INVESTMENT INSIGHTS

Analysis, Insights and a Different Perspective February 2021

6 BEHAVIORAL BIASES THAT CAN LEAD TO POOR INVESTMENT DECISIONS

As humans, we make many decisions every day – from easy choices, like what to eat to what to wear, to more important decisions, like how to adjust our business activities during a pandemic. According to research, we make approximately 35,000 decisions each day,[1] but many of these decisions can be biased due to various reasons. To be a successful investor, it is crucial to understand these errors and how to overcome them, so you can potentially avoid investment mistakes. In this issue of Investment Insights, we explore six behavioral biases that investors need to be aware of.

KEY POINTS

- When making decisions, humans are prone to behavioral biases.
- Confirmation, hindsight and representative are belief-perseverance biases that cause people to cling to their views irrationally.
- Anchoring, framing and availability are information-processing biases that cause people to process information inaccurately.

TYPES OF BEHAVIORAL BIASES

These types of biases can be classified into two broad categories: 1) belief-perseverance biases and 2) information-processing biases. With belief-perseverance biases, people tend to cling to their previously held beliefs irrationally or illogically.[2] They are reluctant to change their views based on contrary evidence. Examples of belief perseverance biases include confirmation, hindsight and representative biases. With information-processing biases, on the other hand, people process information irrationally or illogically.[2] Examples of information-processing biases include anchoring, framing and availability biases. Let us explore these biases in detail.

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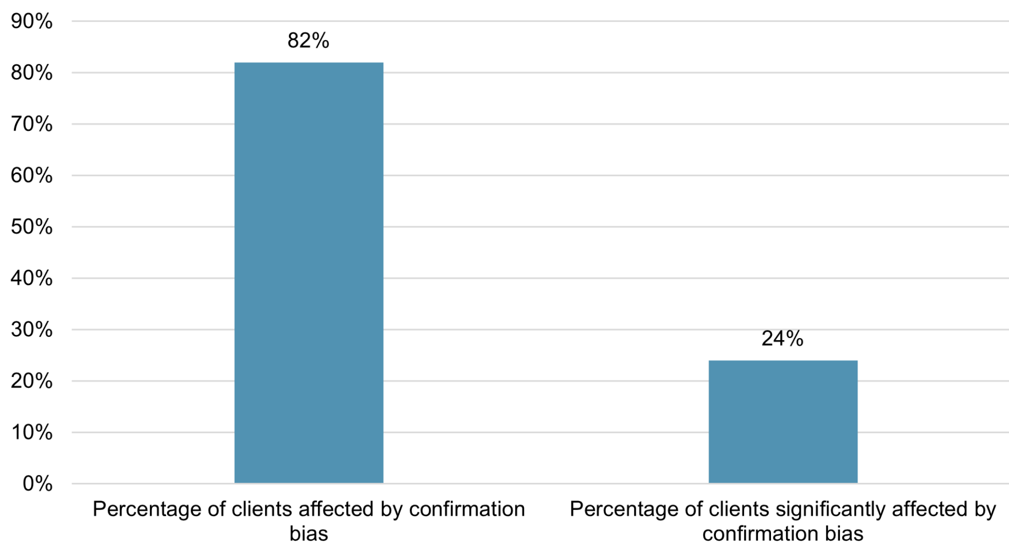
1 Hoomans, Dr. Joel. "35,000 Decisions: The Great Choices of Strategic Leaders." Robert's, 20 Mar. 2015.
2 Pompian, Michael M. Behavioral Finance and Wealth Management How to Build Investment Strategies That Account for Investor Biases. Wiley, 2012.

BELIEF-PERSEVERANCE BIASES

Confirmation

Confirmation bias is caused by people looking for and noticing information that confirms their opinions, while ignoring information that contradicts their opinions. With this bias, investors tend to only consider the positive information about their investments and ignore any negative information. Research has found that investors preferentially treat information that confirms their prior beliefs.[3] Interestingly, this bias not only shows up in regular individuals' decision-making but also appears to influence large professional bodies. Several studies show how many academic papers suffer from confirmation bias.[4] It is a bias that appears to impact a considerable number of investors as well. As you can see in the graph below, a survey of financial advisors found that 82% of clients are affected by confirmation bias.[5]



Hindsight

Hindsight bias is quite common among many investors. It is the tendency to see past events as predictable. With hindsight, many people now claim that the signs of the 2008 financial crisis were obvious. If the signs were evident to many market participants, however, there should not have been a financial crisis. Similarly, many people will likely come to believe that the healthcare crisis and subsequent market volatility of 2020 were predictable. In reality, the future only becomes clear looking back as hindsight is 20/20.

