

Behavioral Finance

TABLE OF CONTENTS

- What Is Behavioral Finance?
- Understanding Behavioral Finance
- Behavioral Finance Concepts
- Biases Studied
- The Stock Market

What Is Behavioral Finance?

Behavioral finance, a sub-field of behavioral economics, proposes that psychological influences and biases affect the financial behaviors of investors and financial practitioners. Moreover, influences and biases can be the source for explanation of all types of market anomalies and specifically market anomalies in the stock market, such as severe rises or falls in stock price.

Understanding Behavioral Finance

Behavioral finance can be analyzed from a variety of perspectives. Stock market returns are one area of finance where psychological behaviors are often assumed to influence market outcomes and returns but there are also many different angles for observation. The purpose of classification of behavioral finance is to help understand why people make certain financial choices and how those choices can affect markets. Within behavioral finance, it is assumed that financial participants are not perfectly rational and self-controlled but rather psychologically influential with somewhat normal and self-controlling tendencies.

One of the key aspects of behavioral finance studies is the influence of biases. Biases can occur for a variety of reasons. Biases can usually be classified into one of five key concepts. Understanding and classifying different types of behavioral finance biases can be very important when narrowing in on the study or analysis of industry or sector outcomes and results.

KEY TAKEAWAYS

- Behavioral finance is an area of study focused on how psychological influences can affect market outcomes.
- Behavioral finance can be analyzed to understand different outcomes across a variety of sectors and industries.
- One of the key aspects of behavioral finance studies is the influence of psychological biases.

Behavioral Finance Concepts

Behavioral finance typically encompasses five main concepts:

- [Mental accounting](#): Mental accounting refers to the propensity for people to allocate money for specific purposes.
- Herd behavior: Herd behavior states that people tend to mimic the financial behaviors of the majority of the herd. Herding is notorious in the [stock market](#) as the cause behind dramatic rallies and sell-offs.
- Emotional gap: The emotional gap refers to decision making based on extreme emotions or emotional strains such as anxiety, anger, fear, or excitement. Oftentimes, emotions are a key reason why people do not make rational choices.
- [Anchoring](#): Anchoring refers to attaching a spending level to a certain reference. Examples may include spending consistently based on a budget level or rationalizing spending based on different satisfaction utilities.
- Self-attribution: Self-attribution refers to a tendency to make choices based on a confidence in self-based knowledge. Self-attribution usually stems from intrinsic confidence of a particular area. Within this category, individuals tend to rank their knowledge higher than others.

Biases Studied in Behavioral Finance

Breaking down biases further, many individual biases and tendencies have been identified for behavioral finance analysis, including:

Disposition Bias

Disposition bias refers to when investors sell their winners and hang onto their losers. Investors' thinking is that they want to realize gains quickly. However, when an investment is losing money, they'll hold onto it because they want to get back to even or their initial price. Investors tend to admit their correct about an investment quickly (when there's a gain). However, investors are reluctant to admit when they made an investment mistake (when there's a loss). The flaw in disposition bias is that the performance of the investment is often tied to the entry price for the investor. In other words, investors gauge the performance of their investment based on their individual entry price disregarding fundamentals or attributes of the investment that may have changed.

Confirmation Bias

[Confirmation bias](#) is when investors have a bias toward accepting information that confirms their already-held belief in an investment. If information surfaces, investors accept it readily to confirm that they're correct about their investment decision—even if the information is flawed.

Experiential Bias

An experiential bias occurs when investors' memory of recent events makes them biased or leads them to believe that the event is far more likely to occur again. For example, the financial crisis in 2008 and 2009 led many investors to exit the stock market. Many had a dismal view of the markets and likely expected more economic hardship in the coming years. The experience of having gone through such a negative event increased their bias or likelihood that the event could reoccur. In reality, the economy recovered, and the market bounced back in the years to follow.

Loss Aversion

Loss aversion occurs when investors place a greater weighting on the concern for losses than the pleasure from market gains. In other words, they're far more likely to try to assign a higher priority on avoiding losses than making investment gains. As a result, some investors might want a higher payout to compensate for losses. If the high payout isn't likely, they might try to avoid losses altogether even if the investment's risk is acceptable from a rational standpoint.

Familiarity Bias

The familiarity bias is when investors tend to invest in what they know, such as domestic companies or locally owned investments. As a result, investors are not diversified across multiple sectors and types of investments, which can reduce risk. Investors tend to go with investments that they have a history with or have familiarity.

