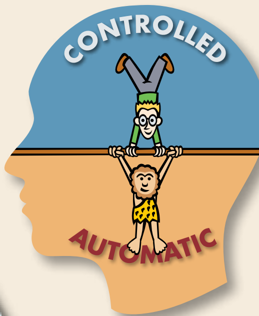
LIGHTBULB PRESS®

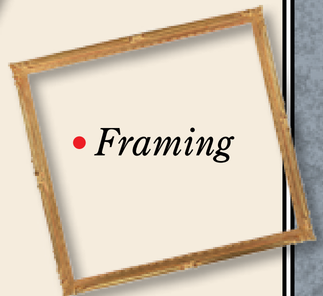
AN ADVISOR'S GUIDE TO BEHAVIORAL FINANCE

- *Pillars of Investment Success*
- *Risk Avoidance*
- *Neuroeconomics*



- *Mental Accounting*

- *Biases*



- *Framing*

VIRGINIA B. MORRIS

HERON
WEALTH

AN ADVISOR'S GUIDE TO BEHAVIORAL FINANCE

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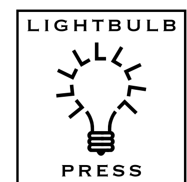


Perspectives on Investing

It's time for a new look at how investment decisions are made.

As an investment advisor committed to helping your clients meet their financial goals, how do you feel when they make investment decisions that aren't in their own best interests?

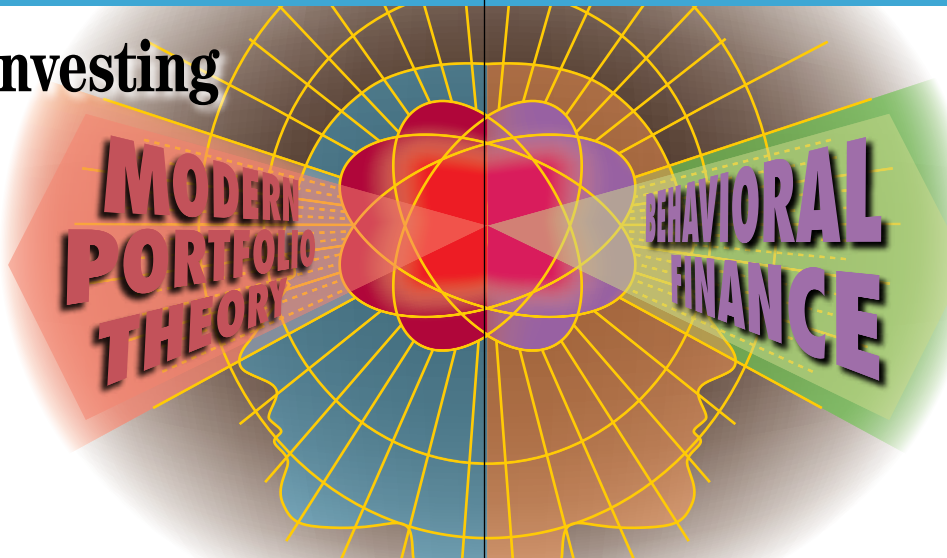
Frustrated? Angry? Convinced that you've wasted your time? Afraid you've failed because you weren't able to convince them your advice was sound?

Despite all your rationalizations that clients are free to make their own decisions, chances are their financial successes and disappointments are something personal to you, something emotional. If you feel as strongly as you do when it's not your money, you can imagine how important not making mistakes is to the person on the other side of the table.

That's precisely the reason it's the right time to augment your skill at security selection and portfolio allocation with new expertise: understanding and managing investor behavior.

LOGICAL EXPECTATIONS

You can expand your professional focus to include how and why investors may react as they do to the advice you provide. This represents a break with what you and most of your colleagues have traditionally considered your jobs as financial advisors. But, as you'll discover, adding this new perspective can help you more effectively tailor the advice you provide because you've already anticipated the reactions it might provoke.



MODERN PORTFOLIO THEORY	BEHAVIORAL FINANCE
Investors can maximize their return for any level of risk they're willing to take by using asset allocation and diversification to select an optimal combination of securities.	Investor losses have more than twice the impact on future investment decisions than investor gains.
A security's price accurately reflects all the information that's available about that investment. Any incorrect prices will immediately return to their real value through arbitrage.	Investors tend to categorize securities as either good or bad. When a security is seen as good, it has outperformed the market, and when it is seen as bad it has underperformed. There is no sustained link between these perceptions and the security's fundamentals.
An investor's investment plan should be integrated so that different needs like retirement, education, and current income are seen as one risk/return proposition.	People pigeonhole their money into separate accounts and treat each category as self-contained, treating risk and return in wildly different ways depending on how that category has performed.
Taxes play a key role in investment returns over time, so should always be a consideration in making buy and sell decisions.	Investors avoid selling losing stocks and are quick to sell good performing ones, regardless of the tax consequences.

MEET BEHAVIORAL FINANCE

Advocates of behavioral finance—sometimes known as behavioral economics or investor psychology—have spent nearly 50 years exploring the investment decisions people make and why they make them.

These researchers and practitioners have observed, for example, that people often:

- Make decisions based on fear of making a mistake rather than on a rational assessment of probable risk and return
- Base decisions on recent short-term investment performance
- Overload on stock in companies they work for or are familiar with
- Resist selling faltering investments, even when they would provide useful capital losses
- View retirement, education, or other goal-focused accounts as stand-alones rather than as components of an overall portfolio

Most of this isn't news to you, and you could probably add several items to a list of illogical investment decisions. What you may not know is why investors act in the ways they do. That's why becoming familiar with psychological and physiological perspectives that behavioral finance provides can help. You can be more effective at recognizing and dealing with the conflicting emotions that underlie many poor investment decisions.

If you can help your clients recognize the reasons they make some of the choices they do, they may make better ones. That's one reason why behaviorism, according to recent Nobel laureate Daniel McFadden, "is a fundamental re-examination of the field. It's where gravity is pulling economic science."

A TALE OF TWO THEORIES

BEHAVIORAL FINANCE

1973 Amos Tversky and Daniel Kahneman describe the role of heuristics in decision-making, the first exploration of behavioral finance.

1979 Tversky and Kahneman publish "Prospect Theory," which analyzes how investors make decisions in the face of certain loss.

1980 Richard Thaler publishes "Toward a Positive Theory of Consumer Choice," a discussion of the impact of framing, or how information is presented.

1985 Thaler publishes "Mental Accounting and Consumer Choice," which explores the concept that people pigeonhole their money into separate accounts and analyzes the negative consequences.

1988 Meir Statman publishes "Investor Psychology and Market Inefficiencies," which explores the fear of regret that drives many investor decisions.

2002 Kahneman wins the Nobel Prize in Economics for the work he did with Tversky to develop behavioral finance.

1930 1940 1950 1960 1970 1980 1990 2000 2010

MODERN PORTFOLIO THEORY

1934 Benjamin Graham's *Security Analysis* provides a formula to identify the value of a security and determine when to buy or sell. Sometimes called the introduction to strategic investing.

1952 Harry Markowitz introduces the concept of modern portfolio theory.

1962 William Sharpe articulates the capital asset pricing model (CAPM), a formula for determining the return investors demand in return for taking risk.

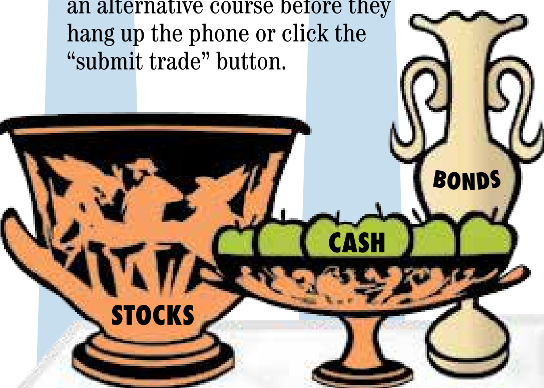
1965 Eugene Fama publishes "Random Walks in Stock Market Prices," exploring the thesis of an efficient market.

1990 Harry Markowitz, Merton Miller, and William Sharpe win the Nobel Prize in Economics for their work in modern portfolio theory.

Pillars of Investment Success

You may want to redesign the way you present classic investment strategies.

As you learn more about why your clients make some of the investment decisions they do, you'll be more adept at detecting the warning signs. And because you sense what's coming, you'll have time to point out potential—but unforeseen—consequences or suggest an alternative course before they hang up the phone or click the "submit trade" button.



PORTFOLIO BUILDING

The first pillar of investment success is helping your clients construct strong, diversified portfolios by allocating among distinct asset classes chosen to fit their goals, timeframes, and risk tolerance.

Modern portfolio theory seems to suggest that determining this allocation is a mathematical exercise, in which, by measuring expected return, standard deviation, and correlation, you identify the most appropriate asset classes in the most efficient percentages for each individual investor.

