

Behavioral Finance Lessons for Asset Managers

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If you build better returns, investors will come” is an implicit mantra among asset managers, an analog to the familiar mantra about the world beating paths to doors of builders of better mousetraps. Yet the mantra is untrue even for builders of better mousetraps, and it is surely untrue for builders of better returns. Marketing efforts are necessary to direct investors to asset managers, as they are necessary to direct buyers to builders of mousetraps.

One behavioral finance lesson for asset managers is about the importance of marketing in identifying investors’ wants and helping satisfy them. Another is about the use of cognitive and emotional shortcuts and susceptibility to cognitive and emotional errors. Asset managers can identify their own errors and correct them, and they can choose to correct investors’ errors or to exploit them.

Investors belong in two main groups: amateurs and professionals. Typical individual investors, often called retail investors, are investment amateurs. They buy investments for themselves, in retirement saving plans or outside them. Amateur investors are skilled at professions and occupations such as medicine, engineering, policing, or gardening, but they are not skilled at investing.

Asset managers are investment professionals, skilled at investing, and acting as marketers whether they acknowledge it or not. Pension fund managers market to

boards or corporate managers, and mutual fund managers market mostly to amateur investors. In turn, pension fund and mutual fund managers are marketed to by other investment professionals, such as brokers and investment bankers.

Buyers of mousetraps want nothing more than to rid themselves of mice, but investors have many wants, some aligned with better returns and some conflicting with them. Marketing to investment professionals is not entirely different from marketing to investment amateurs because the wants of investment professionals are not entirely different from the wants of investment amateurs.

Socially responsible investors, both professionals and amateurs, come with wants for better returns with wants for being true to values, and some are willing to sacrifice returns for fidelity to values. Moreover, investors acknowledge some wants but hide others, not only from other people but also from themselves. Some investors, both professionals and amateurs, deny to others and possibly to themselves that they enjoy investing as a game, as others enjoy chess or backgammon.

John Paulson of the Paulson & Co. hedge fund, known for the billions he made on mortgage-backed securities in the 2008–2009 financial crisis, does not deny to others or himself his wants in playing investment

games. In an interview with Kolhatkar [2012], he said: “Some people like playing chess, some like backgammon. This is like a game, and playing games is fun,” and added “It’s more fun when you win.”

STANDARD FINANCE AND THE FIRST AND SECOND GENERATIONS OF BEHAVIORAL FINANCE

Typical financial economists operate within standard finance, in which investors are rational and their wants extend no further than the highest possible returns. Rational investors in Berk and Green’s [2004] framework choose mutual funds by returns and learn from past returns the ability of managers to deliver future returns.

Roussanov, Ruan, and Wei [2017] assumed that mutual fund investors seek nothing but high returns but are misled by marketing into funds with low returns. They argued that prohibiting marketing would benefit investors because “preventing funds from competing on non-price attributes (such as marketing) significantly intensifies price competition.” In the absence of marketing and its substantial costs, they wrote, low-cost index funds would gain market share at the expense of high-cost active funds, and the average performance of funds, measured by alpha, would improve.

Typical asset managers operate within standard finance or the first generation of behavioral finance. That generation, starting in the early 1980s, largely accepted standard finance’s notion of investors’ wants as rational wants, mostly high returns, but described investors as “irrational”—misled by cognitive and emotional errors on the way to their rational wants. Asset managers regularly seek behavioral finance insights about correcting their own cognitive and emotional errors, correcting the errors of their investors, and exploiting the errors of other investors.

Asset managers do well, however, to operate within the second generation of behavioral finance, presented by Statman [2017] in *Finance for Normal People*. That generation describes investors, and people more generally, as “normal.” It begins by acknowledging the full range of people’s normal wants—hope for riches and freedom from the fear of poverty, nurturing children and families, being true to values, gaining high social status, playing games and winning, and more. It distinguishes wants from errors and offers guidance

on using cognitive and emotional shortcuts and avoiding cognitive and emotional errors on the way to satisfying wants. Asset managers who enter the second generation of behavioral finance understand the importance of marketing, including advertising, in identifying investors’ wants, educating investors about financial facts and human behavior, and helping investors avoid errors on the way to satisfying wants.

