PIMCO

INVESTOR EDUCATION

The Importance of Behavioral Guidance

Why managing our biases may lead to better investment outcomes

A company of Allianz

Behavioral Science: An Overview

Classic economics assumes that investors are rational — that they incorporate available information to determine appropriate probabilities and to optimize their investing decisions.

95%

of us use heuristics,[1] or mental shortcuts, such as a rule of thumb, an educated guess or intuitive judgment to make complex decisions.

But, what you may not realize is that **95% of us use heuristics,[1]** or mental shortcuts, such as a rule of thumb (general guidelines say this is the right thing to do), an educated guess (this seems like the right thing to do) or intuitive judgment (it feels right) to make complex decisions.

The study of behavioral science, which incorporates cognitive and behavioral psychology, recognizes that investors have biases that often may lead to erroneous conclusions and suboptimal investing decisions.

Behavioral biases can influence how we process and interpret information, especially when markets are volatile. They can also influence how we make decisions and take information in. In Behavioral Science, these biases are split into two distinct groups, cognitive and emotional:

Cognitive Biases: This is a type of thinking, often a mental shortcut, that occurs when we're processing and interpreting information.

Emotional Biases: As the names suggests, emotional biases stem from emotional factors, like impulse or intuition, which distort cognition and decision making.

On the following pages, we highlight several common cognitive and emotional biases that can have a negative impact on how investors make financial decisions – as well as important tips to consider to help your clients keep their biases in check.

1 Ariely, Dan. (2008) Predictably Irrational: The Hidden Forces That Shape Our Decisions. Harper Collins.

BEHAVIORAL SCIENCE IN ACTION

PIMCO has long understood that behavioral science can help make us better investors. That's why we've partnered with some of the best minds in the field at the Center for Decision Research at The University of Chicago Booth School of Business. Through this innovative partnership, PIMCO supports diverse and robust academic research that contributes to a deeper understanding of human behavior and decision-making.

CHICAGO BOOTH Center for Decision Research | PIMCO Decision Research Laboratories

Behavioral Biases Common to Investors

LOSS AVERSION

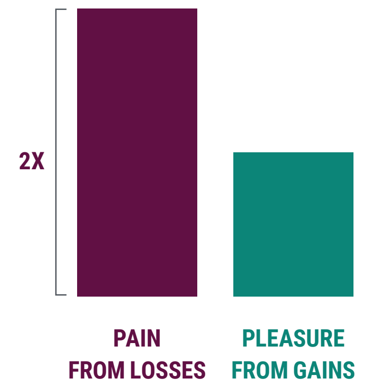
What is it?

Loss aversion is an emotional bias in which investors typically feel the pain of loss more profoundly than the joy of an equivalent gain. Research has found that some investors need to "win" twice as much as they "lose" to be indifferent to taking risk.

How loss aversion can impact investors?

- Investing only in safe investments with low returns, potentially reducing future purchasing power
- Holding a stock below purchase price solely to avoid taking a loss
- The unwillingness to sell a home for less than it was purchased for
- Focusing only on positions that are underwater while ignoring total portfolio holdings
- Holding the belief that an investment loss doesn't exist until it's sold
- Selling winning positions instead of losing investments to avoid accepting defeat

The pain of losses is twice as painful as the pleasure of gains



ANCHORING

What is it?

A cognitive bias, anchoring is the tendency to continue using information that has been used in past decisions despite the existence and availability of new and relevant data. As a result, investment decisions become difficult to reverse, even if the new information indicates that a change is advisable.

How does anchoring impact investors?

Investors may stick too closely to their original estimates when new information becomes available. For example, if an investor estimates next year's earnings for a company to be $2 per share and the company experiences difficulties during the year, the investor may not adjust their original estimate to account for these challenges because they're anchored by their original estimate.

HINDSIGHT

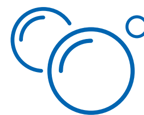
What is it?

Hindsight is a common cognitive bias where investors perceive investment outcomes as if they were predictable – even if they were not. You may have heard friends or even yourself say "I knew it," or "I could have predicted that." We all need to be careful when evaluating how past events affect the current market and our own ability to predict.

How does hindsight impact investors?

Hindsight bias gives investors a false sense of security when making investment decisions, possibly leading to excessive risk-taking.

Hindsight isn't always 20/20



Financial bubbles are always subject to substantial hindsight bias after they burst.

RECENCY

What is it?

Recency bias is a cognitive bias that favors recent events over historic ones. It gives greater importance to the most recent events, such the closing argument a jury hears before being dismissed to deliberate.

What are the effects on investors?

Recency bias can skew investors into not accurately evaluating economic cycles, causing them to believe that rising markets will continue to gain or that declining markets will continue to fall. This can lead to portfolio allocations that may be inconsistent with an investor's risk tolerance and long-term financial goals.

