HILLCREST ASSET MANAGEMENT

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Behavioral Finance for Financial Advisors

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Executive Summary

- Behavioral finance show that markets are moved by the emotions of greed and fear.
- Investor decisions are influenced by these emotions. These lead to biased decisions with sub-optimal consequences for investors.
- Financial advisors can help clients recognize these biases to improve their asset allocation and manager selection.

What is behavioral finance?

Traditional investing focuses on using financial information to determine the fair value or efficient market price for a security. Despite the hours spent by investment analysts looking at financial statements and listening to company management, academic researchers have found that prices cannot be fully explained by these standard methods. Behavioral finance formalized what some investors already knew: Investment decisions are a mixture of calculations and judgements based upon reason *and* emotions.

Professional managers make 100s if not 1000s of investment decisions every year. They have their clients' best interests in mind. They understand that buying and selling decisions are a balance of market factors. Prices are the outcome of professional managers' valuation measures and behaviors resulting in buy and sell decisions.

Behavioral finance has shown that individual investors can be their own worst enemies. One of the behavioral findings most damaging to an investor's portfolio is that "individuals experience a one dollar loss two to three times more intensely than a one dollar gain" [Ervolini 2014]. Economists call this "Prospect Theory" based on a research paper by Nobel Prize winning psychologist Daniel Kahneman and his collaborator Amos Tversky. This very basic human reaction is at the very heart of some of the most important findings of behavioral finance. It tells us how individuals react to gains and losses. The financial press has given them more emotive labels of "greed" (gains) and "fear" (losses).

Let's see how these basic behavioral biases can be damaging to our portfolio's health.

Why is behavioral finance important to advisors and clients?

Financial advisors and their clients can benefit by recognizing that behavioral factors can lead to subpar performance. Both investors and investment professionals can fall victim to emotions like greed and fear and cognitive biases that affect the investment decisions they make.

Behavioral finance research has identified common investor biases. People are generally unaware that their investment decisions may be influenced in ways that lead to unintended consequences. Pompian and Longo, in a 2004 journal article, classify the behavioral biases as "cognitive" that can be corrected with education and "emotional" that require more coaching.

The following tables show some of the common behavioral biases and the effect they have on investment behavior.

Cognitive biases	Effect on investment behavior
Recency	Investors rely too heavily on the first piece of information
Confirmation bias	Investors only believe information that confirms their own beliefs
Endowment effect	Investors believe things are more valuable merely because they own them
Overconfidence	Investors have more confidence in their own beliefs rather than objective facts
Selective memory	Investors remember only good outcomes and forget painful ones

Emotional biases	Effect on investment behavior
Loss aversion	Investors dislike losses 2-3 times more than they like comparable gains
Regret	Investors feel bad about a decision but will not correct it
Risk aversion	Investors overestimate potentially negative outcomes

Advisors can help clients by first acknowledging the emotions involved in their decisions. Once clients are aware of their emotions they can, with some introspection, examine their reasons for their decisions. This can help them understand their performance and help them make more rational decisions in the future.

For example, the classic greed and fear reactions will lead to bad buying and selling decisions in ironically different ways. Greed may lead an investor to sell a winning position too soon. Investors want their profits and are fearful they will lose them. Fear may lead an investor to hold a losing position too long. The feeling is that "it's not a loss until I sell it".

In much the same way the very natural human feeling of greed may lead to losing reactions like overconfidence and excessive trading. Fear could lead to ignoring information like trading fees.

Investors also focus more on recent events (known as the Recency Effect) which often leads to overweighting new information relative to history. The result prompts chasing trends and selling companies too quickly due to recent news and failing to buy companies due to short term negative information.

Investment decisions can be biased by behavior with the impact on portfolio results shown in this table:

Decision	**Bias**	**Impact**
Sell a winner	Greed vs fear	Sell too soon
Buy a hot stock	Recent information	Ignore or overweight recent news
Hold losing position	Regret	Larger losses
Overvalue a stock	Endowment	Hold too long

By understanding behavioral finance advisors can help their clients overcome many behavioral biases. Below are several examples of what advisors can do.

- Track the performance of securities after they've been sold to diagnose if the winners were sold to soon or if losers were held too long.
- Discussing with clients about avoiding regret in trading decisions.
- Making sure the temptation to realize a profit doesn't cloud the view of an opportunity for a greater financial gain by holding the winning position longer.
- Asking would clients buy a stock if they did not already own it?