Most advisors know better, as the asset allocation that their clients gravitate toward is anything but rational.

Consider the typical response when you present the case for thinking about asset allocation in global terms. Unless you've been more persuasive than most of your colleagues or have savvier clients, chances are that few have even 10% of their equity portfolios invested in companies headquartered outside the United States.

That's the case, despite the fact that the US stock market, measured by market capitalization, accounts for just 44% of the total global equity market, according to data compiled by Russell Indexes.

Your clients aren't the only ones who prefer investing in what they know. As John R. Nofsinger points out in *The Psychology of Investing*, even sophisticated institutional investors predict that domestic companies will provide higher returns than international ones—regardless of the country in which those professionals live. It's an example of a behavior called **home bias**.

RISK AND RETURN

You face a particular challenge with clients who are eager to avoid risk, as many of them are, even at the expense of achieving their goals. Although they may acknowledge when you're face-to-face that every investment poses some risk, they may not be willing—or emotionally capable—of ignoring declining prices or falling indexes long enough to ride out the current turbulence.

At the opposite end of the spectrum are equally problematic clients who are so eager to make a financial killing and so confident of their own skill that they ignore your warnings that they're overloaded on too few investments or have too much committed to risky endeavors. If fear drives the risk-averse group, then greed drives this one.

One proactive approach is to rethink your customary portfolio construction. For example, you might stress safety at the expense of strong returns for the nervous investors even though you recognize it will limit their ability to meet their goals. If they're comfortable with your ability to protect their assets, and you're patient enough, you may be able to tempt them with something a little more adventuresome down the road.

Coping with risk seekers requires a different approach. Since you're unlikely to be successful urging moderation, you might get them to try hedging. While there's no upside and significant downside to constantly monitoring traditional securities, that's not the case with options contracts. To make money with these derivatives, clients must be constantly engaged. While there are costs involved, and potential tax consequences, your real agenda is deflecting attention from trading in their core portfolios.

SECURITY SELECTION

The second pillar of investment success is selecting the right combination of securities to diversify your clients' portfolios. It's not something most clients do successfully on their own, as you probably know all too well. So it should come as no surprise that this is another area where investor behavior gets in the way of logic.

Is this a problem you can solve? The answer is a qualified yes, though finding the solution for each of your clients may require a dialogue in which they're willing or able to explain why they've made the investment choices they have. One opener is to look together at the way they've diversified their 401(k) portfolios, since it's likely they made these decisions on their own.

Don't be surprised if they've divided their deferred salary equally, either among all of the fund choices available in their plan or among the three or four alternatives they've selected. What that pattern demonstrates is a commitment to diversification but not the knowledge to make it work. It's the opening you need to suggest a better approach.

SETTING THE RECORD STRAIGHT

In 1986, Gary Brinson, Randolph Hood, and Gilbert Beebower released a study entitled "Determinants of Portfolio Performance." In the study, the economists compared the performance of actively managed pension funds to indexed funds containing the same allocation of stocks, bonds, and cash. They found that asset allocation accounted for over 90% of the *variance* in the long-term performance of the portfolios.

Though the study addressed volatility and not long-term returns, investors and their advisors have often mistakenly overemphasized the role of allocation in portfolio performance while ignoring other, equally relevant factors.

IT'S ALL IN THE TIMING

If you were asked to identify the most difficult aspect of successful investing, you and your colleagues would probably agree that it's knowing when—rather than what—to buy and sell.

In the best possible scenario, your clients follow your advice and adopt a buy-and-hold strategy for their core portfolios. But in a more typical situation, they want to get out of equities when the stock market is down even though you've explained market cycles as explicitly as you know how.

Similarly, they're predictably drawn to last year's best performing market sector even though the more tactically sound approach is to look for next year's opportunity. Managing investor behavior to avoid such instinctive yet self-defeating reactions may rightly be called the third pillar of investment success.

To help your clients think and act differently, you need a fuller grasp of the psychological and neurological explanations for why they behave as they do.

AN AVERSION TO REGRET

Ed's financial advisor suggested he make a long-term investment in a mutual fund that had recently lost value and been downgraded by Morningstar and Lipper. He agreed. The fund filled a gap in his portfolio and was undervalued. But, at the last minute, he recalled buying a faltering fund that had continued to lose value, and he changed his mind. Ed's regret aversion bias pushed him to avoid another mistake. But when the fund's value increased, he felt an even keener sense of regret because he'd trusted fear rather than reason.

Behavioral Finance

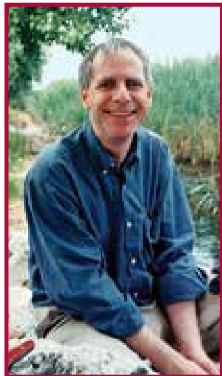
Intuition and emotion play a major role in decision-making.

The origins of behavioral finance are rooted in cognitive psychology, which is the study of how people learn, what they know, and how they act on what they know.

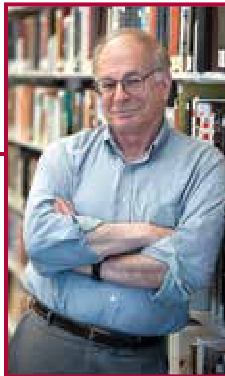
As the field evolves, its focus has been and continues to be on two related phenomena:

- Why people, faced with investment and other financial decisions, make the choices they do
- How choices are, and can be, influenced

Those interests are built on the **four cornerstones** of the field: an understanding of heuristics, prospect theory, and the concepts of framing and mental accounting.



Tversky



Kahneman

SHORTCUTS TO CHOICE

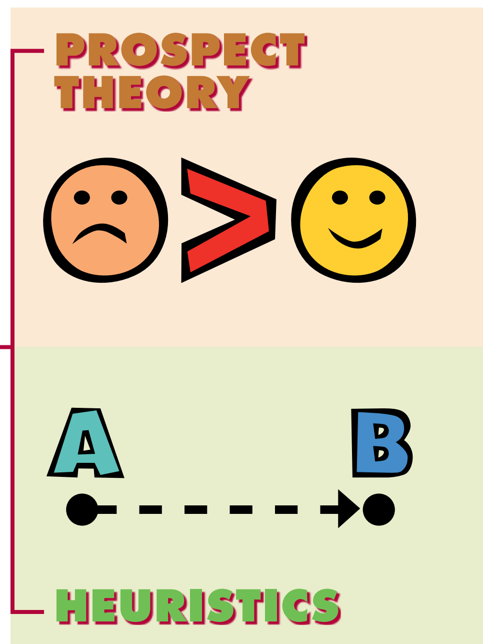
Amos Tversky and Daniel Kahneman, psychologists whose research laid the groundwork for behavioral economics, concluded after investigating decision-making in a variety of settings, that many people use **heuristics**, or mental shortcuts, to arrive at intuitive conclusions based on limited and often unreliable information.

When these findings were published in 1973, they evoked outrage in some quarters—and accusations that Tversky and Kahneman were arrogantly condemning people for not thinking straight. But further study has confirmed not only the existence of mental shortcuts but also their impact on decision-making.

Kahneman himself elaborated on this idea in 2002 when he observed that human judgments can be produced in two ways: one a "rapid, associative, automatic and effortless intuitive process" and the other "slower, rule-governed, deliberate, and effortful." The second judgment process, he says, recognizes that the first approach sometimes results in errors and may or may not overrule it.

THE PAIN OF LOSS

In 1979, Tversky and Kahneman published a similarly groundbreaking study of the powerful impact that aversion to loss has on people's financial decision-making.

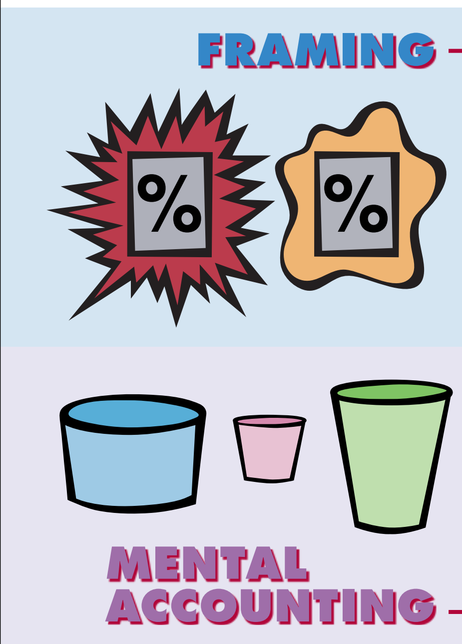


In one of the experiments conducted in their research, one group of participants was told they had $1,000 and were asked to choose between (a) a sure gain of $500 and (b) a 50% chance to gain an additional $1,000 and a 50% chance to gain nothing.

A second group was told they had $2,000 and were asked to choose between (a) a sure loss of $500 and (b) a 50% chance to lose $1,000 and a 50% chance to lose nothing.