MARKETING ASSET MANAGEMENT

Much of the marketing of active mutual funds is done through financial advisers and brokers who are paid loads and 12b-1 fees collected by mutual fund companies. Marketing is expensive, consuming one third of active mutual funds’ revenues. This likely underestimates the full cost of marketing by excluding other marketing expenses, such as for advertising.

We know from work of Sirri and Tufano [1998]; Christoffersen, Evans, and Musto [2013]; and others that marketing activities drive investors into particular mutual funds, yet marketing seems to offer investors no benefits in higher returns. Bergstresser, Chalmers, and Tufano [2009] found that funds sold to investors through financial advisers are more expensive than funds sold directly to investors, but they yield investors no higher returns.

Roussanov, Ruan, and Wei [2017] argued, based on this and similar research, that marketing promotes a “wasteful rat race.” This argument belongs, however, in the framework of standard finance, in which investors’ wants from mutual funds consist of nothing but the utilitarian benefits of high returns. Yet mutual funds and other managed investments also offer expressive and emotional benefits that compensate some investors for low utilitarian benefits.

We seek three kinds of benefits, utilitarian, expressive, and emotional, in all products and services, including financial products and services. Utilitarian benefits are about what something does for me and my pocketbook. Expressive benefits are about what something says about me to others and myself. Emotional benefits are about how something makes me feel.

Asset managers might perceive their industry as unique, but it is not. Indeed, analogies illuminate the investment industry. Consider the watch industry. The utilitarian benefit of a watch is accurate time-telling. A *generic* watch, such as by Timex, costs less than \$40.

It is an analog to low-cost index funds. A *luxury* watch, such as by Patek Philippe, costs more than \$40,000. It is an analog to high-cost active funds. If watch buyers cared only about utilitarian benefits, none would buy luxury watches because they show the same time as much cheaper generic watches.

Observation of ads for both generic and luxury watches indicates that they never mention accuracy (their utilitarian benefit), and ads for luxury watches never mention price (their utilitarian cost). Ads for luxury watches convey, explicitly or implicitly, expressive and emotional benefits. A Patek Philippe ad shows a handsome man standing next to his equally handsome son in a well-appointed setting, and its caption says: "You never actually own a Patek Philippe, you merely look after it for the next generation." The expressive benefits of owning a Patek Philippe watch include a display of refined taste and high social status, and the emotional benefits include contentment and pride in nurturing children and grandchildren. Many ads for financial products and services closely resemble this Patek Philippe ad. One shows a smiling grandfather standing next to his grandson, and the caption says: "I want my grandson to spend my money."

The watch industry does not divide watches into only the two groups of generic and luxury, and the investment industry does not divide mutual funds into only two groups, passive and active. Instead, each industry divides its products into many different groups, catering to many different wants. Some watches, both generic and luxury, are sporty, whereas others are elegant. Some depict us as pilots, whereas others depict us as divers. Some investment products, both passive and active, cater to wants for social responsibility, some cater to wants for high social status, and some cater to wants for playing investment games and winning. Many watch buyers are willing, explicitly or implicitly, to sacrifice the utilitarian benefits of low watch prices for expressive and emotional benefits, and many investors are willing, explicitly or implicitly, to sacrifice the utilitarian benefits of high returns for expressive and emotional benefits.

To some, wants for financial security mean wants for retirement with solid income and growth. A mutual fund company promised to satisfy these wants with its growth and income funds, transferring the image of the safety of a lighthouse to the safety of its funds: "Consistency. Experience. Dependability. They drew me to the lighthouse. Like a sailor searching for a safe haven.

Or a Baby Boomer looking for solid growth and income funds."

To others, financial security means freedom from fear of poverty, especially when stock markets crash. An ad at the height of the 2008–2009 crisis and the bottom of the stock market showed a silhouette of woman who says: "I'm anxious about retiring in a market like this." The investment company reassures her: "Times like these require innovative solutions."

Trading can bring the utilitarian benefits of great wealth, but many are drawn to it by the expressive and emotional benefits of playing and winning. The caption of an ad by a brokerage company says, "Trying to make money is only half the fun. No ... that's pretty much it." But the picture below the caption was all about fun, showing traders frolicking in a trading room.

An ad by a mutual fund company specializing in socially responsible mutual funds showed a woman who says: "Truth be told, I'm as financially ambitious as I'm socially conscious." The company answers: "We hear you. You want to do good. You also want to do well. That's why we manage ... with our disciplined process for finding stocks with strong growth potential and avoiding those at risk from unethical business practices."

