In our series *Learning Outcomes Decoded* we break down a single Learning Outcome Statement (LOS) from the CFA level 1 curriculum. Dave Kaczorowski, CFA, author of this article, is the Content Manager of the CFA team at the Princeton Review and teacher of the live online review sessions. He is a professor of finance at the University of San Francisco.
The module on behavioral biases was introduced in the 2022 curriculum. Investor psychology is a growing field in the investment industry, and is considered by some to be the most viable path to market-beating returns. This module introduces a long list of specific ways investors behave irrationally, all of which are highly testable.

Two categories of behavioral biases

**COGNITIVE ERRORS**—These are situations where the decision-maker processes the data improperly to reach the wrong conclusion. The curriculum divides these errors into two types: belief perseverance biases, and processing errors.

**Believe perseverance biases**

- **Conservatism bias**—Ignoring new evidence to maintain prior views
- **Confirmation bias**—Only paying attention to evidence that supports current beliefs
- **Representativeness bias**—Basing decisions on only the portion of the data that relates to personal experiences or beliefs
- **Illusion of control bias**—Overestimating one’s ability to control an outcome
- **Hindsight bias**—Believing past events to be more predictable than they were at the time
Processing errors

- **Anchoring and adjustment bias**—Making a decision that relies too heavily on the initial information received
- **Mental accounting bias**—Dividing money into separate “accounts” when it should be grouped together
- **Framing bias**—Answering the same question differently based on how it is phrased
- **Availability bias**—Assigning unfairly high weight to the most easily recallable information

**EMOTIONAL BIASES**—In this case, the decision-maker ignores the data completely and bases the decision entirely on emotion, again often leading to the wrong conclusion

- **Loss-aversion bias**—Attaching more pain to a loss than to a gain of equal size
- **Overconfidence bias**—Overestimating one’s skill as a factor in the outcome
- **Self-control bias**—Acting in pursuit of short-term satisfaction at the expense of long-term goals
- **Status quo bias**—Failing to make changes for the sake of keeping the situation as is
- **Endowment bias**—Attaching too much value to an asset solely because it is owned
- **Regret-aversion bias**—Avoiding a decision out of fear that it will turn out poorly

The curriculum lists the negative outcomes of these biases and ways to correct them which is highly testable information.
PRACTICE QUESTION
Which of the following is the least likely way to prevent a cognitive error regarding an investment portfolio?

A. Conducting attribution analysis on returns results to separate skill from luck
B. Scrutinizing investment decisions to root out “default assumptions”
C. Documenting investment decisions and the key reasons behind them

A is correct. Confusing skill with luck defines overconfidence bias as an emotional bias rather than a cognitive error. Overconfidence is characterized by a tendency to ignore the data and assume success is the result of one’s skill, a hallmark of emotional bias. Answers B and C both describe ways of increasing the robustness of the analysis to prevent drawing faulty conclusions from the data. Answer choice B is described as a remedy for anchoring bias, while answer choice C is a remedy for hindsight bias.