The results of either choice posed to the two groups are identical: in choice (a), participants end up with $1,500, and in choice (b) they end up with either $2,000 or $1,000. Despite the identical end results for the first and second groups, 84% in the first group selected the known gain (option a) rather than risk a loss (option b). But in the second group, 69% chose option (b) indicating that they were willing to assume the greater risk of losing $1,000 rather than face the certain loss of $500, a result that has been validated in subsequent tests. The study generated years of additional investigation and more evidence about why investors behave the way they do. One of the key findings was that prospective losses bother investors much more than prospective gains please them.

According to Kahneman, their work on this topic, which they labeled "Prospect Theory," also made it irrefutably clear that the choices people make are based on their subjective version of the situation, not on some objective reality.



FRAMING DECISIONS

It's not what you say, it's how you say it. This adage has taken on new meaning in behavioral finance where it is becoming increasingly clear that the ways in which alternatives are presented to people can make substantive differences in the financial choices they make. The way that things are presented is known as **framing**.

One often noted example of framing involved representatives of the credit card industry who, faced with justifying higher charges for purchases made by card than those paid for in cash, preferred to account for the price differential as a cash discount rather than what it really was—a surcharge to help cover credit processing fees.

Behavioral economists who analyze the power of framing also point out that the way people hear what is being said—in addition to the way the alternatives are expressed—impacts the decisions they make. Typically, their perceptions are influenced by their recent past experiences, associations, intuitions, and a range of other factors that may or may not include a conscious effort to make a rational decision.

OPENING MENTAL ACCOUNTS

The concept of **mental accounting**, which Thaler called narrow framing, describes an approach many people use to organize their financial assets in their minds, creating separate compartments for money they've designated for specific purposes and refusing to mix and match. For example, they might segregate what they need for living expenses in one mental account, money to buy a home in another, money invested for specific long-term goals in a third, and money for vacations in a fourth.

Thaler

When mental accounting works, it keeps investors from borrowing from their 401(k) account to spend it on a vacation. But being too rigid can lead to poor choices, sometimes involving significant amounts of money. For example, consider a person who chooses to finance a car rather than purchase it outright with money available in a savings account because the account has been designated for another use in a mental accounting system.

As an advisor, you might point out that a client who has the discipline to repay a lender could borrow the purchase amount from his or her savings and repay part of the principal plus market-rate interest each month. But you might have to overcome the objections of a mental accountant to succeed.

A Glimpse Inside the Brain

Neuroscience provides key insights into how investors make financial decisions.

Many of the principles of behavioral finance are finding validation in **neuroscience**—the physiological study of the brain and nervous system. While human beings have speculated about the brain and consciousness for thousands of years, recent breakthroughs in brain imaging and other techniques provide insights into how the brain actually functions.

An emerging field called **neuroeconomics**, which combines brain studies with psychological research and economic theory, is reshaping how many financial experts think about the way people make financial decisions.

MIND AND MONEY

Many of the emotions, biases, and thought processes that contribute to financial decision-making have origins deep inside the brain and in the network of communications between different parts of the brain. Understanding something about these neural foundations can help advisors work with clients more effectively in making money management and investment decisions.

The human brain has evolved over hundreds of millions of years to deal with the life-and-death struggles that *homo sapiens* and their ancestors faced: to find food and shelter, to procreate, to steer clear of danger, and to survive. However, the same instincts that enabled prehistoric people to prevail may make people less successful at dealing with the risks, rewards, and challenges of modern-day financial markets.

CHECKS AND BALANCES

Both the limbic and cortical areas of the brain play a critical role in making financial decisions. The limbic impulses that helped early humans survive can lead modern investors astray if those impulses go unmediated or are so strong that they override the powers of reason and analysis arising in the cortex. For instance, emotional urges originating in the limbic system can cause investors to panic and liquidate their portfolios during a temporary market downturn.

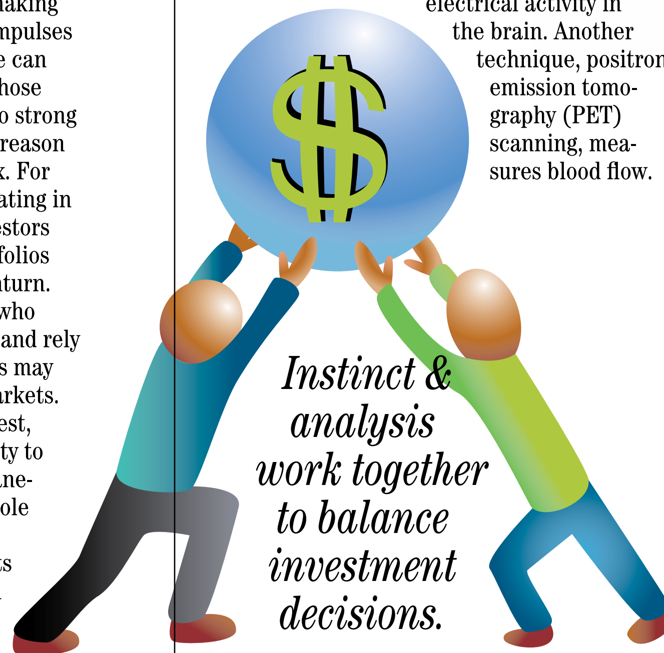
On the other hand, investors who ignore their instincts altogether and rely solely on calculation and analysis may also go astray in the financial markets. As many successful investors attest, intuition—the unconscious ability to process key information instantaneously—also plays an important role in investment decision-making.

In fact, many neuroeconomists agree that a successful approach to investing arises from an ideal interplay of the quick, reflexive instincts of the limbic system and the reflective, analytical powers of the cortex.

TOOLS OF THE TRADE

Neuroeconomists use an array of methods to study how the brain works, including:

Brain imaging. A variety of imaging technologies enable scientists to visually map brain activity in response to different thoughts, feelings, and actions. The oldest is the electroencephalogram (EEG), which measures electrical activity in the brain. Another technique, positron emission tomography (PET) scanning, measures blood flow.



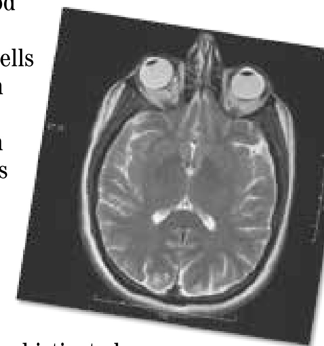
Instinct & analysis work together to balance investment decisions.

A UNIVERSE UNTO ITSELF

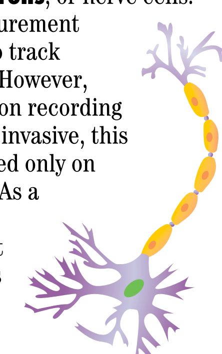
Researchers caution that while imaging and other techniques yield important clues about the brain, these methods only afford a glimpse into enormously complex brain processes. Neuroscientists estimate that the human brain contains 100 billion neurons—roughly equivalent to the number of stars in the Milky Way.

These neurons create intricate networks that control all physical and mental processes. In fact, many scientists agree that the human brain is the most complex and sophisticated phenomenon in the known universe.

One recent and widely used technology is functional magnetic resonance imaging (fMRI), which records changes in magnetic properties that occur in brain cells due to blood oxygenation. Because brain cells consume oxygen when they are active, fMRI can help researchers pinpoint areas and patterns of brain activity.



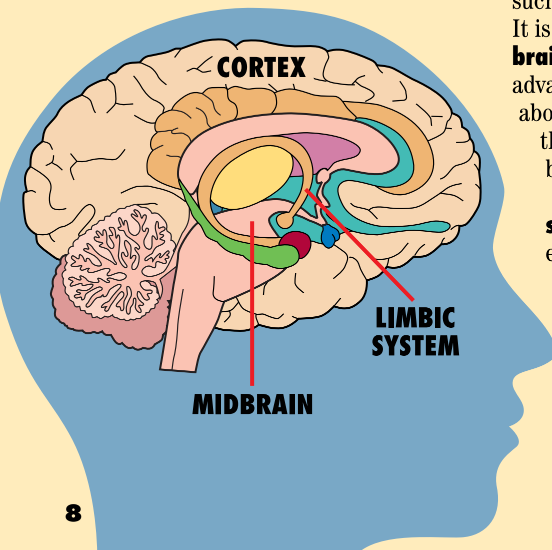
Single neuron measurement. Even the most sophisticated imaging techniques can measure activity only in brain circuits, made up of thousands of **neurons**, or nerve cells. Single neuron measurement enables scientists to track individual neurons. However, because single neuron recording techniques are very invasive, this research is performed only on laboratory animals. As a result, it has so far yielded more insight into the basic drives that humans share with other animals than into the neural processes that are unique to humans.



Study of neurological disorders and damage. The study of brain activity in people who suffer from neural damage, developmental disorders, and mental illness can also provide important insights into brain function. For instance, scientists glean information about brain processes by comparing the brain activity of people who have neurological damage to those who don't.

