BEHAVIORAL FINANCE

FOR FINANCIAL ADVISORS

riskalyze

"Here's to the advisors who empower the world to invest fearlessly. You're the real heroes, and that's why we believe the financial advisor is someone worth betting on deep into the future. Thank you—we couldn't have built this movement without you."

—Aaron Klein, CEO at Riskalyze

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Dr. Daniel Crosby may have said it best in his book, *Laws of Wealth: Psychology and the Secret to Investing Success*, that "First, we must own up to the reality that we investors are afflicted with a disease for which there is not, nor will ever be, a cure. That disease is our own fear and greed."[1] Any advisor that has worked with clients in bear and bull markets can attest that irrationality is not resigned to one or the other. Investors often see themselves in a "winners or losers" cycle with the market, their portfolio, and other investors. It stems from basic fear on both sides: the fear of losing too much and the fear of missing out. Biologically, this kind of awareness is beneficial to us in times of feast and famine, but financially it makes us vulnerable. Crosby argues that humans are innately incapable of being good investors and the only way to break through our natural-born bad habits is through methodologies that A) acknowledge these behaviors and B) overcome them.

Behavioral Economics has garnered widespread support in the scientific and academic communities over the past two decades. Behavioral Economics scholars have won the Nobel Prize in 2002 and 2017, and this area of the economic sciences seeks to bridge the psychological and investment gaps that have plagued modern investors and their advisors. By examining natural behaviors and their influence on markets, investments, and economies, Behavioral Finance (a subset of Behavioral Economics) provides the framework that can counteract our natural inclination for self-sabotage.

This struggle of fear and greed is all too common for financial advisors, as they often have to act as the barrier to bad decision-making for their clients. The oft-quoted Warren Buffett said, "Fear is instant, pervasive and intense. Greed is slower. Fear hits."[2] If the qualities that make us such bad investors are natural, how can advisors overcome this biological disadvantage? Classic economics approaches and the industry-wide focus on returns haven't resulted in any measurable success. In downturns, clients still panic and fear/sell which goes against all reasonable advice, yet the pattern repeats. The key is not to ignore the problem but, as Dr. Crosby states, "own up to the reality" of it. This means implementing behavioral finance principles into your advisory firm so that clients are prepared for the struggles ahead, are invested according to their unique psychology, and get the information they need to make the right decisions.

1 Daniel Crosby, *Laws of Wealth*

2 http://fortune.com/2011/08/11/buffett-the-lower-stocks-go-the-more-i-buy/

BEHAVIORAL INVESTING (IN A NUTSHELL)

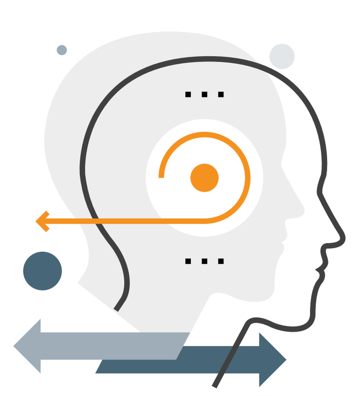
With the ever-expanding body of knowledge in this field, we've had to be selective in the principles and values highlighted, and don't profess this to be a comprehensive guide. To gain practical, actionable knowledge on behavioral finance principles, it's best to highlight some of the core tenets of the methodology, namely bias and risk, and how those affect investor behavior.

Behavioral finance is based on the alternative notion that investors are subject to behavioral biases that make their financial decisions irrational. This does not mean that behavioral economists dismiss neoclassical theories, methods, and assumptions altogether. What behavioral economists do, instead, is incorporate ideas drawn above all from contemporary psychology when necessary and appropriate[3], starting with the bias dilemma. Evidence of these biases has typically come from cognitive psychology literature and has then been applied in a financial context.

Some common examples of bias include:

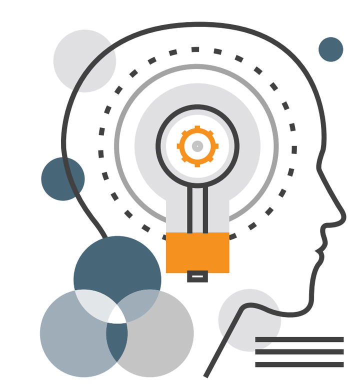
Mental Accounting
individuals allocate wealth to separate mental compartments and ignore fungibility and correlation effects.