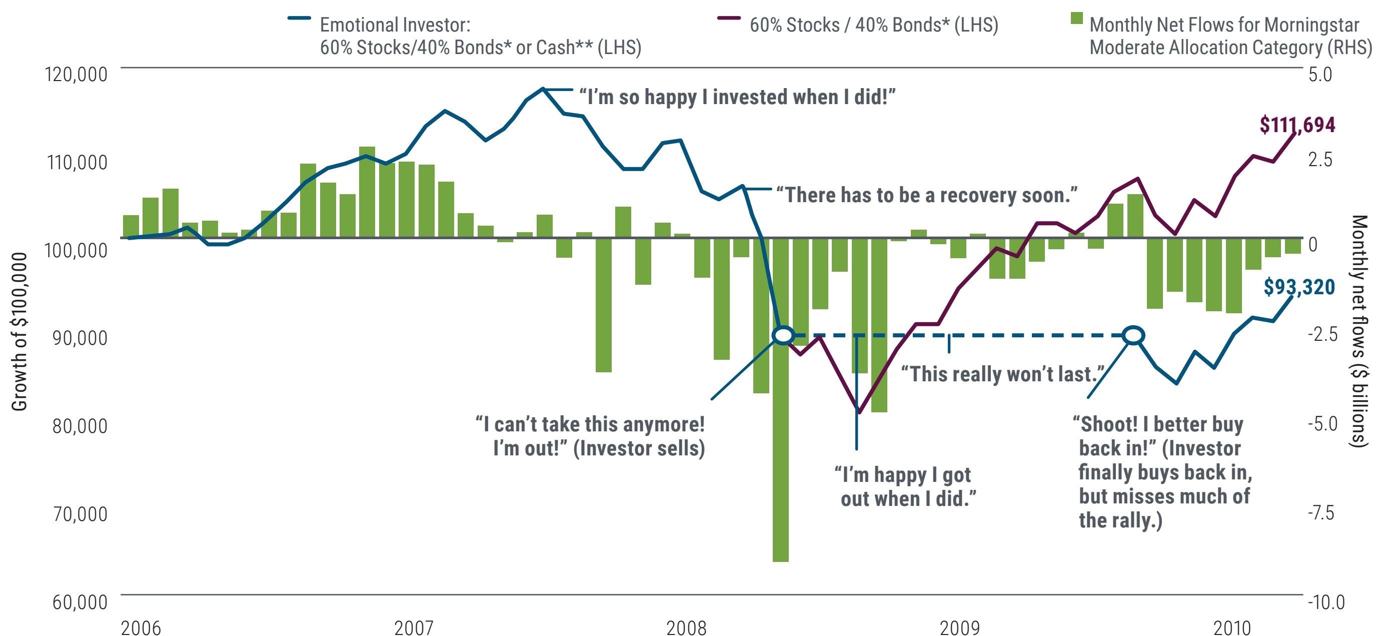
Recency Bias in Context

In order for investors to help improve their individual investment outcomes, they need to improve the choices they make. Understanding biases in context can help all of us make better investment decisions.

Investors tend to make decisions based on recent trends instead of using longer-term information. In periods of market decline, we exhibit a tendency to reduce our exposure and add to portfolio holdings following periods of strong returns – behavior that may hinder our long-term performance and objectives.

As this hypothetical example shows, when emotions take over, it's easy for investors to make suboptimal decisions, buying out of excitement when the market is going up (buying high) and selling out of fear when the market is falling (selling low).

Investor's Behavior and Thoughts During a Volatile Market (2006-2010)



January 2006 to December 2010. Source: Morningstar, Bloomberg, PIMCO. Past performance is not a guarantee or a reliable indicator of future results.

Hypothetical example for illustrative purposes only. Not indicative of the past or future performance of any PIMCO product.

* Stocks are represented by S&P SOO Index. Bonds are represented by Bloomberg U.S. Aggregate Index. It is not possible to invest in an unmanaged index.

** These results are based on hypothetical modeling and are intended for illustrative purposes only. Emotional Investor is assured to move to cash on 10/31/2008 and back to 60% Stocks / 40% Bonds on 04/30/2010.

Defining Some Biases

Cognitive Biases

CONFIRMATION BIAS: interpreting new information as confirmation of something you already believe

Humans have a tendency to search for, interpret, focus on and remember information that confirms our preconceptions. Investors might inadvertently look for information that supports their beliefs about an investment and fail to see information that presents different ideas. Having a one-sided view can lead to poor investment decisions.

ANCHORING: using irrelevant information as a reference for evaluating or estimating the unknown value of something

Investors cling to arbitrary price points when they decide to buy or sell a portfolio holding. This bias may prevent an investor from viewing investments holistically, because they are influenced by purchase price or an arbitrary price level.