ANATOMY OF THE HUMAN BRAIN

Broadly speaking, the human brain can be divided into three areas, each responsible for different neural processes.



The innermost and oldest part of the brain is the **midbrain**, which is responsible for regulating vital functions, such as breathing and body temperature. It is sometimes called the **reptilian brain** because it reached its most advanced stage of evolution in reptiles, about 250 million years ago, and includes the same structures that dominate the brains of present-day reptiles.

Above the midbrain is the **limbic system**, which is believed to have emerged about 150 million years ago and is common to all mammals. The limbic system is the emotional center of the brain and the source of powerful unconscious motivations. It's the reactive part of the brain that processes information instantaneously, leading to sudden reactions and quick value judgments.

The large outer lobes of the brain make up the **cortex**, responsible for analytical thinking, calculating, planning, and learning. It is estimated to have emerged in primates about two million years ago and is most evolved in human beings.

A hundred trillion neural circuits traverse the brain enabling the three anatomical areas to communicate with one another. For example, the cortex processes emotions and sensory data emerging from the limbic system. To illustrate, if the limbic system perceives a reward like food or shelter—or the potential return on an investment—the cortex can decide whether it's worth pursuing.

Neuroeconomics

Studies of the brain are transforming long-held assumptions about financial behavior.

While economists have long recognized that emotions play a role in financial decisions, they have generally excluded feelings, impulses, and biases from their theoretical frameworks because emotions couldn't be measured objectively or represented mathematically.

Neuroeconomists, on the other hand, offer a different perspective. They measure what happens inside the brain when people make financial decisions. And what their research has shown is that decisions that appear to be inexplicable or irrational often occur because of hard-wired human traits deeply rooted in brain structure and function.

These insights have not only revolutionized thinking on the theoretical front, as economists have been spurred to develop more comprehensive frameworks for explaining financial behavior. They can help you as an investment advisor help your clients recognize and manage their primal motivations and feelings so they can make smarter investment decisions.

AUTOMATIC PILOT

Neuroscientists have found that the brain is largely designed to carry out certain **automatic processes** that take place instinctively, effortlessly, and below the level of conscious awareness. These processes, many of which humans share with other animals, have been essential to human survival. They include reflexive reactions to strong emotions, such as desire, aversion, excitement, anger, fear, and panic.

Automatic processes are also responsible for the immediate instinctive judgments that take place viscerally—well before a person consciously acknowledges that someone or something is good, bad, desirable, funny, or sad.

When automatic processes encounter unanticipated events or choices, or are faced with complex decisions, the brain's **controlled processes** take over. In contrast to automatic processes, controlled processes are conscious, deliberate, and strategic. Traditionally, financial decisions, such as planning for short- and long-term goals, choosing investments, and deciding if and when to buy or sell, are associated with controlled processes.

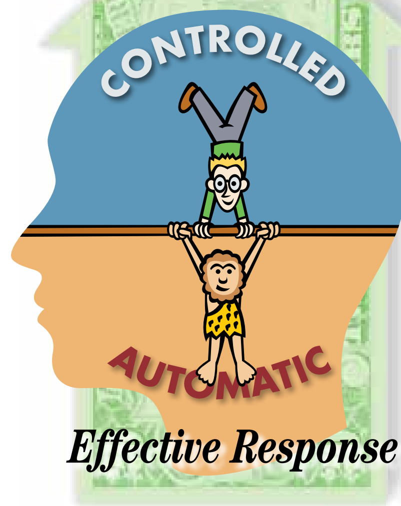
EMOTION VERSUS REASON

In most circumstances, the automatic and controlled systems work together to react to emotions, draw conclusions, and respond effectively to situations. What's interesting from a financial perspective, however, is that in certain cases the two systems may compete rather than collaborate with each other. For example, if a situation is vague or ambiguous, or evokes strong emotions, the reflexive urges arising from the brain's automatic processes may dominate and override more deliberate controlled processes.

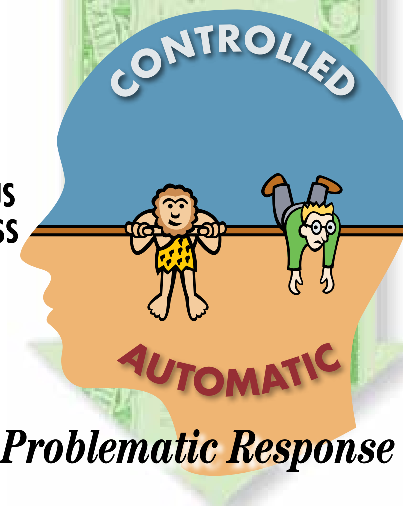
This phenomenon may explain why, for instance, many investors who are faced with uncertain situations, such as market downturns, react in panic and behave counter to their established financial plans. There may be a similar explanation for investors who, for some seemingly inexplicable reason, act against their better judgment and spend money intended for long-term goals to gratify immediate desires.

These overriding instincts—away from apparent risks and toward immediate gratification of goals and desires—helped prehistoric humans prevail in an age when the ability to quickly assess and respond to danger or to seize an opportunity were matters of life and death. These same instincts, however, can be problematic for investors and their advisors since they tend to upend long-term financial planning and investing to meet specific goals.

When the processes…



CONSCIOUS AWARENESS LEVEL



THE REWARD SYSTEM

The pursuit of reward and the avoidance of risk are two of the central goal-oriented systems within the brain, underlying much of human feeling, thought, and action and provoking powerful biochemical processes that affect the entire body.

When the brain perceives something it desires, from a delicious meal to a new car, it releases dopamine—sometimes known as the brain's pleasure chemical. This powerful biochemical induces sensations of happiness, arousal, and alertness as it directs the attention of the nervous system towards the pursuit and attainment of the desired goal.

In financial contexts, however, these urges, which neuroeconomists call the brain's **reward system**, can cause investors to jettison their long-term objectives in pursuit of instant gratification. It can also precipitate greed, causing investors to overtrade, invest on impulse, and lose sight of their strategy and objectives.

THE LOSS AVOIDANCE SYSTEM

Similarly, when the nervous system senses something threatening in the environment, the brain secretes adrenaline and other stress hormones into the bloodstream, giving rise to feelings of anxiety, fear, nervousness, and the so-called **fight-or-flight response** to perceived dangers.

The flood of stress hormones throughout the body can also cause unpleasant physical sensations, such as sweaty palms, elevated heart rate, and shallow breathing. Called the **loss avoidance system**, this chain reaction can have many detrimental effects for investors who haven't developed strategies for managing stressful situations or dealing with investment risk.

For instance, loss avoidance may prevent investors from taking the risks necessary to meet their long-term financial goals. It may also compel them to sell their investments at the slightest sign of a setback, causing them to miss out on long-term gains, or to hold disappointing investments too long because they are afraid or unwilling to take losses. In addition, loss avoidance can inhibit the innate intuitive intelligence that effective investors value so highly.

DEVELOPING EMOTIONAL INTELLIGENCE

The good news is that investors can develop techniques to help them respond more effectively to stressful feelings and deep-seated impulses. By cultivating intellectual discipline, flexibility, and self-knowledge, by learning to accept loss, and by setting realistic and concrete goals, investors can go a long way to developing the emotional intelligence that is a linchpin to investing success.

Investor Biases

Short-cuts can save time but they can send you down the wrong road.

Think about the torrent of sensory data that floods the human brain and nervous system every moment of every hour.

Even when you walk down a city street on your lunch hour, you're processing enormous amounts of information from your environment—reacting to the weather, evaluating sights, smells, sounds, and the body language of passers-by, negotiating traffic at crosswalks. You're also constantly surveying your surroundings for potential threats—such as speeding vehicles—and rewards, like the salad or sandwich you plan to buy for lunch.

It would be impossible to perform even the simplest tasks or make the most basic judgments if you had to work through all of these cues consciously and deliberately. That's why the human mind reacts very selectively to the information it takes in, by employing shortcuts and rules of thumb to arrive at conclusions, evaluate potential risks and rewards, and assess the likelihood of particular outcomes. Psychologists and behavioral economists call this process **heuristic simplification**.

ORIGINS OF BIAS

The use of such shortcuts can make people act in apparently irrational ways, because their past experiences, their feelings, and their intuitive sense of what is pleasurable or painful influence their decisions. The result of all this is bias.

Everyone has biases. You may find the World Series exciting and the World Cup tedious, or the reverse. You may put New York at the top of your destination list or relegate it to dead last. You may love or hate jazz, drink red but not white wine, and despise beets.

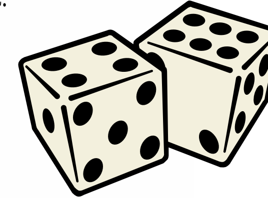
Most people think of these seemingly irrational judgments as benign, but they can exert enormous influence on feelings, thoughts, and actions. And when these cognitive shortcuts are applied to personal finances, they can lead investors away from rational, long-term thinking to highly charged and prejudicial reaction that falls back on preconceived notions and old patterns of thinking and problem solving.