Private banking brings utilitarian benefits in providing solutions to complex financial problems and expressive and emotional benefits through high social status. An ad showed a person in a chauffeured Rolls-Royce and a caption that said "Once you've earned exclusive service, there's no turning back."

COGNITIVE SHORTCUTS AND ERRORS

All people, amateur and professional alike, use cognitive shortcuts, and all sometimes stumble into cognitive errors. Knowledge of financial facts and human behavior is the advantage of professionals over amateurs, helping them use cognitive shortcuts correctly and avoid cognitive errors.

There is no uniform list of cognitive shortcuts and associated errors, and not all cognitive shortcuts and associated errors on lists are distinct from one another. Moreover, cognitive errors on many lists are tainted by hindsight errors. Action is faulted as a *jumping-to-conclusions* cognitive error once we know, in hindsight, that refraining from action would have brought a better outcome, whereas refraining from action is faulted as a *status-quo* cognitive error once we know, in equal

hindsight, that action would have brought a better outcome. Cognitive shortcuts and associated errors most relevant in the context of finance include framing, hindsight, confirmation, anchoring and adjustment, representativeness, availability, and confidence.

Framing

A commercial for running shoes illustrates framing shortcuts and errors. Two barefoot men are bantering as they walk in an African savanna. Suddenly, they spot a growling lion. “Do you think you’re faster than a lion?” asks one as he watches the other put on his running shoes. “No,” says the man, “but I’m faster than you.” And with that he runs away. Next we see the lion closing in on the barefoot man who lags behind.

The man in running shoes possesses human-behavior and racing-facts knowledge. He uses a good framing shortcut, whereas the barefoot man commits a framing error. The man in running shoes frames the race correctly as between him and the barefoot man, whereas the barefoot man frames the race in error as between each of them and the lion.

Traders possessing human-behavior and financial-facts knowledge frame trading correctly as being against traders on the other side of the trades—the likely buyers of what they sell and likely sellers of what they buy. This is the frame of “traders in running shoes” who ask: Do my computers help me outrun other traders as my running shoes help me outrun barefoot men, or are the computers of high-frequency traders on the other side of my trades much faster than mine? Do I know more about the prospects of this company than company insiders who might be on the other side of my trade, wearing “running shoes” of exclusively or narrowly available information, whereas I wear “heavy boots” of widely available information? Traders committing framing errors fail to understand that trading is a race against other traders. It is no wonder that such traders predominate among losers.

Hindsight

Good hindsight shortcuts lead us to repeat actions that brought good outcomes and avoid actions that brought bad ones. We did favors for friends, and they subsequently returned favors. We learned that reciprocated favors are the likely outcomes of doing favors. Hindsight shortcuts can turn into hindsight errors,

however, in which randomness and luck are prominent, loosening associations between past events and future events and between actions and outcomes.

Fast driving when luck is good gets us to our destination faster, but fast driving when luck is bad gets us a speeding ticket or worse. Hindsight errors can mislead lucky drivers into thinking that fast driving always gets them to their destinations more quickly and mislead unlucky drivers into thinking that fast driving always gets them a speeding ticket. Hindsight errors also mislead lucky traders into thinking that fast trading always gets them to their profit destinations more quickly and mislead unlucky traders into thinking that fast trading always inflicts losses.

One manifestation of hindsight errors is an underestimation of the volatility of stock prices. People free of these errors increase their estimates of volatility when they observe unexpectedly high or low returns, but people misled by hindsight errors fail to be surprised and consequently fail to understand that such returns were unexpected. Instead, they think that they knew it all along. Biais and Weber [2009] found, in an experiment, that hindsight errors led students to underestimate the volatility of stock prices and detracted from the performance of investment bankers.

Confirmation

Confirmation errors mislead the proverbial dog who believes that his bark makes UPS trucks go away. The dog can test his belief by seeking disconfirming evidence. How about not barking next time when the UPS truck is in the driveway? If the truck stays in the driveway, that would be confirming evidence, but if the truck leaves, that would be disconfirming evidence.