Asset allocation

Asset allocation can be the single largest source of returns. A core allocation is based upon clearly defined objectives (housing, education, and retirement), hard and soft constraints (risk, income, wealth accumulation) and investment opportunities and will naturally evolve over time. Core asset classes have stood the test of time: Stocks, bonds and cash instruments are the building blocks for asset allocation.

Advisors and clients need to be aware of short term trends and should carefully consider the impact of events. Markets can temporarily move out of equilibrium as a result of economic, political or natural shocks.

Investors must be careful to avoid typical behavior errors and:

- not concentrate a portfolio in any particular industry, country or investment style
- not expect a single portfolio to be the best over time
- not follow the latest fashions
- not extrapolate the hot trends into the future

Advisors can help clients maintain their target asset mix weights unless there is a significant change in expected returns or risks that are expected to persist for a considerable time. Of course if there is a significant change in a client's situation then a review and possible change of target weights may be warranted.

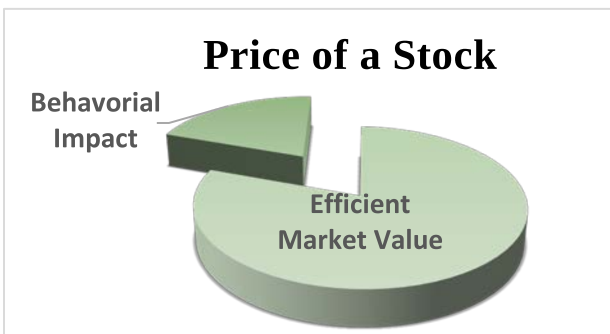
The relative value of asset classes tend to follow the business cycle – and industries and specific companies can move from fair value. Disruptive events due to discoveries, changes in technologies or laws or politics, or natural catastrophes can lead to temporary or permanent re-pricings. The field of investments is littered with promising strategies that failed. What seemed to be great ideas at the time later proved to be ephemeral.

- Advances in technology proved elusive in practice during the late 90s dot com bubble. Investors followed the crowd and valued the new internet companies on ridiculous metrics like the number of clicks per web page and when traditional valuation metrics like earnings returned, many stocks fell over 90%.
- Investors standing in lines to buy multiple Florida condos for speculation in the mid 2000s are an example of greed in the real estate market.

- Financially engineered portfolio insurance crashed in the 80s and did not provide the "insurance" that was expected.
- Loose credit led to loans made with no collateral which created the 2008 financial crisis.

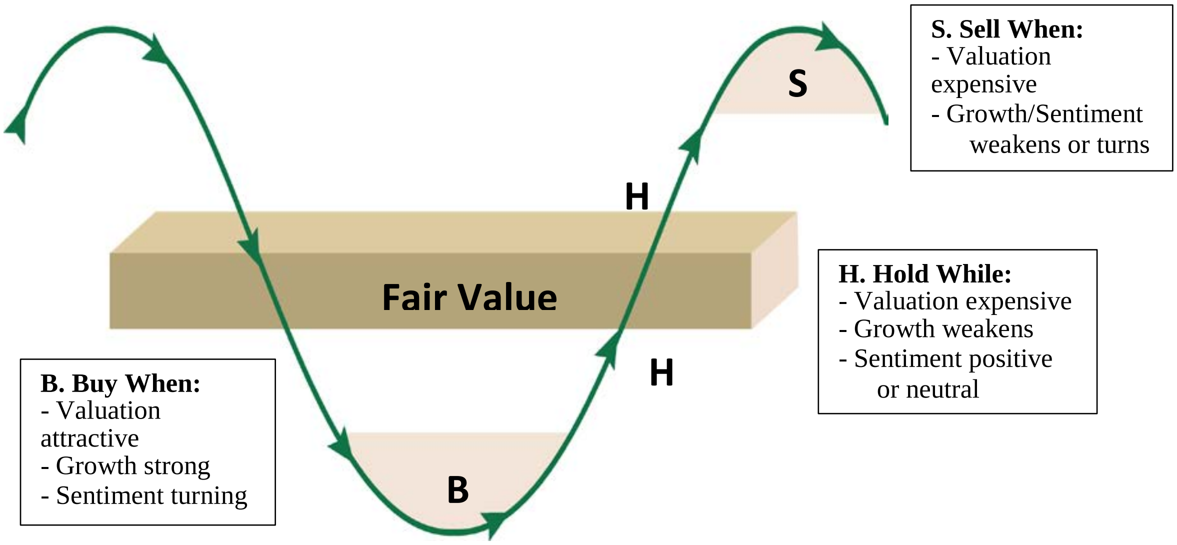
<u>Why it is important to hire a behavioral aware manager?</u>

Advisors who understand behavioral biases need to find managers who also understand behavior. They should look for a manager that understands that prices of stocks are determined by both intrinsic value and behavioral factors. For example, in the pie chart below, we see that while a large part of a stock's value is efficiently priced there is a portion attributable to behavioral factors.