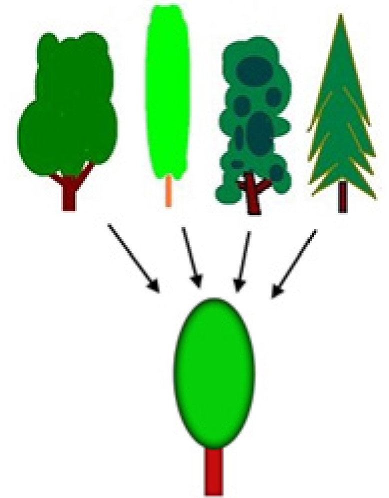
3 Park, JaeHong, et al. "Information Valuation and Confirmation Bias in Virtual Communities: Evidence from Stock Message Boards." Information Systems Research, 25 July 2013.

4 Eric-Jan, Wagenmakers, et al. "An Agenda for Purely Confirmatory Research." SAGE Journals, 7 Mar. 2012; and, Doherty, Michael E. "Confirmation Bias in a Simulated Research Environment: An Experimental Study of Scientific Inference." SAGE Journals, 1 Feb. 1977.

5 Cerulli Assoicates, "BeFi Barometer 2020." Survey. July 2020.

Representative

Representative bias occurs when people mistakenly classify new information based on their past experiences and classifications. The image to the right shows the classification of a tree as an example of this bias. With representative bias, people characterize new information like the type of tree they see into their existing mental model of a tree.



Source: Tom Sulcer

There are two types of representative bias: 1) sample-size neglect and 2) base-rate neglect. Sample-size neglect is the tendency of people to assume small samples represent the entire population. After flipping a coin and getting three heads up in a row, individuals often mistakenly believe that the odds of the tail landing up are higher than 50/50 for the next coin flip. But statistically, that is not the case, as each coin flip has the same odds of heads and tails. Similarly, investors often extrapolate recent investment returns as indicative of the long-term average.

On the other hand, base-rate neglect occurs when people assign a higher value to specific information and a lower value to objective information. The following example of Steve can help us understand this more clearly:

> "Steve is very shy and withdrawn, invariably helpful but with very little interest in people or in the world of reality. A meek and tidy soul, he has a need for order and structure, and a passion for detail. Is Steve more likely to be a librarian or a farmer?"[6]

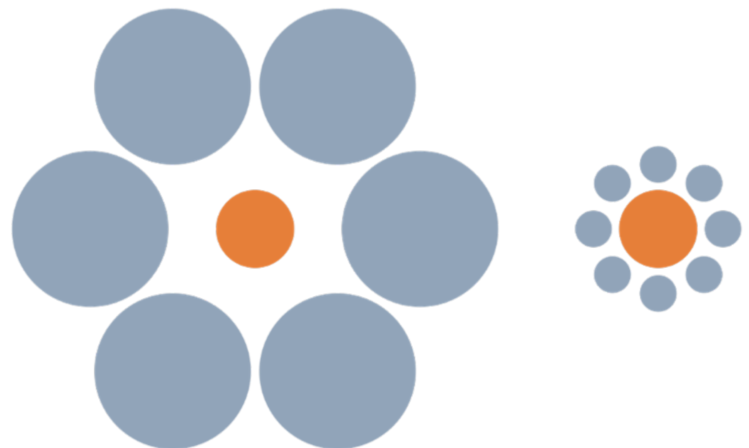
Most people answer this question as a librarian due to base-rate neglect bias. People focus on Steve's individual qualities, such as "shy" or "tidy," which are qualities that match a librarian more than a farmer. The objective information most often ignored in this example is that there are many more male farmers than librarians. As such, there is a higher number of "shy" and "tidy" farmers than librarians, making Steve more likely to be a farmer.

INFORMATION-PROCESSING BIASES

Anchoring

Anchoring bias causes people to rely too heavily on the initial information (anchor) and insufficiently adjusting their views based on new information. This is because people tend to view new information with reference to the anchor instead of objectively.

Consider an example of a watch that is given to you by your parents. Suppose that you are told they believe it is worth $100. If someone offers you $75 for it, you will want to reject the offer. If someone offers you $125, you may be more inclined to sell the watch. Later, if you find out that the watch was actually valued at $200, you would likely be disappointed and wished you had not sold the watch. The watch was sold mistakenly because of the anchoring bias. An example of anchoring bias is shown in the picture to the right. Most people see a larger middle circle on the right side, but both middle circles measure the same size in reality.