Confirmation errors mislead investors into choices that degrade returns. Gu et al. [2013] found that investors interacting in the virtual community of the largest message board in South Korea committed confirmation errors when they processed board information, overlooking or assigning little weight to disconfirming facts and opinions. Investors who committed greater confirmation errors expected higher returns and traded more frequently, but they realized lower returns.

Confirmation errors are evident among professionals in investment committees charged with hiring and firing asset managers. A Vanguard survey by LaBarge [2010] revealed that investment committee members seek

confirming evidence for the committee's views. Nearly 4 in 10 admitted that their committees commit confirmation errors.

Anchoring and Adjustment

We begin the process of estimating the value of a house for sale by finding the average price of houses sold recently in the same neighborhood. We use that average price as an anchor and adjust our value estimate up or down to account for the fact that this house has four bedrooms, whereas the average house has only three, and the fact that this house is situated on a less desirable street than the average house.

Anchoring and adjustment errors are evident among investment amateurs and professionals alike. Campbell and Sharpe [2009] found that expert consensus economic forecasts from Money Market Services are anchored to data from previous months, and the errors are substantial. George and Hwang [2004] found that stock traders use the 52-week high as an anchor. When good news pushes a stock's price near its 52-week high, traders are reluctant to bid the price higher even if the news warrants it. When bad news presses a stock's price near its 52-week low price, traders are unwilling to sell at prices that are as low as the news implies. Li, Lin, and Lin [2015] found that the odds of stock downgrades by analysts when share prices approach the 52-week high are 32.7% higher than the odds of downgrades at other times.

Representativeness

The shortcuts and errors of representativeness resemble those of the "duck test." *Representativeness information* inclines us to conclude that if a thing looks like a duck, swims like a duck, and quacks like a duck, then it is probably a duck. But *base-rate information* might indicate that such conclusion is unwarranted because there are many kinds of fowl that look like a duck, swim like it, and quack like it, but are not ducks.

Traders commit representativeness errors when forming expectations about returns. In particular, they focus on representativeness information in the form of their own recent returns, neglecting to examine base-rate information in the form of the average returns of all investors over long periods. Traders also commit representativeness errors when using technical analysis, inferring future stock prices from what seems like

representative patterns in past stock prices. Hoffmann and Shefrin [2014] found that technical analysis subtracted more than seven percentage points from the annual returns of Dutch traders.

Availability

We use availability shortcuts when we assess the probability that our airplane will arrive on time by retrieving from our minds the proportion of our flights that have arrived on time, yet we are *aware* that the proportion among all flights is likely different. In contrast, we commit availability errors when we assess that probability by our flight experience, yet we are *unaware* that the proportion among all flights is likely different. We also commit availability errors when our retrieval process is biased, as when friends who beat the market share their stories with us, but friends who lag the market do not. And we commit availability errors when our search processes are ineffective, as when we fail to search the performance records of all funds, not only those readily available in our minds.

Barber and Odean [2008] found that amateur investors are frequent buyers of attention-grabbing stocks, such as those available in the news, those reported as having extreme trading volume, and those reported as having extreme one-day returns. Attention-driven buying stems from the difficulty of searching among the thousands of stocks available for buying. Investors do not face similar difficulty when selling because they sell only the much smaller number of stocks they already own.

Confidence and Overconfidence

Confidence and overconfidence are of three types, classified by Healy and Moore [2008]: estimation, placement, and precision. Confidence shortcuts and errors correspond to these three types. We commit *overestimation errors* if we expect a 12% portfolio return when objective assessment indicates that its expected return is 8%. We commit *overplacement errors* if we expect our portfolio return to place us among the top 10% of investors when objective assessment would place us among the bottom 40%. We commit *overprecision errors* if we believe that there is a 90% probability that our portfolio return will fall between 10% and 14% when objective assessment indicates that there is a 90% probability that it will fall between a -10% return and a 26% return.

Examination of a large group of British investors by Merkle [2017] confirmed that the three kinds of overconfidence are distinct. There was a substantial propensity for overprecision errors, yet there was no general propensity for overplacement errors. Less than half of investors expected their risk-adjusted portfolio returns to exceed those of the market. There was no general propensity for overestimation, although a minority of investors greatly overestimated their returns.

Overconfidence in the form of overplacement might well be more prevalent among investment professionals than among amateurs. The Vanguard survey of investment committee members by LaBarge [2010] revealed that 83% claimed that the collective knowledge in their committee is above average, and 61% claimed that their committees seldom make mistakes.

