Behavioral Finance

Why investors make the decisions they do

Behavioral finance is the intersection of behavioral psychology and finance that helps explain why people make irrational financial decisions.

It informs every financial decision we make.

Behavioral evolution

Changes over time affect decision-making

Understanding behavioral finance helps to avoid emotion-driven decisions that can lead to unnecessary losses.

Evolutionary changes naturally impact decision-making over time:

- Human nature and hard wiring
- Means of processing information
- Coping mechanisms

Technological evolution

Major advancements have altered the process

Decades of constant technological advancements have shaped the way humans interact with one another and make decisions.

- Computer revolution, 1980s–present
- Internet and smart phone adoption
- Algorithmic trading and artificial intelligence

Personal experience

Beliefs are rooted in personal experience

Family, community, or societal legends often contribute

Experiences are some of the most difficult habits/beliefs to break

Major investor behavior challenges

The roots and reasons behind decision-making

- Anchoring Bias
- Confirmation Bias
- Recency Bias
- Herding Bias
- Ambiguity Aversion
- Myopic Loss Aversion

Anchoring bias

Relying too heavily on information received first

WHAT IS ANCHORING?
Anchoring is most commonly used in facets of retail shopping, such as groceries, clothing, and car shopping.

No one buying | **Everyone dying to buy**

Confirmation bias

Seeking out information that confirms an existing belief

WHAT IS CONFIRMATION BIAS?
Confirmation bias is the natural tendency to filter out information to retain only what confirms one's original belief.

Working against good behavior every day

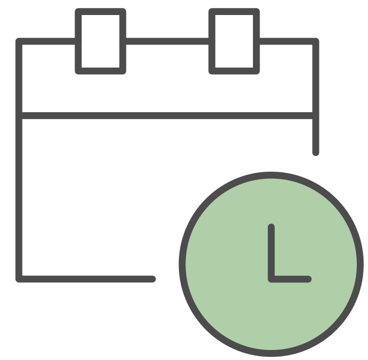
Searching out the answers that you want to hear rather than the right answers

> **I don't always know what I'm talking about,** but I know I'm right.
>
> Muhammad Ali

Recency bias

Basing decisions only on the most recent information

WHAT IS RECENCY BIAS?
Recency bias is when individuals make decisions based on recent results, or on their perspective of recent results, which may lend itself to making incorrect conclusions based on the recent past.



"What we learn from history is that **people don't learn from history**. When investors get either too fearful or too greedy, they sometimes hide behind the notion that, 'This time it's different.' Usually, they regret it."

Warren Buffett

Herding bias

Following the crowd instead of making decisions independently

WHAT IS HERDING BIAS?
Herding bias is the tendency to follow the actions of a larger group, whether those actions are rational or irrational.

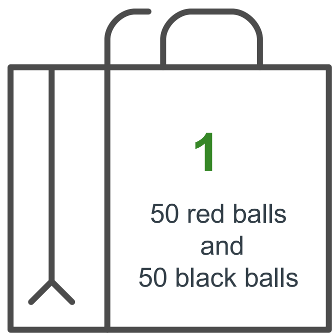
It is rooted in early human behavior.

Ambiguity aversion

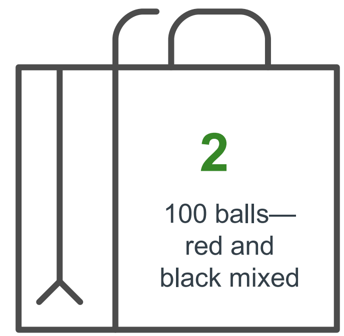
A tendency to avoid the unknown

WHAT IS AMBIGUITY AVERSION?
Ambiguity aversion is the tendency to avoid the unknown by having a preference for known risks over unknown risks.

Daniel Ellsberg Paradox:
Select a ball from either bag and guess the color.