Behavioral Finance in the Stock Market

The [efficient market hypothesis \(EMH\)](#) says that at any given time in a highly [liquid market](#), stock prices are efficiently valued to reflect all the available information. However, many studies have documented long-term historical phenomena in securities markets that contradict the efficient market hypothesis and cannot be captured plausibly in models based on perfect investor rationality.

The EMH is generally based on the belief that market participants view stock prices rationally based on all current and future intrinsic and external factors. When studying the stock market, behavioral finance takes the view that markets are not fully efficient. This allows for observation of how psychological factors can influence the buying and selling of stocks.

The understanding and usage of behavioral finance biases is applied to stock and other trading market movements on a daily basis. Broadly, behavioral finance theories have also been used to provide clearer explanations of substantial market anomalies like bubbles and deep recessions. While not a part of EMH, investors and portfolio managers have a vested interest in understanding behavioral finance trends. These trends can be used to help analyze market price levels and fluctuations for speculation as well as decision-making purposes.

What is Behavioral Economics?

Behavioral Economics is the study of psychology as it relates to the economic decision-making processes of individuals and institutions. The two most important questions in this field are:

1. Are economists' assumptions of [utility](#) or profit maximization good approximations of real people's behavior?
2. Do individuals maximize subjective expected utility?

Behavioral economics is often related with [normative economics](#).

BREAKING DOWN Behavioral Economics

In an ideal world, people would always make optimal decisions that provide them with the greatest benefit and satisfaction. In economics, [rational choice theory](#) states that when humans are presented with various options under the conditions of [scarcity](#), they would choose the option that maximizes their individual satisfaction. This theory [assumes](#) that people, given their preferences and constraints, are capable of making rational decisions by effectively weighing the costs and benefits of each option available to them. The final decision made will be the best choice for the individual. The [rational person](#) has self-control and is unmoved by emotions and external factors and, hence, knows what is best for himself. Alas behavioral economics explains that humans are not rational and are incapable of making good decisions.

Behavioral economics draws on psychology and economics to explore why people sometimes make irrational decisions, and why and how their behavior does not follow the predictions of economic models. Decisions such as how much to pay for a cup of coffee, whether to go to graduate school, whether to pursue a healthy lifestyle, how much to [contribute towards retirement](#), etc. are the sorts of decisions that most people make at some point in their lives. Behavioral economics seeks to explain why an individual decided to go for choice A, instead of choice B.

Because humans are emotional and easily distracted beings, they make decisions that are not in their [self-interest](#). For example, according to the rational choice theory, if Charles wants to lose weight and is equipped with information about the number of calories available in each edible product, he will opt only for the food products with minimal calories. Behavioral economics states that even if Charles wants to lose weight and sets his mind on eating healthy food going forward, his end behavior will be subject to cognitive bias, emotions, and social influences. If a commercial on TV advertises a brand of ice cream at an attractive price and quotes that all human beings need 2,000 calories a day to function effectively after all, the mouth-watering ice cream image, price, and seemingly valid statistics may lead Charles to fall into the sweet temptation and fall out of the weight loss [bandwagon](#), showing his lack of self-control.

Applications

One application of behavioral economics is [heuristics](#), which is the use of rules of thumb or mental shortcuts to make a quick decision. However, when the decision made leads to error, heuristics can lead to cognitive bias. Behavioral [game theory](#), an emergent class of game theory, can also be applied to behavioral economics as game theory runs experiments and analyzes people's decisions to make irrational choices. Another field in which behavioral economics can be applied to is behavioral finance, which seeks to explain why investors make rash decisions when trading in the [capital markets](#).

Companies are increasingly incorporating behavioral economics to increase sales of their products. In 2007, the price of the 8GB iPhone was introduced for \$600 and quickly reduced to \$400. What if the [intrinsic value](#) of the phone was \$400 anyway? If Apple introduced the phone for \$400, the initial reaction to the price in the smartphone market might have been negative as the phone might be thought to be too pricey. But by introducing the phone at a higher price and bringing it down to \$400, consumers believed they were getting a pretty good deal and sales surged for Apple. Also, consider a soap manufacturer who produces the same soap but markets them in two different packages to appeal to multiple target groups. One package advertises the soap for all soap users, the other for consumers with sensitive skin. The latter target would not have purchased the product if the package did not specify that the soap was for sensitive skin. They opt for the soap with the sensitive skin label even though it's the exact same product in the general package.