RECENCY BIAS: short-term memories influence more than memories of things long ago

Investors tend to more easily remember something that happened recently instead of something that may have occurred a while back. This means they're likely to believe that rising markets will continue to gain or that declining markets will continue to fall. That can lead to portfolio allocations that may be inconsistent with investors' risk tolerance and long-term financial goals.

Emotional Biases

FAMILIARITY BIAS: sticking with what you know

Investors tend to stick with what they know, which can have a strong impact on what they buy. However, investing only in stocks that investors are familiar with may result in over allocations to certain companies, industries and countries; that can negatively impact portfolio diversification.

LOSS AVERSION: feeling the pain of loss more than the joy of gains

Investors feel the pain of loss more severely than they feel the joys associated with gains. This aversion to loss can cause investors to sell winning investments too early, hold losing investments too long, or possibly assume additional risk in an attempt to make up for potential losses.

OVERCONFIDENCE: overestimating or exaggerating your ability to successfully perform a given task

Overconfident investors feel that they are better than others at picking the best stocks and times to enter or exit a position – a behavior that can lead to more frequent trades and market timing. That may result in lower returns.

Behavioral Finance: Moving Beyond the Biases

A basic understanding of behavioral finance can help you keep emotions in check, make better decisions and potentially improve your investment outcomes.

Partnering with a financial professional can help, too, as she or he can often develop a thoughtful strategy, provide continued advice to encourage discipline in investment choices.

TIPS TO CONSIDER

In addition, consider some important tips that may help you overcome biases that can derail long-term financial goals and objectives:

- ☑ **Define your objectives:** If you have a plan, you're more likely to keep emotions at bay. Investors who have clearly defined investment objectives are less apt to let short-term market moves get the better of their emotions.
- ☑ **Put pen to paper:** Writing out your objectives, and aligning on the methods you're comfortable using to achieve them, will provide a framework for rational decision making.
- ☑ **Keep emotions in check:** Decisions that are driven by emotion are often not the wisest. Rather than worrying about short-term market fluctuations, stay focused on your long-term financial goals.
- ☑ **Consider the other side:** To avoid having a one-sided view of an investment and acting on it, search out reliable information that presents different perspectives. This will help give you a holistic picture and lead to a more informed decision.
- ☑ **Stay diversified:** Portfolio diversification, in line with your return objectives and risk tolerance, can help mitigate portfolio volatility and can potentially produce more consistent and successful investment outcome.
- ☑ **Rebalance regularly:** Change can be good. Regular portfolio rebalancing instills a disciplined approach to decision making, forcing investors to take actions that may be emotionally uncomfortable, but often financially productive.

Additional Key-Terms To Know

Asset-Allocation: How an investor distributes their money between different types of investments, such as stocks, bonds and cash. Asset allocation can help balance a portfolio's risk and return (a strategy known as diversification).

Benchmark: A standard against which to measure investment performance. In most cases, an investment benchmark is a market index or a combination of indexes. An index tracks the performance of a type of security, such as all listed stocks or all government bonds. Indexes are unmanaged and an investor cannot invest directly in an index.

Diversification: The process of incorporating various asset classes and holdings with different return profiles to help blunt the impact of significant market declines in a particular asset class or sector.

Framing: Occurs when people make decisions based on the way information is presented, or framed, rather than on the facts themselves. The language used, the physical arrangement of the options, and how we think about a problem are all aspects of a frame. Importantly, the same facts presented in different ways – positive or negative – can lead us to make different decisions.

Rebalancing: Portfolio rebalancing is the process of adjusting portfolio allocations back to initial targets. It can be implemented using a time-based approach (i.e.: monthly, quarterly, annually) or a variance-based approach, triggered by certain deviations from original targets.

Regret Aversion: Investors want to avoid the pain of regret resulting from a poor investment decision – whether the loss comes from an investment that goes down, or from a perceived loss resulting from a stock that went up, but that they didn't own. This bias can sometimes initiate herding behavior – investors may buy into an already richly priced and volatile market, helping form a bubble, believing that if they don't, they will miss out on good opportunities.

Status quo Bias: An emotional bias in which people respond to new circumstances by doing nothing instead of making appropriate adaptations. People are generally more comfortable keeping things as they are. This bias might prevent an investor from looking for opportunities where change may be beneficial.

Volatility: Volatility is the constant movement up and down (and up again) of investments. Like anything else, volatility has both a good and bad side. On one hand, the roller-coaster ride that is the stock market can be pretty scary for novice investors. On the other hand, if you're invested in the market and the market goes up, you might feel good about the spike in prices.

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Past performance is not a guarantee or a reliable indicator of future results.

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