Probability of success: 50%



Probability of success: unknown

Result

More people chose bag 1, where there was more certainty in the outcome (50% chance of guessing correctly).

Fewer people chose bag 2, where there was more uncertainty (ambiguity) in the outcome.

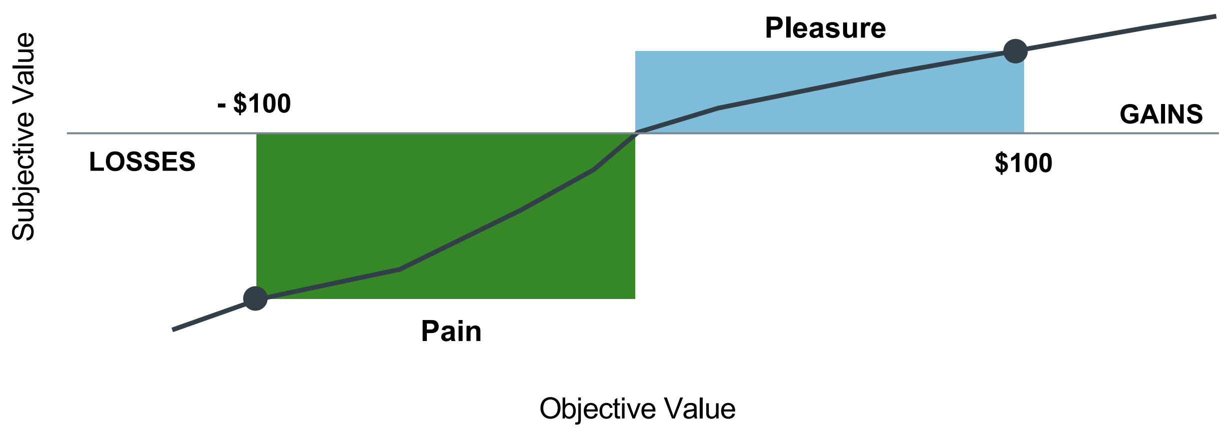
Source: Graham, Harvey, and Huang, "Investor Confidence, Trading Frequency, and Home Bias," *Management Science*, July 2009.

Myopic loss aversion

Experiencing more sensitivity to losses than gains

WHAT IS MYOPIC LOSS AVERSION?
Myopic loss aversion is the combination of a greater sensitivity to losses than to gains, and a tendency to evaluate outcomes frequently.

Losing $100 hurts twice as much
as the feeling you'd experience by gaining $100.



Studies showed that people chose to take a risk **only when the potential gain is 2x greater than the expected loss.**

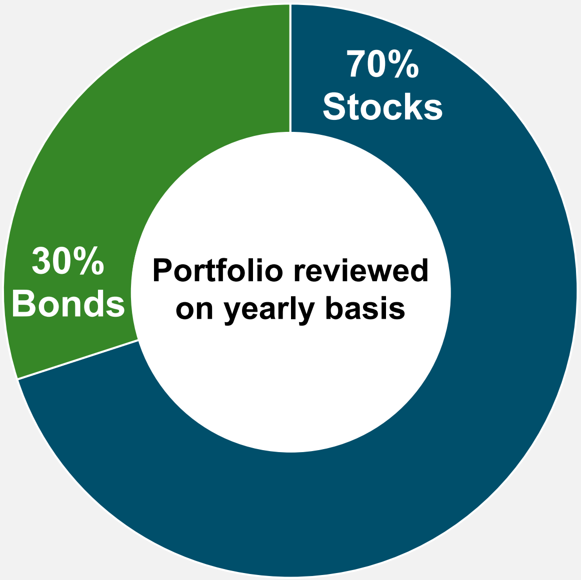
Example based on experiment by Kahneman and Tversky, 1992.