As companies begin to understand that their consumers are irrational, an effective way to embed behavioral economics in the company's decision-making policies that concern its internal and external stakeholders may prove to be worthwhile if done properly.

Paradox of Rationality

What Is the Paradox of Rationality?

The paradox of rationality is the observation, in [game theory](#) and [experimental economics](#), that players who make irrational or naive choices often receive better payoffs and that those making the rational choices predicted by [backward induction](#) often receive worse outcomes. A paradox of rationality appears to show that there are benefits to irrationality or at least to seemingly irrational behavior. It is common to games that have [Nash equilibria](#), which produce overall outcomes that leave the players worse off than they could have been had they chosen less rational individual strategies. When the players do not reach the expected equilibrium solution it suggests that something more than purely rational individual choice is at work.

KEY TAKEAWAYS

- A paradox of rationality occurs when the individually rational strategy to a game produces an outcome that is less desirable for the players than if they had made less individually rational choices. A paradox of rationality appears to show that there are benefits to irrationality.
- A paradox of rationality suggests that something more than rational individual choice is in play. Either the choices made are somehow not entirely rational, are in some sense not entirely individual choices, or some combination of the two.
- Economists have developed several strands of research that can help explain how and why behavior differs from the perfect rationality of game theory, including behavioral economics, new institutional economics, and evolutionary economics.

Understanding the Paradox of Rationality

The paradox of rationality is consistently observed in experimental studies of game theory using such well-known games as the [prisoner's dilemma](#), the [traveler's dilemma](#), the [diner's dilemma](#), the public good game, and the centipede game—and underscores the contradictions between intuition and reasoning and between the predictions of rational choice theory and actual behavior.

Such seemingly irrational behavior can lead to results that cannot be explained by theories that solely rely on individual rational choice. That people do not always behave rationally is a challenge to traditional economic and financial theories, which assume individual rationality. For example, the theory of [public goods](#), which justifies much of public policy, predicts that individuals will rationally consume as much of any available public good as they can but that none will pay for it or produce it. Yet experiments (and real world experience) show that this is often not the case.

Attempts to explain these results follow two major approaches. Some see them as a challenge to the rationality of individual choice and argue that cognitive biases must be at play in inducing people to choose irrationally. Others modify the individuality of rational choice in a social context and argue that formal and informal social institutions mediate individual choice.

Behavioral Economics

[Behavioral economics](#) explicitly considers psychological factors in individual decisions. Various cognitive biases, emotional states, or simple faulty reasoning are the root cause of observed behavior that varies from the game theoretic rational choice. Subjects either lack the rational capacity to arrive at the equilibrium strategy or are guided by unconscious biases that originate from non-rational mental processes, emotions, or habits of behavior. In some cases, new models that adapt traditional game theory logic to reflect these kind of decision maker preferences have been developed.

Rational Behavior Definition

What Is Rational Behavior?

Rational behavior refers to a decision-making process that is based on making choices that result in the optimal level of benefit or [utility](#) for an individual. The assumption of rational behavior implies that people would rather be better off than worse off. Most conventional economic theories are based on the assumption that all individuals taking part in an action or activity are behaving rationally.

KEY TAKEAWAYS

- Rational behavior refers to a decision-making process that is based on making choices that result in an optimal level of benefit or utility.
- Rational behavior does not necessarily require a person to attempt to get the highest return but rather the highest optimal benefit based on key factors for concern.

- Several financial and economic areas of study are built on the underlying examination of rational behavior including rational choice theory, behavioral finance, and behavioral economics.

Understanding Rational Behavior

More than one behavior in a given situation may be deemed rational, as long as it can be logically explained. In addition, rational behavior may not involve receiving the most monetary or material benefit, because the satisfaction received could be purely emotional or non-monetary.

Rational behavior is also the key assumption of [rational choice theory](#) (RCT), an economic principle that assumes that individuals always make prudent and logical decisions that provide them with the highest amount of personal utility. These decisions provide people with the greatest benefit or satisfaction – given the choices available – and are also in their highest self-interest. Most mainstream academic economics theories are based on rational choice theory.