TAKING A NARROW VIEW

Biases tend to exert themselves in situations that are uncertain or emotionally charged—and investing is both. The ups and downs of the financial markets are unpredictable, and few things evoke stronger feelings than one's own money.

Investors are especially vulnerable to biased, or distorted, perceptions of **probability** and the way it affects investment **risk**.

Think about what happens at a basketball game when the star player sinks three field goals, one after the other, as the clock runs out. The crowd, caught up in the energy of the moment, is absolutely convinced he's on a roll and can't miss the next shot—especially if it will win the game. You could never persuade them that, despite the player's obvious skill, hitting the fourth is no more or less probable than his hitting the first one was.



It's the same kind of enthusiasm for what is possible but not probable that drives some of the investment choices certain clients make when they mistake a recurring pattern as a predictor of future results. Why do they gravitate to last year's best performing fund or this year's hot commodity if it's not that they expect the magic to last?

MISDIRECTED WORRY

More experienced investors understand the tendency of fund performance or commodity prices to move from a current high or low toward their long-time average, and so may not make the same mistakes as new investors. But experienced investors aren't immune to probability bias.

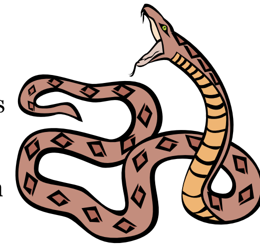
Try asking a cross-section of clients if they're more concerned about running short of money in retirement or being wiped out in a market crash.

While either is possible, it's certainly much more probable, based on historical and anecdotal evidence, that inflation is the greater threat to financial security. Yet the possibility of a crash tends to grip investor emotions in a way that inflation risk does not.

UNREPRESENTATIVE SAMPLE

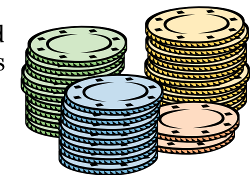
After the back-to-back experiences of winning big in Las Vegas and accumulating impressive gains in the two technology stocks in his portfolio, Tim was on a roll. Convinced his lucky streak would hold, he told his advisor to sell his underperforming assets and buy more technology stocks. Tim not only increased his risk by reducing diversification. He made the error of calculating probability based on a too-small sample size. Heady from his success, he ignored the realities that not all technology companies perform the same and no sector is hot forever.

THE STING OF BIAS



Do you have clients who lost money when the technology bubble burst in 2000 and who still refuse to invest in tech stocks? This bias—called the **snake-bite effect**—makes your clients unable to see that the risks and rewards of the sector are completely different now than they were at the beginning of the century. And it may be preventing your bite-shy clients from taking advantage of strong growth opportunities.

On the other end of the spectrum is the bias known as the **house money effect**, an expression borrowed from the world of casino gambling. Like inexperienced gamblers, investors may be inclined to take excessive risks shortly after experiencing an investment windfall. Because your clients haven't assimilated the earnings as their own, they tend to take greater and often ill-conceived risks, veering far off strategy. These actions typically result in steep losses. Researchers have identified the house money effect among a wide variety of investors, from individuals to professional traders.

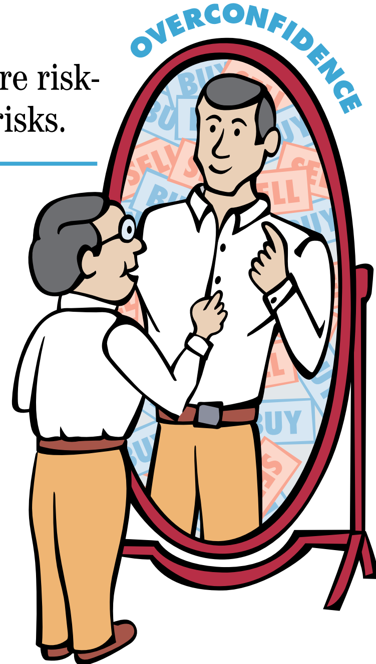


The snake-bite and house money biases resemble another important bias known as **representativeness**, which results in investors labeling an investment as good or bad based on its recent performance. It's a bias that helps to explain why investors predictably break the golden investment rule. They buy stocks whose prices have risen, expecting those increases to continue. And they ignore stocks—or sell at a loss—when their prices are below their fundamental values.

Types of Biases

Biases explain why some people are risk-averse and others take excessive risks.

The challenge of helping clients overcome the biases that limit their investment success is complicated by the conflicting emotions that drive their behavior.



BIASES OF SELF-DECEPTION

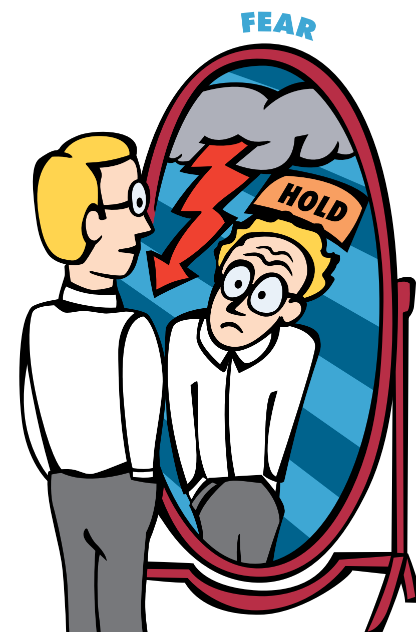
Biases of self-deception stem from the fact that the great majority of people think they are better, smarter, and wiser than they really are. In a frequently cited example, as many as 80% of drivers believe they are more skilled than the average driver. Of course, many must be fooling themselves, since statistically, only one-third can be above average.

This bias, known as **overconfidence**, leads investors to:

- Believe that their judgment is better than it really is
- Think they have access to better investment information than others
- Be overly optimistic about the outcomes of their investment choices

In fact, overconfidence is especially prevalent among experienced investors, which typically means they buy and sell too often—increasing transaction costs and reducing returns—and take excessive levels of risk.

You can counteract overconfidence more effectively if you recognize some of its chief warning signs:



- **Illusion of control.** Overconfident investors believe they can exert influence over uncontrollable events.
- **Self-attribution.** These clients tend to attribute successful outcomes to their own skills while blaming poor results on bad luck or you.
- **Hindsight bias.** They convince themselves, contrary to fact, that they had predicted poor outcomes, making it likely they'll repeat the same mistakes.

BIASES OF FEAR AND REGRET

Nobody likes to lose money or make investment mistakes. But some clients are so afraid of doing the wrong thing that they put their money in cash or government securities and leave it there because they're emotionally incapable of making choices and too nervous about stocks.

For these investors, avoiding loss takes precedence over pursuing investment gains, even when the losses are short term and the possibility of gain is long term.

Risk-averse investors, when they do buy, tend to get into the markets too late and miss out on gains. They're also vulnerable to panic selling in the face of losses—unless you recognize the symptoms and persuade them to wait.

These actions are the result of what's known as **projection bias**. In periods when the markets are strong, risk-averse investors anticipate future strength. But in periods of turmoil, they fear worsening losses. This response is driven by what's known as the **recency effect**, or **representativeness**, which overemphasizes current experience as an indicator of the future.

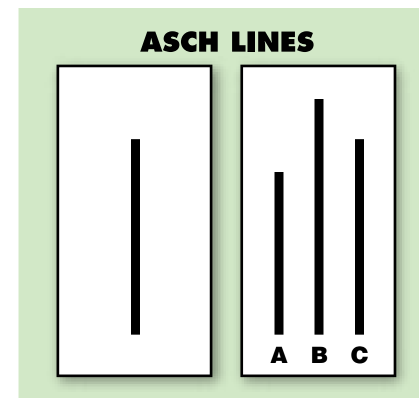
Loss-averse clients also tend to be vulnerable to the **endowment effect**, which means they want to keep investments they already own. In fact, this bias may help explain why many investors consider sell decisions harder to make than buy decisions. Their emotions are involved when they sell.

BIASES OF SOCIAL INTERACTION

Their social environment and personal interaction also exert powerful influences on your clients' investment decisions. Because people have trouble processing all the information they're bombarded with, they tend to pay much more attention to opinions or facts that they can confirm with people they know or their own experience. So, for instance, they're more inclined to invest in a stock they've heard about from others.

Another way that social interaction plays a critical role in investing is known as **herding**. Like other social animals, humans instinctively follow the behaviors and opinions of the majority to feel safer and to avoid conflict. If the majority of the group starts to move in one direction, the others instinctively follow.

In fact, studies show that the brain actually secretes a chemical to the prefrontal cortex to create pain in the brain if you are forced to go against the crowd. That may explain Solomon Asch's famous study on social conformity, where he asked test subjects which of the three lines in the box to the right is equal in length to the line in the box to the left.