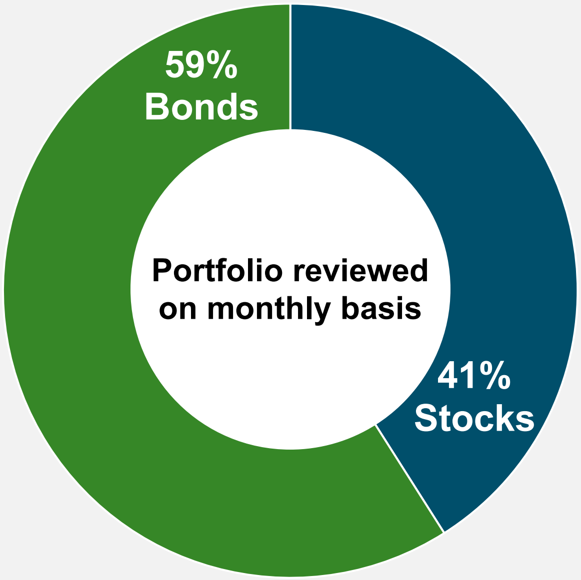
 For investor use.

Frequent portfolio evaluation can lead to risk-averse behavior

A short-term focus can lead to investing too conservatively

Constant reminders of volatility may cause investors to **seek more conservative investments**—regardless of objectives or time horizon.