Individualized Rational Behavior

Rational behavior does not necessarily require a person to attempt to get the highest [return](#). The optimal benefit for an individual may involve non-monetary returns and/or risk considerations. For example, while it is likely more financially lucrative for an executive to stay on at a company rather than retire early, it is still considered rational behavior for her to seek an early retirement if she feels the benefits of retired life outweigh the utility from the paycheck she receives.

Further, a person's [aversion to risk](#) may be considered rational at multiple levels depending on the exact goals and circumstances. For example, an investor may choose to take more investment risk in his own retirement account than he would in an account designated for his children's college education. Both would be considered rational choices for this investor.

Behavioral Finance

While most conventional economic theories assume rational behavior on the part of consumers and investors, [behavioral finance](#) is a field of study that substitutes the idea of “normal” people for perfectly rational ones. It allows for issues of psychology and emotion to enter the equation, understanding that these factors alter the actions of investors, and can lead to decisions that may not appear to be entirely rational or logical in nature.

This consideration can include making decisions based primarily on emotion, such as investing in a company for which the investor has positive feelings, even if financial models suggest the investment is not wise.

Real-World Example of Rational Behavior

For example, an individual may choose to invest in the stock of an organic produce operation rather than a conventional produce operation if he or she has strong beliefs in the value of organic produce, even if the [present value](#) of the organic operation compared with that of the

conventional operation indicates the conventional operation should earn a higher return. Behavioral finance attempts to model behaviors that on the surface appear irrational.

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Breaking down biases further, many individual biases and tendencies have been identified for behavioral finance analysis, including:

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Disposition bias refers to when investors sell their winners and hang onto their losers. Investors' thinking is that they want to realize gains quickly. However, when an investment is losing money, they'll hold onto it because they want to get back to even or their initial price. Investors tend to admit their correct about an investment quickly (when there's a gain). However, investors are reluctant to admit when they made an investment mistake (when there's a loss). The flaw in disposition bias is that the performance of the investment is often tied to the entry price for the investor. In other words, investors gauge the performance of their investment based on their individual entry price disregarding fundamentals or attributes of the investment that may have changed.

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An experiential bias occurs when investors' memory of recent events makes them biased or leads them to believe that the event is far more likely to occur again. For example, the financial crisis in 2008 and 2009 led many investors to exit the stock market. Many had a dismal view of the markets and likely expected more economic hardship in the coming years. The experience of having gone through such a negative event increased their bias or likelihood that the event could reoccur. In reality, the economy recovered, and the market bounced back in the years to follow.

Loss Aversion

Loss aversion occurs when investors place a greater weighting on the concern for losses than the pleasure from market gains. In other words, they're far more likely to try to assign a higher priority on avoiding losses than making investment gains. As a result, some investors might want a higher payout to compensate for losses. If the high payout isn't likely, they might try to avoid losses altogether even if the investment's risk is acceptable from a rational standpoint.

Familiarity Bias

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Behavioral Finance in the Stock Market

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The understanding and usage of behavioral finance biases is applied to stock and other trading market movements on a daily basis. Broadly, behavioral finance theories have also been used to provide clearer explanations of substantial market anomalies like bubbles and deep recessions. While not a part of EMH, investors and portfolio managers have a vested interest in understanding behavioral finance trends. These trends can be used to help analyze market price levels and fluctuations for speculation as well as decision-making purposes.

Bias

What Is Bias?

A bias is an illogical preference or prejudice. It's a uniquely human foible, and since investors are human they can be affected by it as well. Psychologists have identified more than a dozen kinds of bias, and any or all of them can cloud the judgment of an investor.

Understanding Bias

Bias is an irrational assumption or belief that warps the ability to make a decision based on facts and evidence. Equally, it is a tendency to ignore any evidence that does not line up with that assumption.

KEY TAKEAWAYS

- Bias clouds decision-making judgment.
- Investors are as vulnerable as any humans to making decisions based on irrational prejudices.
- Understanding the types of bias can help you avoid falling victim to them.

A bias can be conscious or unconscious. When investors act upon them, they fail to absorb evidence that contradicts their assumptions.

Smart investors avoid two big types of bias: emotional bias and cognitive bias. Controlling them can allow the investor to reach an impartial decision based solely on the available data.

Relying on bias rather than hard data can be costly.