Thirty-two percent of those tested said the answer was B, even though it's obviously wrong. The reason? A majority of the group were fake participants planted to say the wrong thing. The conclusion? People were more willing to follow the majority than to think for themselves.

A RECENCY REACTION

In September 2008, as the government struggled to resolve the sub-prime debacle, Janice asked her financial advisor to liquidate any holdings that exposed her to the financial services industry. She saw the takeover of Fannie Mae and AIG and the collapse of Washington Mutual as a signal of continuing crisis. Her recency bias prompted her to overrule the historical data that suggests that well-chosen undervalued securities may be wise investments that can enhance a diversified portfolio.

This example helps to explain the **bandwagon effect**, or why individuals are driven to follow market trends—resulting in financial bubbles and subsequent bursts—in the absence of the fundamental data or analysis to support their decisions.

COGNITIVE DISSONANCE

People are uncomfortable if they have to hold two contradictory ideas in their mind at the same time. So they either reconcile the opposing positions or accept one and reject the other.

For instance, how do your clients respond if the average historical return for the stock market is 10% but their portfolio return has been negative for the past three years? They may acknowledge that long-term market performance smoothes out short-term volatility and use the most recent three-year market performance as the benchmark for their three-year returns. Or, they may reject one of the contradictory ideas.

The one they reject has a lot to do with their self-perception. If they think of themselves as good investors, they may rationalize away their bad recent performance or ignore it altogether, filtering out all but the positive aspects of their decisions. In contrast, if they perceive themselves as poor investors, they may believe they are always doomed to underperform the market.

Cognitive dissonance can affect investment decisions in other ways as well. For instance, some of your clients may put off making difficult decisions to avoid the discomfort of internal conflict, such as making financial sacrifices now to save enough for the future. The distorted perceptions that arise from cognitive dissonance not only get in the way of clear-headed evaluation of investment choices. They foster a tendency to continue to make the same mistakes.

BEHAVIORAL FINANCE

Mental Accounting

Looking through a different frame alters your perspective.

Retirement savings plans are a great success. When a plan is available, the majority of employees sign on. When there's an employer match, many contribute enough to qualify for the full amount. By using automatic enrollment to bring non-participants into the fold, employers do an end-run around procrastination. And, by adding automatic escalation clauses and default investments, they take most of the stress out of investing.

Increased participation is good because it improves the likelihood that more people will have greater financial security after they retire than they would otherwise enjoy.

But there's an irony in this story. Certainly it's smart to find painless ways to counteract the emotions that lead to bad investment choices like not participating in a retirement savings plan. Yet focusing so much attention on the single goal of investing for retirement encourages the practice of **mental accounting**, the most common and in some ways the most self-defeating investor bias.

OPENING MENTAL ACCOUNTS

Mental accounting, like other forms of accounting, means people assign their financial assets to separate categories in their minds rather than treat them as components of a single portfolio. Retirement assets are for retirement. Down payment savings are for buying a house. Shares of stock A are one investment and shares of stock B are another.

This tendency is hardly surprising and it doesn't exist in a vacuum. The US tax code provides advantages for putting money in retirement or education savings accounts and penalizes early withdrawals. Intentionally or not, this fosters the notion of separate and unequal investment accounts.

Similarly, some economists argue, the corporate practice of paying dividends encourages mental accounting because it encourages shareholders to see investment earnings as separate from investment principal. Like a bonus, a gift, or even a tax rebate, the dividend is found money that can be spent without qualm even by an investor who refuses to cash in a CD paying 4.5% interest to pay off credit card debt that carries an APR of 19.5%.

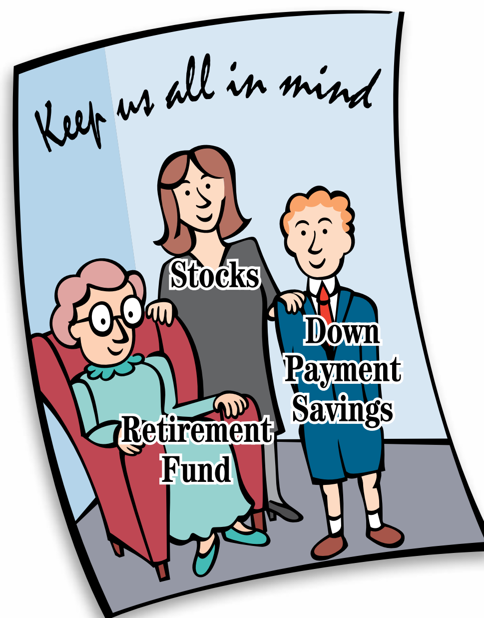
TWO POINTS OF VIEW

Unlike following the herd, fearing a snakebite, or other investor biases, mental accounting has advocates. Successful budgeting depends on it. So does resisting the temptation to tap your home equity for a blowout vacation. But while allocating money to specific uses may be essential for self-control, it's also a mental shortcut that can limit investment return.

At the most basic level, mental accounting explains why loss-averse investors are reluctant to sell underperforming securities, not only tying up money that could be more profitably invested elsewhere but also failing to accumulate capital losses that could reduce their tax bills. This happens because they weigh the loss solely against the security's purchase price, and selling would put that balance sheet in the red.

It also helps to explain why investors tend to sell their strong performers too soon. Instead of considering the gains a profitable security could add to their overall wealth, they sell because they can book the transaction in the plus column.

The advantage of investment errors like these is that you can actively intercede by using evidence from the client's own account to illustrate the downside of thinking too narrowly. In most cases, you don't have to look any further than the capital gains in their year-end account summary, pointing out that the tax they'll owe on their gains, especially in the absence of offsetting capital losses, is money they could have put to effective use in making new investments.



PART OF THE FAMILY

The larger challenge is persuading your clients—from the newest to the most experienced, from the most risk averse to the most overconfident—to make correlation with existing assets a primary consideration when they buy securities or add investment options to their goal-specific accounts. The point is that making piecemeal choices, however strong they may be individually, inevitably limits long-term investment success.

A complicating factor is that most people build their investment portfolios incrementally, with a combination of reinvested earnings and new money. In choosing investments, they're likely to be drawn to what is familiar and comfortable, or what is known as **anchoring** or **home bias**. This tendency helps to explain why people buy the stock of the company they work for—both inside and outside their 401(k)—ignoring the double hit to their financial security that problems in the company would cause. It also explains the reluctance of people in one country to invest in the markets of other countries, even when those markets are strong and growing stronger.

But be prepared. Determining correlation and thinking globally rather than locally are things most of your clients probably can't or won't do on their own. So you'll have your work cut out for you.

REBUILDING THE FRAME

Countering mental accounting is all about looking at the big picture and taking the long view. If the statements your clients receive report performance from month to month rather than from an account's inception or an investment's transaction date, you'll serve them and your relationship well if you generate a companion report with a five- or ten-year perspective, or longer. It's much easier to be persuasive about bad investment decisions that are based on short-term fluctuations when you have long-term evidence to back up your point. And they are much less liable to be distracted by small gains or losses if they take a broader view of their wealth.

THINK GLOBALLY

Action Plans

There's nothing wrong with making mistakes. The problem is making the same ones over and over.

If you understand why your clients make some of the poor decisions they do, you can move your relationship with them to a new, more productive level by helping them:

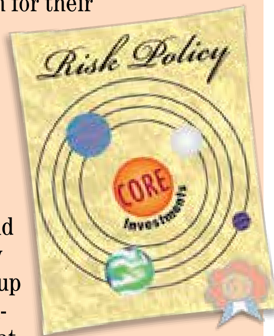
- **A** Define a personal risk policy
- **B** Develop an effective investment strategy
- **C** Maintain a long-term perspective

That may not seem radically different from the approach you've always followed. But it has a more clearly defined purpose: overcoming investor biases to improve investment performance.

A CREATE A RISK POLICY

Instead of trying to pinpoint risk tolerance—a notoriously unreliable exercise—you may want to shift your focus toward developing a pro-active **risk policy** for each client that's appropriate to his or her age, goals, financial situation, and investor psychology, which is based on emotional responses to the uncertainties and opportunities of investing.

A risk policy can guide you as you structure the client's **core** portfolio of broadly diversified equity investments chosen for their long-term promise. This will help you identify the appropriate role for the more fluid and more actively managed group of satellite investments that supplements or enhances that core.



For example, for a client whose tendency is to panic in the face of market volatility, you may use the satellite investments to reduce risk exposure even if it means limiting the potential for gains. Or, for a client who relishes being on the cutting edge or whose investment timeframe requires an above average return, you can use the satellite investments in the active pursuit of risk.