Regret Aversion
individuals make decisions in a way that allows them to avoid feeling emotional pain in the event of an adverse outcome.

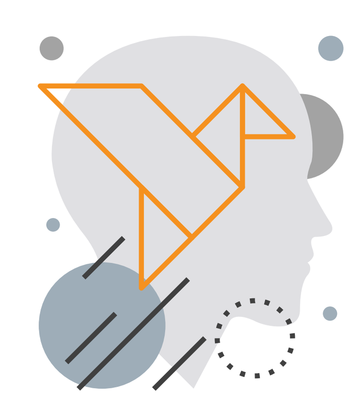


Conservatism
forecasters cling to prior beliefs in the face of new information that contradicts those beliefs.

Availability
investors overstate the probabilities of recently observed or experienced events because the memory is fresh.



Overconfidence
investors overestimate their abilities and the accuracy of the information they have.



Representativeness
investors assess situations based on superficial characteristics rather than underlying probabilities.

Frame Dependence
the form of presentation of information can affect the decision made.

3 http://behavioralscientist.org/behavioral-economists-now/

Behavioral finance also challenges the use of conventional utility functions based on the idea of risk aversion. For example, Kahneman and Tversky proposed their Prospect Theory as a descriptive theory of decision making in risky situations. Outcomes are evaluated against a subjective reference point (e.g., the purchase price of a stock), risk-seeking behavior in the face of losses, and risk-averse behavior in the face of gains[4].

The biases outlined above are behaviors that financial advisors know all too well. In addition to these biases, life circumstances and experiences can create major barriers to long-term investments, and overcoming these challenges continues to be a priority for advisors in the best interest economy.

Economic wisdom of 50 years ago didn't acknowledge these natural behaviors. Neoclassical Economics, the most widely taught form of economic study even today, stipulates that a good or service often has value that goes above and beyond its input costs. Classical Economics believes that a product's value is derived as the cost of materials plus the cost of labor, while neoclassical practitioners say that consumers have a perceived value of a product that affects its price and demand[5].

Since the late 1970s, Behavioral Economics has presented itself as a different approach that tries to increase the explanatory and predictive power of economic theory by providing it with more psychologically plausible foundations[6]. The relationship between Neoclassical and Behavioral economic principles has been contentious, at times, but has taken a more conciliatory tone in the past two decades. Kahneman and Tversky's work in 1979 on Prospect Theory won the Nobel Prize in Economics in 2002. Richard Thaler, who some argue created behavioral finance as we know it today and is responsible for bringing principles of behavioral economics into the legal field, won the Nobel Prize in Economics in 2017[7]. As behavioral economists gain recognition for their work, it shows that this field of study is no longer an outlier, but a well-established theory embraced in the scientific community that enhances our economic understanding.

> **For decades, the prevailing economic theories espoused a view of Economic Man as rational, utility maximizing and self-interested. On these simple (if unrealistic) assumptions, economists built mathematical models of exceeding elegance but limited real-world applicability. It all worked beautifully, until it didn't. Goaded by a belief in the predictability of Economic Man, The Smartest People in the Room picked up pennies in front of steamrollers - until they got flattened.**
> **— Dr. Daniel Crosby, *The Laws of Wealth***

Classical Economics explains value and costs but doesn't: 1) tackle the question of "why," 2) seek to overcome the objections of investors, or 3) act as a deterrent to bad decision-making. To say that something only "is" misses the compelling reasons that markets fluctuate how they do, or how individuals play their part in the cycle. Bears and Bulls don't happen in a vacuum.

> ***Bears and Bulls don't happen in a vacuum.***

Behavioral Finance shows the interconnectedness of Classical Economics and Human Behavior at work. It also shows how markets are affected by this ongoing relationship, and how to recognize correlation between events and emotion. These two elements depend

4 http://prospect-theory.behaviouralfinance.net/
5 https://www.investopedia.com/terms/n/neoclassical.asp
6 http://behavioralscientist.org/behavioral-economists-now/
7 http://behavioralscientist.org/richard-thaler-wins-nobel-prize-economics/

on each other, and it is when they are misaligned that we experience volatile shifts in the market, stocks, interest rates, wages, and pricing for means of production.

Implementing behavioral finance best practices into an advisory firm ensures that advisors can recognize patterns of behavior that affect not only their clients, but the market as a whole. Seeing how biases, behaviors, and economics intersect arms advisors with the knowledge to help their clients invest for the long haul.