Common Biases in Investing

Psychologists have identified a number of types of bias that are relevant to investors:

- Representative bias leads to a snap judgment on a question based on its apparent similarity to an earlier matter.
- [Cognitive dissonance](#) leads to an avoidance of uncomfortable facts that contradict one's convictions.
- Home country bias and familiarity bias lead to an avoidance of anything outside one's comfort zone.
- Mood bias, optimism (or pessimism) bias, and overconfidence bias all add a note of irrationality and emotion to the decision-making process.
- The [endowment effect](#) causes people to over-value the things they own just because they own them.
- Status quo bias is resistance to change.
- Reference point bias and anchoring bias are tendencies to value a thing in comparison to another thing rather than independently.
- The law of small numbers is the reliance on a too-small sample size to make a decision.
- [Mental accounting](#) is an irrational attitude towards spending and valuing money.
- The disposition effect is the tendency to sell investments that are doing well and hang onto losers.
- Attachment bias is a blurring of judgment when one's own interests or a related person's interests are involved.
- Changing risk preference is the gambler's disease. A small risk, no matter what the outcome, creates a willingness to take on greater and greater risks.
- Media bias and internet information bias represent uncritical acceptance of widely-reported opinions and assumptions.

Example of Bias

All of these common types of bias can be seen in the way some people invest. For example, endowment bias can lead investors to overestimate the value of an investment simply because they bought it. If they bought it for more than it is now worth, they think they're right and the market will surely correct its error. They may reinforce this belief by reviewing all of the reasons it was worth what they paid for it. They choose to ignore the reasons its value fell.

The rational investor would review all of the data, positive and negative, and decide whether it's time to take the loss and move on.

Cognitive vs. Emotional Investing Bias: What's the Difference?

Cognitive vs. Emotional Investing Bias: An Overview

Everybody has [biases](#). We make judgments about people, opportunities, government policies, and of course, the markets. When we analyze our world with our own biases, we put our observations through a number of filters manufactured by our experiences, and we're not just talking about [stock screeners](#). We're talking about the filters we put our decisions through that sometimes make them biased. Individuals may or may not necessarily rationalize that their decisions are being made based on biases they have developed.

In general, all kinds of day-to-day activities are primarily driven by behavioral patterns. These same behavioral patterns can also influence investing actions.

For most people, it is impossible to be unbiased in investment decision-making. However, investors can mitigate biases by understanding and identifying them, then creating trading and investing rules that mitigate them when necessary. Broadly, investing biases fall into two main categories: cognitive and emotional. Both biases are usually the result of a prejudice for choosing one thing over the other.

KEY TAKEAWAYS

- Identifying and understanding unprofitable cognitive and emotional biases can help a trader improve their total return.
- Cognitive biases generally involve decisionmaking based on established concepts that may or may not be accurate.
- Emotional biases typically occur spontaneously based on the personal feelings of an individual at the time a decision is made.

What Is Cognitive Bias?

Cognitive biases generally involve decisionmaking based on established concepts that may or may not be accurate. Think of a cognitive bias as a [rule of thumb](#) that may or may not be factual.

We've all seen movies where a thief wears a police uniform to pass through a security checkpoint. The real police officers assume that because the person is wearing a uniform like theirs, he must be a real police officer. That's an example of a cognitive bias.

What does a fake cop have to do with your investment choices? You make the same types of assumptions that may or may not necessarily be true. Here are some examples:

- **Confirmation Bias:** Have you noticed that you put more weight into the opinions of those who agree with you? Investors do this too. How often have you analyzed a stock and later researched reports that supported your thesis instead of seeking out information that may poke holes in your opinion?
- **Gamblers' Fallacy:** Let's assume that the S&P has closed to the [upside](#) five [trading sessions](#) in a row. You place a short trade on the SPDR S&P 500 (SPY) because you believe chances are high that the market will drop on the sixth day. While it may happen, on a purely statistical basis, the past events don't connect to future events.

There may be other reasons why the sixth day will produce a down market, but the fact that the market is up five consecutive days is irrelevant.

- **Status-Quo Bias:** Humans are creatures of habit. Resistance to change spills over to investment portfolios through the act of repeatedly coming back to the same stocks and ETFs instead of researching new ideas. Although investing in companies you understand is a sound [investment strategy](#), having a short list of go-to products might limit your profit potential.
- **Risk-Averse Bias:** The [bull market](#) is alive and well, yet many investors have missed the rally because of the fear that it will reverse course. Risk-averse bias often causes investors to put more weight on bad news than good news. These types of investors typically overweight in safe, conservative investments and look to these investments more actively when markets are rocky. This bias can potentially cause the effects of risk to hold more weight than the possibility of reward.
- **Bandwagon Effect:** Warren Buffett became one of the most successful investors in the world by resisting the [bandwagon effect](#). His famous advice to be greedy when others are fearful and fearful when others are greedy is a denouncement of this bias. Going back to [confirmation bias](#), investors feel better when they are investing along with the crowd. But as Buffett has proven, an opposite mentality, after exhaustive research, may prove more profitable.