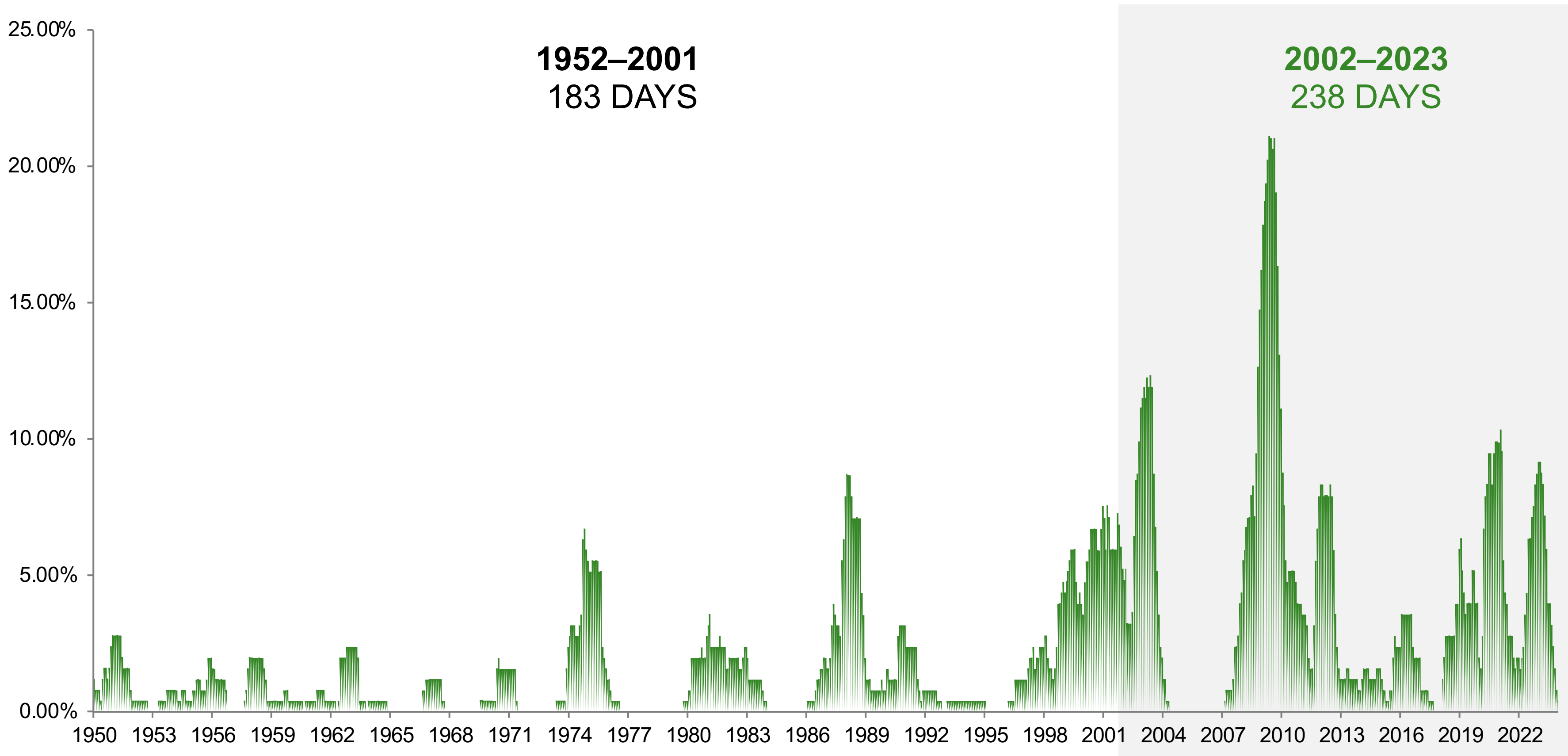


Source: Thaler, R. H., A. Tversky, D. Kahneman, and A. Schwartz. "The Effect of Myopia and Loss Aversion on Risk Taking: An Experimental Test." *The Quarterly Journal of Economics* 112.2 (1997). In the study, subjects were assigned simulated conditions that were similar to making portfolio decisions on a monthly or yearly basis.

Market volatility exacerbates the effects

During the past 22 years, the equity market had more days of >2% declines than the prior 50-year period

NUMBER OF DOWN TRADING DAYS PER CALENDAR YEAR WITH DECLINES OF MORE THAN 2%



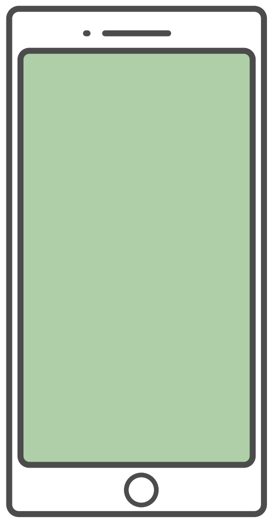
Past performance is no guarantee of future results. You cannot invest directly in an index. Index performance includes the reinvestment of dividends and interest income.

Source: Standard & Poor's, FactSet, as of 12/31/23.

 For investor use.

Information overload

The amount of information at our fingertips is rising exponentially



The average American spends **five hours and twenty-four minutes per day** on their mobile device.