EMOTIONAL SHORTCUTS AND ERRORS

Emotion, mood, and affect are regularly comingled, but they are distinct by intensity, duration, focus, and valence—positive or negative. Fear was a very intense negative emotion felt in early 2009 as we focused on stock markets that cut retirement savings by half for some and threatened to cut much more. Fear abated into a less intense but longer lasting negative mood that has persisted even as the stock market recovered. The emotion of fear and its mood have subsequently faded into a much less intense but longer lasting negative affect of stock markets.

Hope and Fear

Fear is a negative emotion arising in response to danger, whereas hope is a positive one in anticipation of reward. Fear is unpleasant and hope is pleasant, but the two are similar in that control is in the hands of others, whether other people or situations. We fear the danger of an airplane crash but cannot control the outcome. We hope to win the lottery but cannot control the outcome. Exuberance is extreme hope, as in the famed case of “irrational exuberance.”

Fear increases risk aversion even among financial professionals, leading to high risk aversion in financial busts and low risk aversion in financial booms. Cohn et al. [2015] found that financial professionals who read a story about a financial bust became more fearful than those who read a story about a financial boom, and fear led them to reduce risky investments.

Fearful investors expect low returns with high risk, whereas hopeful investors expect high returns with low risk. Hoffmann and Post [2017] found in brokerage records and matching monthly surveys that high past returns are associated with increased return expectations combined with decreased risk perceptions and risk aversion.

Happiness, Sadness, and Disgust

Happiness comes with gains and enjoyment, sadness with losses and helplessness, and disgust with proximity to distasteful objects or ideas. Happiness encourages us toward actions that bring further gains and enjoyment, sadness prods us to pause and contemplate actions that would stem losses and helplessness, and disgust prompts us to expel repellent objects and keep our distance from abhorrent ideas.

Lerner, Small, and Loewenstein [2004] induced sadness among one group of participants using a clip from the movie *The Champ*, portraying the death of a boy's mentor. The other group watched a neutral clip. They found that sadness increased impatience and focus on obtaining money immediately. Shu, Sulaeman, and Yeung [2015] found that sadness among mutual fund managers following the death of a parent was associated with a decline in their funds' returns.

Happiness, however, promotes delayed gratification and increased savings. Ifcher and Zarghamee [2011] induced happiness in a group of people via a montage of stand-up comedy bits. The other group watched a neutral clip. They found increased willingness to delay gratification in the happy group.

Han, Lerner, and Zeckhauser [2012] induced disgust in people by using a video clip from *Trainspotting*, portraying a man using a filthy toilet. People in the other group saw a neutral clip. All people were given closed boxes, told that they contained office supplies, and asked to shake them to establish a sense of ownership. People who were induced to feel disgust were ready to dispose of their boxes, willing to sell them at prices lower than those set by people who watched the neutral clip.

Anger

Anger, like fear, is a negative and unpleasant emotion arising in response to threats or dangers. Whereas fearful people perceive control as being in the hands of

others, however, angry people perceive control to be in their own hands. Lack of control discourages fearful people from taking risk, prompting them to act as pessimists do, whereas a sense of control encourages angry people to take risk, prompting them to act as optimists do. Gambetti and Giusberti [2012] found that people disposed toward anger are more willing to invest in stocks than those not so disposed. They also prefer medium- and long-term investments and believe that they can forecast stock-market trends.

Anger can occasionally counter cognitive errors, attenuating the tendency to commit confirmation errors. Young et al. [2011] found that angry people who read an article about a controversial social issue were more likely to consider disconfirming information than sad people who read the same article. Anger can, however, mislead into poor choices because it induces underestimation of the likelihood of losses and other bad outcomes. Keltner and Lerner [2001] found that angry people have a higher than average likelihood to divorce, suffer more cardiovascular disease, and face problems at work, while rating themselves as less likely to experience these problems.

Regret and Pride

Regret is a *cognitive emotion*, a negative and unpleasant one we experience when we can easily imagine a different choice that would have brought a better outcome. Shimanoff [1984] found that people mention regret as the most frequent negative emotion they experience.