What Is Emotional Bias?

Emotional biases typically occur spontaneously based on the personal feelings of an individual at the time a decision is made. They may also be deeply rooted in personal experiences that also influence decisionmaking.

Emotional biases are usually ingrained in the psychology of investors and can generally be harder to overcome than cognitive biases. Emotional biases are not necessarily always errors. In some cases, an investor's emotional bias may help them to make a more protective and suitable decision for themselves.

Here are a few examples:

- **Loss-Aversion Bias:** Do you have a stock in your portfolio that is down so much that you can't stomach the thought of selling? In reality, if you sold the stock, the money that is left could be reinvested into a higher-quality stock. But because you don't want to admit that the loss has gone from a computer screen to real money, you hold on in hopes that you will, one day, make it back to even.
- **Overconfidence Bias:** "I have an edge that you (and others) do not." A person with overconfidence bias believes that his/her skill as an investor is better than others' skills. Take, for example, the person who works in the pharmaceutical industry. He/she may believe in having the ability to trade within that [sector](#) at a higher level than other traders. The market has made fools out of the most respected traders. It can do the same to you.
- **Endowment Bias:** Similar to loss aversion bias, this is the idea that what we do own is more valuable than what we do not. Remember that losing stock? Others in its sector

may show more signs of health but the investor won't sell because he/she still believes, as before, it's the best in its sector.

Key Differences

In general, a bias is usually the result of prejudice when choosing one thing over another. Biases can be influenced by experience, judgment, social norms, assumptions, academics, and more. Cognitive biases generally involve decisionmaking based on established concepts that may or may not be accurate. Emotional biases typically occur spontaneously based on the personal feelings of an individual at the time a decision is made. Emotional biases are usually not based on expansive conceptual reasoning. Both cognitive and emotional biases may or may not prove to be successful when influencing a decision.

Minimizing Unprofitable Biases

In investing, taking steps to minimize unprofitable biases can be extremely helpful in making more money.

A few examples include:

- Using a spreadsheet to [calculate the risk/reward](#) of every trade or investment. This can help in setting a threshold and never deviating from the rule.
- When you put a trade on, set an upside target. Once it reaches the target, sell the position.

One of the key ways to minimize unprofitable biases is to set objective trading rules and stick to them. Trading rules that mitigate unprofitable biases can help to override emotions and increase returns.

Proponents of [efficient market theory](#) believe that all known information is priced into a stock or other [investment product](#). The advent of [algorithmic trading](#) makes that process almost instant, according to EMT theorists. This was seen on April 23, 2013, when a fake tweet that claimed the White House was bombed and President Obama injured immediately sent markets crashing. Although the market recovered within four minutes, this incident exposed the network of supercomputers that constantly scan headlines looking for keywords that are programmed to sell equity positions when the right words are flagged.

This would seem to prove that EMT is true - especially now that [non-human traders dominate the market](#). However, others say, "not so." They argue that the reason long-term investors like [Warren Buffett](#), as well as [high frequency traders](#), can profit is because of market inefficiencies. These inefficiencies are natural because the markets are comprised of humans or computers programmed by humans.

Regardless of how disciplined, humans often trade with behavioral biases that cause them to act on emotion. This is the basis of [behavioral finance](#), a relatively new field of study that combines psychological theory with conventional economics. Behavioral finance predicts trading behavior and is used as a basis for creating more efficient [trading strategies](#). A University of California study found strong evidence that investors have behavior biases that

often affect investing decisions more than empirical data. Here, we highlight four of those biases that are common among retail traders who trade within their individual [brokerage accounts](#).

Overconfidence

Overconfidence has two components: overconfidence in the quality of your information, and your ability to act on said information at the right time for maximum gain. Studies show that overconfident traders trade more frequently and fail to [appropriately diversify their portfolio](#).