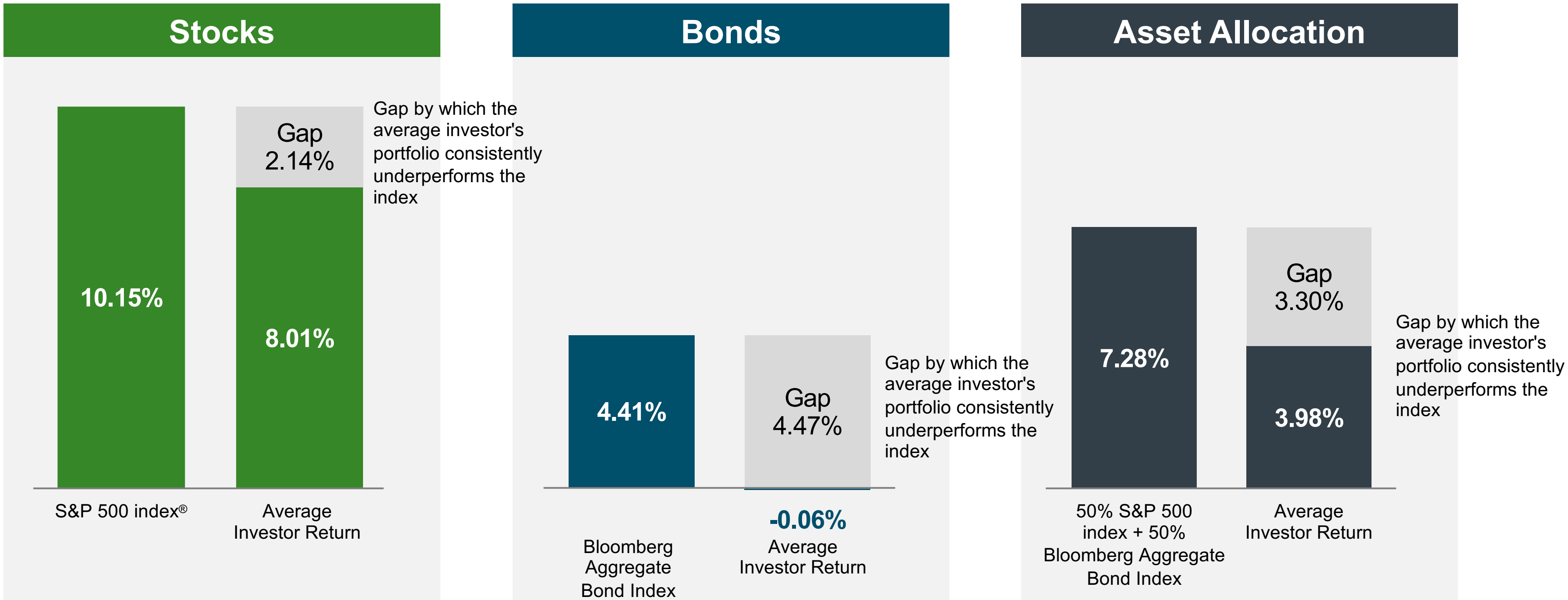
Americans check their phones on average 96 times per day, or **once every ten minutes**.

Source: Zippia, 20 Vital Smartphone Usage Statistics [2023]: Facts, Data, and Trends on Mobile Use in the U.S., April 2023.

Keeping emotions in check

The average investor's portfolio consistently underperforms

AVERAGE ANNUAL RETURNS (1994–2023)



Past performance is no guarantee of future results. It is not possible to invest directly in an index. All market indices are unmanaged.

Returns are for the period ending 12/31/23. Investment Company Institute, Standard & Poor's, BloombergBarclays Capital Index Products and the Bureau of Labor Statistics Average investor performance results are calculated using data supplied by the Investment Company Institute. Investor returns are represented by the change in total mutual fund assets after excluding sales, redemptions, and exchanges. This method of calculation captures realized and unrealized capital gains, dividends, interest, trading costs, sales charges, fees, expenses, and any other costs. After calculating investor returns in dollar terms, two percentages are calculated for the period examined: Total investor return rate and annualized investor return rate. Total return rate is determined by calculating the investor return dollars as a percentage of the net of the sales, redemptions, and exchanges for each period. The equity market is represented by the Standard & Poor's 500, an unmanaged index of common stock. The fixed income market is represented by the BloombergBarclays Aggregate Bond Index. Inflation is represented by the Consumer Price Index-U. Indexes do not take into account the fees and expenses associated with investing, and individuals cannot invest directly in any index. Past performance cannot guarantee future results.

Dealing with behaviors that may hinder success

How to address behavioral challenges

Anchoring Bias

- Acknowledge the anchor when making decisions.
- Understand, address, and remember the goal—not the dollars.
- Recognize that the ways choices are presented will affect the decision.

Confirmation Bias

- Admit that different situations call for different expertise.
- Seeking out confirmation of options is a surefire way to “group think.”

Recency Bias

- Yesterday’s truth is not tomorrow’s.
- No pattern continues forever.

Herding Bias

- Running with the crowd may prevent solitary embarrassment, but won’t keep you from being wrong.
- By the time everyone is heading a particular direction, it’s usually time to start heading the other way.

Ambiguity Aversion

- Goal-based planning is key to success.
- Outcomes should drive your actions, not fear of the unknown.