B DEVELOP A STRATEGY

With a risk policy in place, the next step is helping clients define their investment philosophy—which is why they're investing—and develop an **investment strategy** built on the three pillars of investment success:

1. Choosing securities
2. Constructing a portfolio
3. Determining when to trade

The first two are undoubtedly part of the advice your clients have come to expect from you. As you increase the emphasis you put on the third pillar, here are two approaches that can make a difference:

- Give as much attention to what and when to sell as to what and when to buy
- Lay out a plan to handle setbacks

C PUTTING EXPECTATIONS IN PERSPECTIVE

Nothing feeds investor fear, exuberance, panic, or greed—or the mistakes those emotions generate—more intensely than checking the market day-to-day or even hour-to-hour. One of the greatest contributions you can make as an advisor is to redirect that myopia to a long-term perspective that starts at the point your client opened his or her account and ends ten years or more into the future. Along that arc, even a substantial loss in portfolio value from one month to the next is a minor blip, not the end of the world.

By providing rational and consistent criteria for these decisions, you can help counteract subjectivity and bias, streamline the decision-making process, and improve bottom lines.

A PLAN TO SELL

Deciding when they'll sell before they buy may strike some clients as irrational. But like a prenuptial agreement, which deals head-on with the financial consequences of a potentially poor choice of partner, a plan for selling can counter what behavioral economists Meir Statman and Hersh Shefrin have labeled the **disposition effect**. It's the tendency for investors to hold onto poor investments too long and sell good ones too soon.

Typically, these decisions are driven by the emotions of pride and regret rather than logic and rationality. If you can demonstrate in dollars and cents the impact that holding onto disappointing investments while selling profitable ones can have on portfolio performance, you'll have a useful weapon to counteract these client emotions when they inevitably occur.

One way of doing this is to pull an historical performance chart for a solid but particularly volatile stock in a client's portfolio. Discuss what you anticipate will be a continuing pattern of price fluctuations. Address the emotions of greed and fear that such gains and losses typically foster in investors. This may help your client resist the emotional pull to take quick profits at the expense of the potential for long-term portfolio gains.

As you craft a selling strategy with them, to remind your clients that limiting the amount of trading they do not only helps to limit transaction costs, which can wipe out small profits, but also reduces the high cost of too many short-term capital gains. You might even suggest that a small victory over the IRS can be a satisfying antidote to the emotional rollercoaster of constant trading.

DEALING WITH SETBACKS

If you've done your job in stressing the uncertainty that's always part of investing, your clients shouldn't be surprised if their portfolios drop in value from time to time or a security disappoints. But you have to be prepared for their emotions to interfere with their logic.

Getting them to think ahead about how they'll respond to inevitable setbacks is key to a long-term successful relationship. So is emphasizing the difference between losses that are the result of a falling market and those that are the result of bad choices.

You'll discover that it's generally much easier for them to accept the merits of planning to buy on market dips—which they may have resisted doing in the past—than it is to recognize the limitations of intuition.

Intuition has its place, but it should be balanced by understanding the mental shortcuts that interfere with sound decisions.

Redefining Advice

Looking through the prism of behavioral finance provides a new view of your role as advisor.

Your challenge as an advisor is anticipating, recognizing, and managing the emotions—anger, fear, regret, stress, greed, pride—and mental shortcuts that interfere with your clients' ability to make rational and profitable investment choices.

In describing this approach to advising as "prescriptive," Daniel Kahneman and Mark Riepe explain that its goal is to help you fine tune your approach to your clients' psychological profiles and personalize your advice to improve their long-term investment experience.

That advice may range from urging some clients to think twice before they act—"taking a cold shower," in Meir Statman's metaphor—to helping others integrate the competing pulls of thoughtful analysis and intuition in making investment choices.

The more finely you can tune your advice to specific clients or groups of clients who take similar approaches to investment decisions, the more effective you can be in helping them achieve their goals. And it's no secret that in helping them improve their investment experience, you benefit as well.

ASK FOR REASONS

While the recommendations you offer in this new environment may differ little if at all from the advice you have always provided, the more you know about investor psychology, the more that knowledge is likely to affect your one-on-one interactions with your clients.

For example, instead of commenting directly when a client proposes buying or selling a particular investment, you might frame the discussion by asking:

- How did you decide on this purchase (sale)?
- What were the alternatives you considered?
- Why did you decide against those and for this one?
- Can you think of any reasons not to do what you're planning?

READ THE WRITING ON THE WALL

Here's a list of client behaviors that, if unchecked, threaten to undermine their financial security and your professional relationship with them. It's smart to have evidence, both anecdotal and factual, ready to help counteract them:

- ❑ Overtrading
- ❑ Repeating the same mistakes, like selling too soon, holding on too long, or buying too high
- ❑ Resisting diversification, often the consequence of overconfidence or overvaluing the familiar
- ❑ Mistaking naïve or indiscriminate diversification for the real thing
- ❑ Putting too much emphasis on recent losses and not enough on long-term gains
- ❑ Blindly following the most recent investment fad
- ❑ Nursing an obsession with avoiding loss
- ❑ Mental accounting

By working with them to analyze their decisions before they act on them, you can point out the biases or emotions that are influencing their choices and what a more appropriate response might be. The back-and-forth should also encourage them to internalize the process, so that they'll conduct this type of dialogue on their own as part of making future decisions.

The advantage for you is that you can continue to hone your ability to anticipate problems and the solutions you offer. Both make you a better advisor. For example, if a client's concern is retirement income you may find it easier to encourage her to increase her savings rate by focusing on the monthly income a particular account value will provide than on the account value itself.

CHECK THE MIRROR

You can recognize client biases more easily if you keep a candid eye on your own investment successes and failures.

Keep a list of your buy and sell decisions—and those times when you wished you'd bought or sold but didn't—and the reasons you acted as you did. For those that turn out to have been mistakes, try to figure out if they were the result of some mental shortcut or bias whose influence you weren't aware of at the time.

In addition to what you learn about yourself from this analysis, you can use your experiences to help your clients understand why you're concerned about decisions they're making. By encouraging them to put themselves in your shoes, you're on firmer ground in urging them to do what you say rather than what you did.

Similarly, keep a running record of the advice you give, with an explanation of why you're giving it, and how clients are responding.

THE BEST MEDICINE

If you can poke fun at yourself by creating trophies to the worst investment decisions you've ever made, you can take the edge off the message that everyone makes mistakes and emphasize that not repeating them is what's really important.

- Ask yourself if your enthusiasm for a particular approach is too optimistic, a bias that worries you when you detect it in your overconfident clients.
- Evaluate whether you're abetting a tendency toward mental accounting by focusing on certain aspects of a client's financial situation rather than looking at the full picture.
- Reframe information as necessary to motivate your clients to take a different, more desirable action.

CALLING IT QUITS

Are there clients you can't help? There may be. And, in some cases, you may decide it's wiser to end your relationship. For example, the combination of optimism and overconfidence can be especially difficult to counteract, as can "I knew better" hindsight that recasts your reasonable suggestions as stupid mistakes. The most untenable situations, however, often have less to do with the problems of bias than with a major disconnect between a client's stated goals and what his or her emotions make it possible to accomplish.

BEHAVIORAL FINANCE

CLIENT

ADVISOR

BEHAVIORAL FINANCE

Creating a Checklist

If you want useful answers, you need to ask the right questions.

Pinpointing the biases that interfere with your clients' ability to distinguish between a smart investment decision and one that's likely to undermine their return is an essential step in being able to make a difference on their behalf. By creating a profile for each person or couple, you'll be better able to tailor an appropriate long-term investment plan. You'll also be better equipped to anticipate the moments at which it would be smart to intervene.

Try adding some of these questions to your customary assessment of where a client is now, financially speaking, and what he or she expects from working with you. The answers can help you identify potential danger signs and frame your advice to counteract them. It can also help cement your professional relationship.

You may find that some people don't know how to answer some of the questions. Others may resist or say what they think you expect to hear, especially if they feel they're being tested. One approach that may work in cases like that is incorporating the questions into your ongoing conversations rather than asking them all at once.

It won't surprise you to know there are no right answers or that you'll uncover some curious inconsistencies.