One study analyzed trades from 10,000 clients at a certain discount brokerage firm. The study wanted to ascertain if frequent trading led to higher returns. After backing out [tax loss](#) trades and others to meet liquidity needs, the study found that the purchased stocks underperformed the sold stocks by 5% over one year and 8.6% over two years. In other words, the more active the [retail investor](#), the less money they make. This study was repeated numerous times in multiple markets and the results were always the same. The authors concluded that traders are, "basically paying fees to lose money."

Trade less and invest more. Understand that by entering into trading activities you're trading against computers, [institutional investors](#) and others around the world with better data and more experience than you. The odds are overwhelmingly in their favor. By increasing your time frame, mirroring indexes and taking advantage of dividends, you will likely build wealth over time. Resist the urge to believe that your information and intuition is better than others in the market.

Reducing Regret

Admit it, you've done this at least once. You were confident that a certain stock was value priced and had very little downside potential. You put the trade on but it slowly worked against you. Still feeling like you were right, you didn't sell when the loss was small. You let it go because no loss is a loss as long as you don't sell the position. It continued to go against you but you didn't sell until the stock lost a majority of its value.

Behavioral economists call it regret. As humans, we try to [avoid the feeling of regret](#) as much as possible and often we will go to great lengths, sometimes illogical lengths, to avoid having to own the feeling of regret. By not selling the position and locking in a loss, a trader does not have to deal with regret. Research shows that traders were 1.5 to 2 times more likely to sell a winning position too early and a losing position too late, all to avoid the regret of losing gains or losing the original cost basis.

How to Avoid This Bias

Set trading rules that never change. For example, if a stock trade loses 7% of its value, exit the position. If the stock rises above a certain level, set a [trailing stop](#) that will lock in gains if the trade loses a certain amount of gains. Make these levels unbreakable rules and don't trade on emotion.

LimitedAttentionSpan

There are thousands of stocks to choose from but the individual investor has neither the time nor the desire to research each. Humans are constrained by what economist and psychologist [Herbert Simon](#) called, "bounded rationality." This theory states that a human will make decisions based on the limited knowledge they can accumulate. Instead of making the most efficient decision, they'll make the most satisfactory decision.

Because of these limitations, investors tend to consider only stocks that come to their attention through websites, financial media, friends and family, or other sources outside of their own research. For example, if a certain biotech stock gains [FDA](#) approval for a blockbuster drug, the move to the upside could be magnified because the reported news catches the eye of investors. Smaller news about the same stock may cause very little market reaction because it doesn't reach the media.

HowtoAvoidThisBias

Recognize that the media has an effect on your trading activities. Learning to research and evaluate stocks that are both well-known and "off the beaten path" might reveal lucrative [trades that you would have never found](#) if you waited for it to come to you. Don't let media noise impact your decisions. Instead, use the media as one data point among many.

ChasingTrends

This is arguably the strongest trading bias. Researchers on behavioral finance found that 39% of all new money committed to mutual funds went into the 10% of funds with the best performance the prior year. Although financial products often include the disclaimer that "past performance is not indicative of future results," retail traders still believe they can predict the future by studying the past.

Humans have an extraordinary talent for detecting patterns and when they find them, they believe in their validity. When they find a pattern, they act on it but often that pattern is already priced in. Even if a pattern is found, the market is far more random than most traders care to admit. The University of California study found that investors who weighted their decisions on past performance were often the poorest performing when compared to others.

HowtoAvoidThisBias

If you find a trend, it's likely that the market identified and exploited it long before you. You run the risk of buying at the highs - a trade put on [just in time](#) to watch the stock retreat in value. If you want to exploit an inefficiency, [take the Warren Buffett approach](#); buy when others are fearful and sell when they're confident. Following the herd rarely produces large-scale gains.

TheBottomLine

Do you see a bit of yourself in any of these biases? If you do, understand that the best way to avoid the pitfalls of human emotion is to have trading rules. Those might include selling if a stock drops a certain percentage, not buying a stock after it rises a certain percentage and not selling a position until a certain amount of time has elapsed. You can't avoid all behavioral bias but you can minimize the effect on your trading activities. (For related reading, see "[Cognitive vs. Emotional Investing Bias](#)")

It's hard not to think of the [stock market](#) as a person: It has moods that can turn from irritable to euphoric; it can also react hastily one day and make amends the next. But can psychology help us understand financial markets? Does analyzing the mood of the market provide us with any hands-on strategies? [Behavioral finance](#) theorists suggest that it can.