6 Kahneman, Daniel. Thinking, Fast and Slow. Farrar, Straus and Giroux, 2013.

Framing

Framing bias occurs when people's decisions are influenced based on the way information is presented. Overall, people tend to prefer options that are presented with a positive connotation. For example, a product labeled "75% lean" is preferred over one labeled "25% fat," even though both labels are accurately describing the same product.[7]

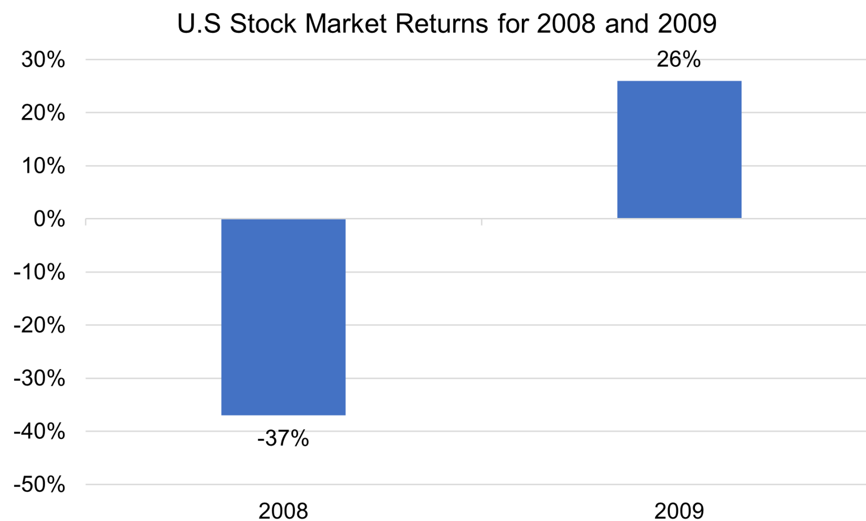
The following table presents an example of framing from psychologists Amos Tversky and Daniel Kahneman.[8] In this example, participants were asked to choose between two treatments for 600 people with a deadly disease. Notice that both treatment A and B produce the same results, 200 out of 600 or one-third of the people live. That said, participants' selection changed depending on how the outcome was framed: 72% chose treatment A when framed positively ("200 people will be saved"), while only 22% chose treatment A when it was framed negatively ("400 people will die").

Framing	Treatment A	Treatment B
Positive	"200 people will be saved"	"1/3 probability that 600 people will be saved, and 2/3 probability that no people will be saved."
Negative	"400 people will die"	"1/3 probability that nobody will die, and 2/3 probability that 600 people will die."

Availability

Our final bias is availability, which is a mental shortcut that people use to recall information based on how easily it comes to mind. With this bias, information that is more easily recalled is considered more important, whereas information that is not easy to remember is considered not as important.

This bias has the potential to influence an investor's view of the financial market based on more recent events. One example occurred in 2009 following the 2008-09 market turmoil. As you can see in the table below, after a market sell-off in 2008, the markets rallied by more than 25% in 2009, but more than two-thirds of participants in a survey believed the market was down or flat in 2009.[9] The disconnect appears to have been caused in large part to the availability bias as people recalled the market decline of 2008 when thinking about the market conditions in 2009.

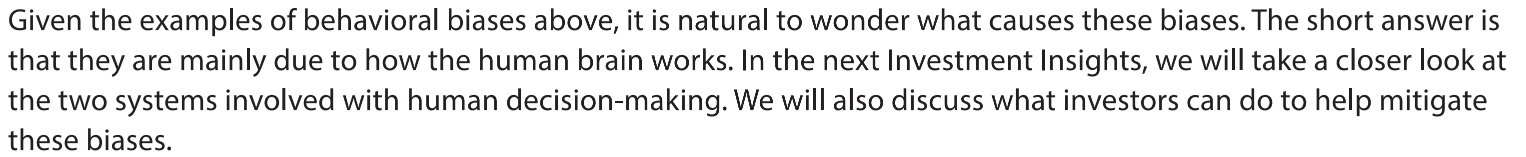


Source: Morningstar. U.S. stocks represented by Standard & Poor's 500 Index.

7 Levin, Irwin P., and Gary J. Gaeth. "How Consumers Are Affected by the Framing of Attribute Information Before and After Consuming the Product." OUP Academic, Oxford University Press, 1 Dec. 1988.

8 Tversky, Amos, and Daniel Kahneman. "The Framing of Decisions and the Psychology of Choice." Science, American Association for the Advancement of Science, 30 Jan. 1981.

9 "WHAT IS AVAILABILITY BIAS?" AN INVESTOR'S GUIDE TO AVAILABILITY BIAS, Franklin Templeton.



Given the examples of behavioral biases above, it is natural to wonder what causes these biases. The short answer is that they are mainly due to how the human brain works. In the next Investment Insights, we will take a closer look at the two systems involved with human decision-making. We will also discuss what investors can do to help mitigate these biases.

This report was prepared by

Khurram Naveed, Senior Analyst, LPL Operations Manager
Cornerstone Wealth Portfolios

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