THE MARKET IS FULL OF WINNERS AND LOSERS

It's the classic Wall Street scenario: markets are booming, consumer confidence is high... but why is the market beating my portfolio? This question has been asked countless times by well-meaning clients to their advisors for decades, and it's enough to drive great advisors insane. On one hand, there's no reason that an investor should be worried about someone else's portfolio, as it was created for an entirely different purpose for an entirely different person. But, as research shows, our natural tendency for comparison makes investments a popular social activity.

Nobel Prize Laureate and Yale economist Robert Shiller said, "Investors spend a substantial part of their leisure time discussing investments, reading about investments, or gossiping about others' successes or failures in investing. It is thus plausible that investors' behavior (and hence prices of speculative assets) would be influenced by social movements."[8]

8 https://www.brookings.edu/wp-content/uploads/1984/06/1984b_bpea_shiller_fischer_friedman.pdf

This social aspect of investing has paved the way for products like Openfolio to gain wide popularity in the past five years. Branding itself as the Yelp of investing, Openfolio allows users to compare their portfolio's performance (daily, weekly, monthly, yearly, etc.) with that of other investors on the platform.

With over 70k active users, Openfolio presents itself as a form of groupthink, and the company similarly hypes their product as "herd knowledge" that identifies trends. The problem with this groupthink is that there seems to be no benefit to the investors themselves—Openfolio users come nowhere close to beating the S&P 500, lagging by 7 points on average[9]. Not only do users not collect bigger returns, they're underperforming their non-Openfolio peers. This social comparison isn't creating uber-wealthy market wunderkinds, it's just making an impact on market sentiment, which has no bearing on how well or how poorly a portfolio does.

Temper overconfidence with sound science.

When investors are concerned that their portfolio isn't beating the market, it's largely due to diversification—which is not a bad thing. Diversification is about insulating investments from market volatility, or rate hikes, or Black Swans. Unfortunately, investors don't appreciate this safety net during Bull Markets, prompting many of them to abandon their current strategy for the possibility of larger gains. When investors do this en masse, it can trigger a market-wide event that decreases returns, prompts a correction, or creates swings in implied volatility. Herding behavior is a phenomenon seen most often during intense market conditions, and in times of fear usually creates a widespread "flight-to-quality" response that bolsters "safe" investments (bonds, gold, et. al.). The US market herding behavior

9 https://www.cnbc.com/2017/01/04/most-investors-didnt-come-close-to-beating-the-sp-500.html

exhibits time-varying dynamic trading patterns that can largely be attributed to overconfidence[10]. When these events happen, investors panic and either regret the risks they took or sell to stop the losses. Market sentiment is fickle, short-lived, and no indicator of success.

An emphasis on market sentiment is a common pitfall on many risk questionnaires, which is why risk questionnaires have been notoriously ineffective. Relying on market sentiment in order to feel good about investments is a trap—it doesn't actually give insight on what constitutes risk or give advisors the tools to plan accordingly. Strategies to combat this: thorough questionnaires that don't rely on market sentiment and stress testing to show how a portfolio performs under extreme conditions. Temper overconfidence with sound science.

FOMO: FEAR OF MISSING OUT

Platforms like Openfolio appeal to not only the social aspect of investing but the natural curiosity and competitiveness of human beings. Competitiveness is a character trait that can lead to innovation and improvement, but high-competitiveness is also associated with poor interpersonal relations, dysfunctional impulsivity, and incidence of road rage and accidents[11]. When investors compete with each other to find the hottest new investment, it stems back to FOMO or the fear of missing out. Investors don't want to miss out on huge gains, and nobody wants to be the one left behind when a stock surges. In their minds, the consequences of picking the "wrong" stock is losing the chance at unimaginable wealth—wealth that was never likely to begin with.

Greed is a high motivator, but one of the core beliefs that motivates this impulsive, competitive behavior is that there are examples of others who picked correctly and WON. Finance publications are filled with tales of lucky investments, smart picks, and individuals that became overnight millionaires. Investors frequently point to the Murdochs, Buffetts, and Zuckerbergs of the world as what can happen when the stock market goes in one's favor. The problem: these examples are outliers and overwhelmingly the exception, not the rule. Overestimating the probability of an outcome based on the ease with which relevant instances come to mind is an example of the availability bias.