Myopic Loss Aversion

- Financial losses are often “locked in” by panic selling.
- Keep a focus on the long-term goals in order to drive success.

Breaking the behaviors

Four strategies to help investors

1 **Get to know yourself.**
Become more aware of how your tendencies can influence financial decisions.

2 **Avoid panic selling.**
Stay invested during times of market volatility and uncertainty.

3 **Stay focused.**
Don't dwell on the past; focus on your long-term goals and time horizon.

4 **Consult with your financial representative regularly.**
Your financial representative can help take the emotion out of investing.

Make a plan

Working with a financial representative can be invaluable

How can a financial representative help?

Tailor an investment plan aligned to your goals, risk tolerance, and time horizon.	**Maximize** your retirement income potential and minimize your tax exposure.	**Guide you through** emotional financial decisions.

Nearly 7 in 10 investors working with an advisor have a formal financial plan.*

* The 2020 Fidelity Financial Advisor Community—Advisor Sentiment Survey was an online blind survey (Fidelity not identified) and was fielded during the period December 14, 2020, through December 23, 2020. Participants included 483 advisors who manage or advise upon client assets either individually or as a team, and work primarily with individual investors. Advisor firm types included a mix of banks, independent broker-dealers, insurance companies, regional broker-dealers, RIAs, and national brokerage firms (commonly referred to as wirehouses), with findings weighted to reflect industry composition. The study was conducted by an independent firm not affiliated with Fidelity Investments.

Markets have been resilient

Despite market pullbacks, stocks have typically risen over the long term

Past performance is no guarantee of future result.

Source: Fidelity Investments, Bloomberg Finance, L.P., January 1, 1980–December 31, 2023. U.S.

 For investor use.

Index definitions

The S&P 500® index is a market capitalization-weighted index of 500 common stocks chosen for market size, liquidity, and industry group representation to represent U.S. equity performance. S&P 500 is a registered service mark of the McGraw-Hill Companies, Inc., and has been licensed for use by Fidelity Distributors Corporation and its affiliates. The S&P 500 Total Return Index represents the price changes and reinvested dividends of the S&P 500.

BloombergBarclays Aggregate Bond Index is a broad-based, market value-weighted benchmark that measures the performance of the investment-grade, U.S. dollar-denominated, fixed-rate taxable bond market. Sectors in the index include Treasuries, government-related and corporate securities, MBS (agency fixed-rate and hybrid ARM pass-throughs), ABS, and CMBS.

Information provided in, and presentation of, this document are for informational and educational purposes only and are not a recommendation to take any particular action, or any action at all, nor an offer or solicitation to buy or sell any securities or services presented. It is not investment advice. Fidelity does not provide legal or tax advice.

Before making any investment decisions, you should consult with your own professional advisers and take into account all of the particular facts and circumstances of your individual situation. Fidelity and its representatives may have a conflict of interest in the products or services mentioned in these materials because they have a financial interest in them, and receive compensation, directly or indirectly, in connection with the management, distribution, and/or servicing of these products or services, including Fidelity funds, certain third-party funds and products, and certain investment services.

Not FDIC Insured • May Lose Value • No Bank Guarantee

Not NCUA or NCUSIF insured. May lose value. No credit union guarantee.

This presentation is provided for informational purposes only and should not be used or construed as a recommendation of any security, sector, or investment strategy. Investment decisions should be based on an individual's own goals, time horizon, and tolerance for risk.

Past performance is no guarantee of future results. It is not possible to invest directly in an index. All market indices are unmanaged.

Investing involves risk, including risk of loss.

Neither asset allocation nor diversification ensures a profit or guarantees against loss.

Fidelity Investments® provides investment products through Fidelity Distributors Company LLC and clearing, custody, or other brokerage services through National Financial Services LLC or Fidelity Brokerage Services LLC, Members NYSE, SIPC.

657679.32.0

1.968173.116