to Westcore Funds, is well known in the financial services industry. As market prices rise, the typical investor feels a sense of optimism. If prices continue to rise, the feeling of optimism progresses to excitement and ultimately euphoria. In hindsight, the euphoria stage is the point of maximum risk. The euphoria turns to anxiety if prices decline from their peak. According to the theory, the investor’s emotional state worsens as anxiety devolves into fear, panic and capitulation. Once again, in hindsight, the capitulation point in the cycle is the point of maximum financial opportunity. Then the cycle begins anew, as depression morphs into hope, relief and back to optimism.

Prospect theory: Performance chasing and the disposition effect

Nobel Laureate Daniel Kahneman, along with his late colleague Amos Tversky, developed the prospect theory. It argues that utility, or satisfaction, is not simply a function of risk and return, but that it also focuses on purchase price as a reference point. For example, investors feel regret when they are losing money on an investment and feel joy when they are making money relative to their initial investment. This leads to a “disposition effect,” where the typical investor holds onto losing investments too long and sells winning investments too soon.

For example, an investor might purchase a stock near market top because he or she regrets missing a major market move, as many did near the peak of the Dot-Com bubble. A subset of those investors continues to hold the stock through the ensuing decline in the hope that the stock will recover. This behavior is a function of investors not viewing a paper loss the same as a realized loss.
The converse example illustrates the disposition effect – an investor who bought Apple five years before its peak, but sold the stock to book a profit after a year. While locking in a gain can provide an important measure of satisfaction, this investor did not receive the vast proportion of the stock’s ultimate gain.

According to prospect theory, losses for the typical investor hurt roughly twice as much as gains feel good. In a similar vein, it was found that, for individual investors, the percentage change in wealth matters more than the magnitude of their wealth.

For investment professionals, the practical implications of prospect theory are profound. Their clients not only care about the total amount of their wealth but also about the path to amassing it. Investment professionals have their own set of biases that can cause them to follow the crowd. From a business perspective, their worst fear is to be both wrong – and alone. This leads to a pronounced tendency to err towards “benchmark hugging,” or recommending investments that are popular or have worked well in the recent past.

A practical and actionable behavioral finance investment paradigm

During the depths of the credit crisis, we developed a new set of risk-controlled investment strategies that are practical and actionable. The process and its risk management are built around two tenets:

• Investments are made in a systematic manner to take advantage of changes in market volatility by diversifying entry and exit points.
• Each individual investment delivers predictable, mathematically formulaic returns.

These strategies seek to tame the effects of the cycle of market emotions by incorporating the best features of exchange-traded funds (ETFs) and hedge funds while avoiding the unfavorable characteristics of both.

The strategies can serve as core or satellite investments. They are structured to eliminate counterparty risk and offer a liquid and transparent risk-contained solution at lower fees than the typical hedge fund. The disciplined investment process at the core of these investments creates multiple entry and exit points throughout the year, enabling an investor to take advantage of – rather than be intimidated by – intra-year market volatility. Depending upon the particular strategy chosen, the investment process offers investors needed protection when complacency is high and allows investors to enhance returns at the opposite point in the cycle.

We use the S&P 500 because it is easily understood, provides exceptional liquidity and serves as the benchmark for a core U.S. investment portfolio. It broadly represents the U.S. equities market and also offers meaningful international exposure, since roughly 50%
of the index’s earnings come from foreign sources.

The strategies are implemented using a series of 12, rolling one-year “tranches” constructed with S&P 500 ETFs, which are purchased together with coordinated sales and purchases of traded options to deliver a predetermined, formulaic risk/return pattern. As tranches mature, their proceeds fund the purchase of the next tranche. Performance at the portfolio level will equal the time- and value-weighted average of the tranches held in the portfolio over the course of the period. In other words, portfolio performance in a given year will be determined by the average of the returns on the remaining life of each of the 12 tranches owned at the start of the period, plus the partial period returns for the tranches that are purchased each month to replace the matured tranches. Therefore, no single investment is likely to skew the pattern of returns over the course of any time period. In addition, enhanced gains or prevented losses are locked in, because the risk/return pattern is reestablished going forward for the replacement tranche. Likewise, new loss protection is locked in when relevant from new market levels.

An individual tranche in this strategy might be constructed through the purchase of the SPY ETF at a price of $100 to gain broad market exposure. At the same time, an at-the-money put on the SPY would be purchased and another put sold at a strike price of $88, effectively eliminating the first 12% of the downside relative to the price of the ETF. An at-the-money call would be purchased on the SPY to double the market exposure and two out-of-the-money calls sold. The level at which the calls are sold would be determined by market pricing and would establish a maximum return on that tranche. Participation above the maximum is effectively sold off to pay for the downside protection and return enhancement. Maximum returns on an individual tranche in this version of the strategy could range from 8% to 12% in periods of normal volatility.

**What the strategies deliver**

We propose three strategies. The first is designed to consistently outperform the S&P 500 on a risk-adjusted basis in both rising and declining markets, delivering returns in the high single-digit to low double-digits in rising markets while reducing losses in declining markets. This is an attractive strategy for investors seeking to mitigate market volatility and buffer losses while increasing the probability of earning attractive returns.

The second is designed to consistently outperform the S&P 500 in most rising markets, delivering returns in the mid-teens to mid-twenties percent range in rising markets, while posting returns equal to the S&P 500 price decline in falling markets. This is attractive for investors seeking to enhance returns without increasing downside risk.

The third is designed for a “black swan” market environment. It is structured to allow market participation into the low- to high-teens range in rising markets, with less volatility,
while substantially reducing losses in markets that suffer abnormally steep declines. This is an attractive strategy for investors seeking to mitigate normal market volatility and reduce losses during severe market breaks while enjoying linear, market-like price appreciation.

Complete descriptions of these strategies, including performance, may be found at www.acertuscap.com.

The peace of mind factor

Perhaps most important in the context of behavioral finance, these strategies offer peace of mind. The strategies eliminate the temptation to make emotionally flawed investment choices like buying at market tops and selling at market lows. Investors derive comfort from knowing that – without trying to engage in market timing – they can remain engaged and invested in any the market trend. Material losses can be avoided or substantially mitigated, and a pattern of returns can be achieved with fewer peaks and valleys. Market bottoms are the times when investors must remain engaged, since the maximum return levels on reinvested proceeds from maturing tranches may be highest.

By Mitchell D. Eichen, J.D., LL.M. (meichen@acertuscap.com) and John M. Longo, MBA, PhD, CFA (jlongo@acertuscap.com) are the CEO and CIO respectively of Acertus Capital Management.

www.advisorperspectives.com

For a free subscription to the Advisor Perspectives newsletter, visit: http://www.advisorperspectives.com/subscribers/subscribe.php