In addition to their work on Prospect Theory, Kahneman and Tversky did substantial work on the availability heuristic and its effect on decision-making. When individuals focus on the rare instances where speculative investing paid off, it increases the availability of those scenarios in investors' minds. According to Kahneman and Tversky, continued preoccupation with an outcome may increase its availability, and hence its perceived likelihood. People are preoccupied with highly desirable outcomes, such as picking a winning stock or winning the lottery, or with highly undesirable outcomes, such as an airplane crash. Consequently, availability provides a mechanism by which occurrences of extreme utility (or disutility) may appear more likely than they actually are[12]. It's this same principle at play when beachgoers overestimate the chances of a shark attack when it's actually more likely they'll meet a less visible danger like an undertow.

> ***When we discuss the scant examples of extreme wealth, we don't see the failures of millions of others.***

10 "Herding behavior, market sentiment and volatility: Will the bubble resume?" The North American Journal of Economics and Finance, Volume 42, November 2017, Pages 107-131
11 http://www.gavelintl.com/psychology-behind-competition-incentives-work/

12 https://msu.edu/~ema/803/Ch11-JDM/2/TverskyKahneman73.pdf

> **If concentration is the sine qua non of ridiculous wealth, how then can I (and every financial professional you have ever met) possibly tout the merits of diversification? It's because while concentration is the fastest way to impossibly high levels of wealth, it is also the fast train to low levels of wealth. Get rich fast and get poor fast are opposing sides of the same coin.**
> **— Dr. Daniel Crosby, *The Laws of Wealth***

The Fear of Missing Out motivates millions to speculate when they may have naturally been more inclined to protect their investments. The power of narrative, emotion, and fear of missing out combine to make IPOs extremely appealing to both professional and retail investors, according to Dr. Daniel Crosby.

A portfolio shielded from volatility doesn't have allure, but that's the point advisors want to make to their clients. When investors give up speculating in the market, they're not missing out on gains, they're making the best long-term decision based on the information available.

IMPLEMENTING BEHAVIORAL FINANCE BEST PRACTICES

One of the reasons investing feels broken for the average investor is because the industry has taken the approach to focus on returns, ignoring the psychology that put investors in bad positions in the first place. *The Laws of Wealth* compared this crisis of emotional investing to the obesity crisis: "the problem isn't that there's a shortage of gyms or nutritional information, it's that donuts taste better than broccoli." All the knowledge in the world can't overcome basic biology. Lack of information isn't the problem, it's that focusing on returns doesn't solve the underlying behavior that influences reactionary decisions.

The result is investors find themselves in an endless cycle of buying too late, selling too soon, and repeat. Without a check in place to manage the emotions that cause this cycle, it is doomed to repeat itself.

> **No level of investment skill...is sufficient to overcome the cancer of bad behavior.**
> **— Dr. Daniel Crosby, *The Laws of Wealth***

The only way to prevent this cycle from repeating is to tackle this behavior head-on. But where do you begin? Not to worry—advisors now have tools available that are rooted in behavioral finance methodology, designed to work with our natural states, not ignore them.

ADOPT TECH ROOTED IN BEHAVIORAL FINANCE PRINCIPLES

Fintech that's focused on investor psychology should be able to outline, in detail, the methodologies it uses to address investing behavior. A focus on returns, speculation, or the funds themselves isn't addressing psychology. If you're looking to implement behavioral finance principles into your firm, partner with technology that is dedicated to the study of decision-making, and minimizing the effects of natural bias. Fintech experienced in this area of study should be able to backup their methodology with science. At Riskalyze, we embrace the tenets of Prospect Theory and used it as a guide for calculating risk, expanding it for the real world. A team of academics reviewed our methodology and you can read their findings here.

FOCUS ON THE INDIVIDUAL

Looping investors into stereotypes or general categories only reinforces one thing: natural biases. Every investor has their own risk tolerance and a different amount of resources to put toward their goals. A one-size-fits-all, "aggressive" approach for every 25-year-old isn't going to be an effective plan. In our independent research, we discovered that 52% of 20-29-year-olds don't actually fit into their "aggressive" stereotype. The news only gets worse for older folks—53% of 70-79-year-olds didn't fit into their "conservative" stereotype, either. What happens when more than half of all investors are invested incorrectly? They panic during market volatility. Some feel greedy and buy; others sell out of fear. Both reactions might negatively affect their long-term goals. This cycle repeats itself until they eventually change their investment strategy, fire their advisor, or both.