Clients who are aware of behavioral biases can use that knowledge in manager selection. It can help distinguish a skillful manager from a lucky one.

The chart below illustrates how an equity manager who understands the behavioral cycle can incorporate that knowledge into the investment process. A combination of factors helps determine if a company is a buy, a hold or a sell. A traditional manager would typically buy when a stock is below fair value and sell when the stock rises to fair value. That manager only realizes a fraction of the total possible value. The behavioral aware manager can instead buy the stock near the bottom of the cycle, hold through fair value and finally sell near the top capturing far more of the potential returns by looking at not only traditional factors like valuation and growth but also by understanding and measuring investor sentiment.



Professional managers apply their investment processes through various business cycles. Only those managers who recognize the behavioral cycle will be able to build an investment process that will continue to outperform over time by taking advantage of the inevitabilities of human nature. Financial advisors who are aware of the behavioral impacts can help clients overcome their biases and identify managers who understand those impacts and incorporate them in their investment process.

References

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Brian R. Bruce, CEO and Chief Investment Officer

Brian Bruce is the CEO and Chief Investment Officer of Hillcrest and oversees all business and investment activities at the firm. Before founding Hillcrest, Brian was Chief Investment Officer in charge of equity management and research at PanAgora Asset Management. Previously, Brian was President and Chief Investment Officer of InterCoast Capital and worked at State Street Global Advisors, the Northern Trust Company and Stein Roe & Farnham. Brian received his MBA from the University of Chicago, an MS in Computer Science from DePaul University and a BS in Business Administration from Illinois State University. He is a member of the Illinois State University College Business Hall of Fame and is a recipient of the University of Chicago's Graduate School of Business CEO Award. Brian has published numerous scholarly articles and books including *Analysts, Lies, and Statistics*, which he co-authored with former Harvard Business School professor Mark Bradshaw. He is also the Editor of the *Journal of Investing* and the *Journal of Behavioral Finance*.

Richard Wilk, Director, Portfolio Management

Richard Wilk is a portfolio manager and analyst with Hillcrest. Prior to joining Hillcrest, Rick was a Senior Portfolio Manager with BNP Paribas Investment Partners, focusing on Global Equities. Rick also worked closely with Brian Bruce for 8 years at PanAgora Asset Management as Director of Active Equities, and Vice President of Structured Investment Products at The Boston Company. Rick received an MA in Economics from the University of Rochester and a BS in Economics and Applied Mathematics from the State University of New York, Stony Brook. Rick is a CFA charterholder.

Larry Pohlman, PhD

Lawrence Pohlman, PhD has a distinguished career covering 25 years of experience in equity, fixed income and asset allocation. He regularly speaks at professional conferences and is widely published in prominent journals. He is currently the Director of Research at BMO Global Asset Management managing $4 billion in ETFs and multi asset funds. Previously, Larry was the Chief Investment Officer at BNP Paribas Quantitative Strategies. Before BNP, Larry worked at Wellington Management, PanAgora Asset Management. Independence Investment Associates, Blackrock Financial Management, and Goldman Sachs & Co. Larry holds his Ph.D. in Finance, Masters of Philosophy in Finance, MBA in Finance and Management Science, MS in Operations Research, and BS in Nuclear Engineering, all from Columbia University. He is a member of the American Finance Association, Boston Security Analysts Society, Econometric Society, the Chicago Quantitative Alliance and MENSA. He is also an instructor in finance at Northeastern University and the Boston campus of the University of Massachusetts.

About Hillcrest Asset Management

The Hillcrest Portfolio Team utilizes their combined behavioral finance expertise to create all client portfolios. Hillcrest remains guided by a fundamental belief that stocks deviate from their fair value due to behavioral biases and stocks follow the behavioral cycle of stock movements. We combine model-driven behavioral analysis with traditional fundamental research to build on the strengths of both approaches. Our goal is to add value equally through both behavioral models and fundamental stock research. Results reflect Hillcrest's expertise in successfully utilizing these concepts in the portfolio management process.

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