1. What about investing interests you the most?

- ❒ Testing my skill
- ❒ Beating the odds
- ❒ Learning more about how the markets work
- ❒ Nothing really, but I know I have to do it

2. What about investing concerns you the most?

- ❒ Buying the wrong investments
- ❒ Missing out on investments I should have made
- ❒ Losing money
- ❒ Nothing really, I've been pretty lucky

3. How would you define a successful investment?

- ❒ One that I can sell quickly for a big profit
- ❒ One that pays regular dividends or interest
- ❒ One that's never going to lose value
- ❒ One where I guessed right

4. What explains your investment successes?

- ❒ The research I did
- ❒ The advice I got
- ❒ Going with my instincts
- ❒ Good luck

5. What explains your investment disappointments?

- ❒ Taking bad advice
- ❒ Buying/selling at the wrong time
- ❒ Lack of diversification
- ❒ Bad luck

6. What are your investment goals?

- ❒ I never want to worry about money
- ❒ I want to retire in style
- ❒ I want to beat the market
- ❒ I'm not really sure

7. What would make you move your entire portfolio into cash?

- ❒ Losing my job
- ❒ Too much volatility
- ❒ The collapse of a big company
- ❒ Concern about a market crash
- ❒ Nothing

8. How often do you check how your portfolio is doing?

- ❒ Once a year
- ❒ Most months, when I get my statement
- ❒ Every few days
- ❒ As often as I can

9. How many investment accounts do you have?

- ❒ One for each of my major goals
- ❒ Just this one, except for my retirement account at work
- ❒ I don't know off the top of my head

10. What's your primary investment strategy?

- ❒ Buy and hold
- ❒ I trade when a security gains or loses 20% over the price I paid
- ❒ I buy when I think a price is going up
- ❒ I trust my intuition
- ❒ I don't think I have one

Availability bias results in drawing conclusions about the probability of something happening based on the vivid impression that a similar, often recent, event has made.

Anchoring is the tendency to focus on a single factor as the primary reason for a decision or central explanation of an event. The factor may or may not be relevant, but it is never sufficient by itself.

Confirmation bias propels people to seek and overweight information that confirms their views while avoiding or underweighting what's contradictory. While this may be a deliberate attempt to justify their opinions or decisions, such selectivity is often inadvertent.

Disposition effect describes the illogical practice of selling assets that are performing well and holding assets that are losing value. It's characteristic of loss-averse investors.

Endowment effect describes a situation in which an investor is so emotionally attached to an asset that he or she finds it difficult to sell even if that's the rational choice.

Familiarity bias makes people favor things they know over things they don't know. It helps to explain why investors buy stock in local companies or those they work for and why they prefer domestic to international stock.

Herding is what happens when people move as a group in one direction or another. Like the **bandwagon effect**, herding helps to explain market bubbles, in part because of the emphasis on social consensus rather than analysis.

Hindsight bias allows investors to believe that they predicted a poor outcome all along when they had not. It reduces the probability they'll learn from their mistakes.

House money effect describes what's happening when people who've made money on their investments move into riskier securities than they would have chosen before their success. By way of analogy, gamblers who bet their winnings are said to play with the house's money.

Illusion of control bias makes people believe they can influence the outcome of events even though their actions actually have no effect on what happens.

Loss aversion is a compelling tendency to avoid realizing investment losses even when selling losers may have tax and other advantages.

Narrow framing, or **mental accounting**, is the practice of segmenting assets into separate buckets and treating each bucket as a discrete entity dedicated to a specific use rather than as an integral part of a total portfolio.

Overconfidence bias results in investors thinking they know more than they do or that they make better decisions than they do. Among the consequences are the tendencies to take more risk than is reasonable and to trade too often.

Pseudocertainty effect is the tendency to overemphasize a risk-free solution if that choice is available and to misjudge the relative probability of alternative outcomes when all the choices involve risk. Often the resulting choice is not the best one available.

Projection bias undermines some people's ability to do long-term planning because they are unable to image that their needs or emotions will be different in the future than they are in the present. Projection bias may also lead investors to assume that the way a security is performing in the present is the way it will always perform.

Recency effect leads people to put too much emphasis on current experiences or situations and not enough on long-term historical patterns. The result may a tendency to sell assets in a downturn or overbuy in a bubble.

Representativeness is a mental shortcut that people take as they draw conclusions about the future. They concentrate on recent, often dramatic, events as if they are not only normal but predictive. One consequence is buying into securities after prices have already risen substantially.

Self-attribution bias allows people to explain investment success as the result of their making smart choices and attribute investment failures to incompetent advice or bad luck.

Snake-bite bias leads people to shun investment opportunities in sectors where they have previously lost significant amounts of money, even when that sector offers the potential for strong positive returns.

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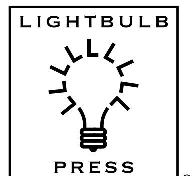

AN ADVISOR'S GUIDE TO BEHAVIORAL FINANCE *explores investor psychology from an advisor's perspective. The guide examines the causes of investor behavior and the biases that undermine sound investment decisions, offering concrete suggestions for addressing these biases. The guide also positions investor psychology as a critical tool for enhancing client relationships and building a business.*

Investor Biases

Short-cuts can save time but they can send you down the wrong road.

Think about the torrent of sensory data that floods the human brain and nervous system every moment of every hour.

Even when you walk down a city street on your lunch hour, you're processing enormous amounts of information from your environment—reacting to the weather, evaluating sights, smells, sounds, and the body language of passers-by, negotiating traffic at crosswalks. You're also constantly surveying your surroundings for potential threats—such as speeding vehicles—and rewards, like the salad or sandwich you plan to buy for lunch.

It would be impossible to perform even the simplest tasks or make the most basic judgments if you had to work through all of these cues consciously and deliberately. That's why the human mind reacts very selectively to the information it takes in, by employing shortcuts and rules of thumb to arrive at conclusions, evaluate potential risks and rewards, and assess the likelihood of particular outcomes. Psychologists and behavioral economists call this process **heuristic simplification**.

ORIGINS OF BIAS

The use of such shortcuts can make people act in apparently irrational ways, because their past experiences, their feelings, and their intuitive sense of what is pleasurable or painful influence their decisions. The result of all this is bias.

Everyone has biases. You may find the World Series exciting and the World Cup tedious, or the reverse. You may put New York at the top of your destination list or relegate it to dead last. You may love or hate jazz, drink red but not white wine, and despise beets.

Most people think of these seemingly irrational judgments as benign, but they can exert enormous influence on feelings, thoughts, and actions. And when these cognitive shortcuts are applied to personal finances, they can lead investors away from rational, long-term thinking to highly charged and prejudicial reaction that falls back on preconceived notions and old patterns of thinking and problem solving.

TAKING A NARROW VIEW

Biases tend to exert themselves in situations that are uncertain or emotionally charged—and investing is both. The ups and downs of the financial markets are unpredictable, and few things evoke stronger feelings than one's own money.

Investors are especially vulnerable to biased, or distorted, perceptions of **probability** and the way it affects investment **risk**.

Think about what happens at a basketball game when the star player sinks three field goals, one after the other, as the clock runs out. The crowd, caught up in the energy of the moment, is absolutely convinced he's on a roll and can't miss the next shot—especially if it will win the game. You could never persuade them that, despite the player's obvious skill, hitting the fourth is no more or less probable than his hitting the first one was.

It's the same kind of enthusiasm for what is possible but not probable that drives some of the investment choices certain clients make when they mistake a recurring pattern as a predictor of future results. Why do they gravitate to last year's best performing fund or this year's hot commodity if it's not that they expect the magic to last?

MISDIRECTED WORRY

More experienced investors understand the tendency of fund performance or commodity prices to move from a current high or low toward their long-time average, and so may not make the same mistakes as new investors. But experienced investors aren't immune to probability bias.

Try asking a cross-section of clients if they're more concerned about running short of money in retirement or being wiped out in a market crash.

While either is possible, it's certainly much more probable, based on historical and anecdotal evidence, that inflation is the greater threat to financial security. Yet the possibility of a crash tends to grip investor emotions in a way that inflation risk does not.

THE STING OF BIAS

Do you have clients who lost money when the technology bubble burst in 2000 and who still refuse to invest in tech stocks? This bias—called the **snake-bite effect**—makes your clients unable to see that the risks and rewards of the sector are completely different now than they were at the beginning of the century. And it may be preventing your bite-shy clients from taking advantage of strong growth opportunities.

On the other end of the spectrum is the bias known as the **house money effect**, an expression borrowed from the world of casino gambling. Like inexperienced gamblers, investors may be inclined to take excessive risks shortly after experiencing an investment windfall. Because your clients haven't assimilated the earnings as their own, they tend to take greater and often ill-conceived risks, veering far off strategy. These actions typically result in steep losses. Researchers have identified the house money effect among a wide variety of investors, from individuals to professional traders.

The snake-bite and house money biases resemble another important bias known as **representativeness**, which results in investors labeling an investment as good or bad based on its recent performance. It's a bias that helps to explain why investors predictably break the golden investment rule. They buy stocks whose prices have risen, expecting those increases to continue. And they ignore stocks—or sell at a loss—when their prices are below their fundamental values.

UNREPRESENTATIVE SAMPLE

After the back-to-back experiences of winning big in Las Vegas and accumulating impressive gains in the two technology stocks in his portfolio, Tim was on a roll. Convinced his lucky streak would hold, he told his advisor to sell his underperforming assets and buy more technology stocks. Tim not only increased his risk by reducing diversification. He made the error of calculating probability based on a too-small sample size. Heady from his success, he ignored the realities that not all technology companies perform the same and no sector is hot forever.

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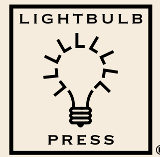

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