Stereotypes don't work, and that's why we believe focusing on the individual means we're meeting their needs and recognizing biases before they threaten long-term goals. The hardest habit for advisors to break is lumping investors into these categories. After all, it's been the industry standard for decades. This is why we created the Risk Number®, a quantitative measurement of an investor's risk tolerance. We believe this level of precision is necessary for creating portfolio recommendations, and it's the method we think is necessary for creating long-term investors.

TAKE THE RISK-FIRST APPROACH

We've coined this term the Fearless Investing Movement, and we think it all starts with risk. We believe that when advisors aren't afraid to talk about risk, investors aren't afraid to make the right decisions. We've broken down this approach into four levels of risk:

- **how much risk an investor wants**
- **how much risk an investor has in their current portfolio**
- **how much risk an investor needs to reach their goals**
- **how much risk an investor should take on**

Not all risk is created equal. Recommendations before now have been the most educated guess an advisor could give with the limited resources available to them. We believe that by starting with risk, and using a rigorous quantitative methodology to calculate an investor's Risk Number, we're no longer making guesses—we're using science. We can calculate the amount of risk an investor has in their current portfolio and compare that to their Risk Number. We've rigorously evaluated risk calculations for thousands of stocks, mutual funds, and ETFs in order to show portfolio risk. We developed the 95% Probability Range to demonstrate how a portfolio is likely to perform in a six-month timeframe. Volatility isn't the enemy—emotional, reactionary investing is. Some clients have a much greater appetite for risk while others may need to be shielded from market fluctuations. We created the Risk Number so that advisors can make these determinations with confidence and get clients invested to their preferences. We lead the conversation with risk in order to set the right expectations, implement portfolio recommendations, and measure success.

EMOTIONS AND INVESTING DON'T MIX

Recognizing emotion in clients, before it turns into bad decision-making, is an invaluable skill for advisors. Fiduciaries always have a client's best interest as top priority, and that means not always being their friend or cheerleader. The hard work comes from telling a client, "I know this stock seems exciting, but we need to take a step back."

That's why we have Check-Ins, a tool advisors can use to quickly assess how their clients are feeling between or before meetings. These can be sent in regular intervals so that advisors can build an emotional profile for each client and more quickly recognize irrational behavior before it leads to a bad decision.

The Laws of Wealth took an informative, and entertaining, approach to a common truth: human beings are not designed to be good investors. Everyone has the same natural inclinations for bias, misjudgment, and irrationality. Knowing what the monster is (emotional investing) doesn't guarantee that we can fight it on our own, and ignoring the problem isn't any more effective than telling a dieter that broccoli tastes like donuts. But does that mean hope is lost? Not at all. Being a good investor doesn't come naturally, but advisors have access to the tools and methodologies to make fearful investors fearless ones.

> **Integrating psychology and finance provides for the possibility of increasing both our returns and our awareness of self—therein lies true wealth.**
> **— Dr. Daniel Crosby, *The Laws of Wealth***

Are you ready to join the Fearless Investing Movement? We'd love to show you how 20,000 advisors are empowering fearless investing with the Risk Number. Take a personal tour and see for yourself.

Dr. Daniel Crosby is the President of Nocturne Capital, a New York Times bestselling author, a psychologist, and behavioral finance expert who helps organizations understand the intersection of mind and markets. He's also a featured speaker at our 2018 Fearless Investing Summit October 17 - 19. To learn more about behavioral finance and hear Dr. Daniel Crosby in person, we'd love for you to join us.

Riskalyze's co-founder and Chief Investment Officer is still a practicing financial advisor to this day. He's the first of over 20,000 advisors who have joined the fearless investing movement.

> **"With Riskalyze, my clients know what to expect, and I consistently deliver on their expectations time and time again," he says. "It's the most amazing closing tool I've ever seen."**
> **—Mike McDaniel**

Our company mission is empowering the world to invest fearlessly, and it's something we don't take lightly. Fearless investing is about having the right expectations that drive great long-term decisions in the face of short-term adversity. This third wave of advice is about having the guts to address a conversation about risk head-on. Short-term events are the number one killer of long-term financial goals—but they don't have to be.

Stop talking about returns. Start talking about risk.

Want some training on how to best supercharge your advice with Riskalyze? Attend Riskalyze 101

Don't have Riskalyze quite yet? Schedule a personal tour to see how 20,000+ advisors use the Risk Number® to empower fearless investing.