Findings of Behavioral Finance

Behavioral finance is a field of study that argues that, when making investment decisions, people are not nearly as rational as [traditional finance theory](#) makes out. For investors who are curious about how emotions and biases drive share prices, behavioral finance offers some interesting descriptions and explanations.

KEY TAKEAWAYS

- Behavioral finance theorists argue that, rather than being rational, people often make investment decisions based on emotions and biases.
- Investors often hold losing positions rather than feel the pain associated with taking a loss.
- The instinct to move with the herd explains why investors buy in bull markets and sell in bear markets.
- Behavioral finance is useful in analyzing market returns in hindsight, but has not yet produced any insights that can help investors develop a strategy that will outperform in the future.

The idea that psychology drives stock market movements flies in the face of established theories that advocate the notion that financial markets are efficient. Proponents of the [efficient market hypothesis](#), for instance, claim that any new information relevant to a company's value is quickly priced by the market. As a result, future price moves are random because all available (public and some [non-public](#)) information is already discounted in current values.

However, for anyone who has been through the Internet [bubble](#) and the subsequent crash, the efficient market theory is pretty hard to swallow. [Behaviorists](#) explain that, rather than being [anomalies](#), irrational behavior is commonplace. In fact, researchers have regularly reproduced examples of irrational behavior outside of finance using very simple experiments.

The Importance of Losses Versus Significance of Gains

Here is one experiment: Offer someone a choice of a sure \$50 or, on the flip of a coin, the possibility of winning \$100 or winning nothing. Chances are the person will pocket the sure thing. Conversely, offer a choice of 1) a sure loss of \$50 or 2) on a flip of a coin, either a loss of

\$100 or nothing. The person, rather than accept a \$50 loss, will probably pick the second option and flip the coin.

The chance of the coin landing on one side or the other is equivalent in any scenario, yet people will go for the coin toss to save themselves from a \$50 loss even though the coin flip could mean an even greater loss of \$100. That's because people tend to view the possibility of recouping a loss as more important than the possibility of greater gain.

The priority of avoiding losses also holds true for investors. Just think of Nortel Networks [shareholders](#) who watched their stock's value plummet from over \$100 a share in early 2000 to less than \$2 a few years later. No matter how low the price drops, investors—believing that the price will eventually come back—often hold stocks rather than suffer the pain of [taking a loss](#).

The Herd vs. Self

The [herd instinct](#) explains why people tend to imitate others. When a market is moving up or down, investors are subject to a fear that others know more or have more information. As a consequence, investors feel a strong impulse to do what others are doing.

Behavior finance has also found that investors tend to place too much worth on judgments derived from small samples of data or from single sources. For instance, investors are known to attribute skill rather than luck to an [analyst](#) that picks a winning stock.

On the other hand, beliefs are not easily shaken. One notion that gripped investors through the late 1990s, for example, was that any sudden drop in the market is a buying opportunity. Indeed, this [buy-the-dip](#) view still pervades. Investors are often overconfident in their judgments and tend to pounce on a single "telling" detail rather than the more obvious average. In doing so, they fail to see the larger picture by focusing too much on smaller details.

How Practical Is Behavioral Finance?

We can ask ourselves if these studies will help investors beat the market. After all, rational shortcomings should provide plenty of profitable opportunities for wise investors. In practice, however, few if any [value investors](#) are deploying behavioral principles to sort out which [cheap stocks](#) actually offer returns that are consistently above the norm.

The impact of behavioral finance research still remains greater in academia than in practical [money management](#). While theories point to numerous rational shortcomings, the field offers little in the way of solutions that make money from market manias.

Robert Shiller, the author of "Irrational Exuberance" (2000), showed that in the late 1990s, the market was in the thick of a bubble. But he couldn't say when the bubble would pop. Similarly, today's behaviorists can't tell us when the market has hit a top, just as they could not tell when

it would [bottom](#) after the 2007-2008 financial crisis. They can, however, describe what an important turning point might look like.

The Bottom Line

The behavioralists have yet to come up with a coherent model that actually predicts the future rather than merely explains, with the benefit of hindsight, what the market did in the past. The big lesson is that theory doesn't tell people how to beat the market. Instead, it tells us that psychology causes [market prices](#) and fundamental values to diverge for a long time.

Behavioral finance offers no investment miracles to capitalize on this divergence, but perhaps it can help investors train themselves on how to be watchful of their behavior and, in turn, avoid mistakes that will decrease their personal wealth.