Regret aversion and pride seeking affect financial choices, such as the choice to buy a stock or sell it. Investors who sell stocks at a loss likely regret buying them. Repurchasing these stocks weeks or months later at higher prices adds to the pain of regret, as opening old wounds adds to physical pain. Repurchasing stocks whose prices declined subsequent to an earlier sale, however, brings the joy of pride, as we congratulate ourselves for selling in time. Strahilevitz, Odean, and Barber [2011] found that investors prefer to repurchase stocks they previously sold at a gain rather than stocks they previously sold at a loss, and they prefer to repurchase stocks whose prices declined subsequent to an earlier sale rather than stocks whose prices increased. These preferences, however, did not add to investors' returns.

We alleviate regret by shifting responsibility. Some people are experts at shifting responsibility, assuming

responsibility when choices turn out well and shirking it when choices turn out badly. This shift underlies the brokers' lament: When a stock goes up, investors say *they* bought the stock; when it goes down, they say *their broker* sold them the stock.

Self-Control

Self-control centers on the interaction between hot emotion and cool cognition. Self-control can be insufficient, excessive, or just right. Self-control is insufficient when hot emotion urging immediate gratification overcomes cool cognition urging delayed gratification. Self-control is excessive when hot emotion urging delayed gratification overcomes cool cognition urging immediate satisfaction.

Framing, mental accounting, and self-control help us save when we are young and working. We frame money into *income* and *capital* mental accounts and follow the self-control rule of "spend income but don't dip into capital." Yet framing, mental accounting, and self-control hinder prudent spending of older retired people who find it mentally difficult to dip into ample capital.

Nature, reflected in our genes, affects our mastery of self-control. Each of us is born with capacity for self-control, just as we are born with capacity for language, but some of us are born with greater capacity than others, and some of us are born with personalities that facilitate it better than others. Saving requires self-control, and genetics account for approximately one third of differences in saving behavior. Cronqvist and Siegel [2015] found that parents do not have long-term effects on their children's saving behavior beyond the genetic endowment they provide. The effect of parents on their children's saving behavior is strongest when children are in their 20s but disappears by middle age.

Mood

Mood is muted emotion, less intense than emotion but longer lasting. Seasons, weather, and sunshine influence mood, as evidenced by sun lamps used to chase away winter blues. Goetzmann et al. [2013] found that cloudy days increase perceived overpricing in both individual stocks and the Dow Jones Industrial Index and increase the selling propensities of institutions.

Optimism and pessimism can be described as moods. Optimism is associated with the emotions of

hope and happiness, and pessimism with the emotions of fear and sadness, but optimism and pessimism are not as intense as hope, happiness, fear, or sadness. Sentiment in the context of investments often corresponds to mood. Bearish sentiment corresponds to pessimistic mood and bullish sentiment to optimistic mood.

Affect

Affect is the faint whisper of emotion or mood, stripped down to valence, positive or negative. Zajonc [1980], an early proponent of the importance of affect in choices, wrote, “We do not just see a house: We see a handsome house, an ugly house, or a pretentious house ... We sometimes delude ourselves that we proceed in a rational manner and weigh all the pros and cons of the various alternatives. But this is rarely the case. Quite often ‘I decided in favor of X’ is no more than ‘I liked X.’”

Investments, like houses, cars, and people, exude affect—good or bad, beautiful or ugly, admired or spurned. We expect investment with positive affect to deliver high returns with low risk, and we expect investment with negative affect to deliver low returns with high risk (Shefrin [2015]). We embrace stocks of admired companies, expecting high returns with low risk, while we keep our distance from stocks of spurned companies, expecting low returns with high risk. Evidence by Statman, Fisher, and Anginer [2008] indicates, however, that affect misleads investors into forgoing stock returns.

CORRECTING COGNITIVE AND EMOTIONAL ERRORS

Human-behavior and financial-facts knowledge are correcting tools. Financial experts gain their expertise over time by acquiring such knowledge and skill at using it.

Amateur investors tend to perceive vivid returns as representative of all returns. Vivid returns are generally recent returns, but not always. The terrible returns of 2008 and early 2009 remained vivid long after stock markets rebounded above pre-2008 levels. Investors tend to overlook less vivid returns and long-term returns that serve as a base rate. Fisher and Statman [2000] found that most amateur investors predict future returns as continuations of recent returns. Professionals, however,

have learned to overcome representativeness errors in predictions of returns. Wall Street strategists show no tendency to predict continuations of recent returns or their reversals.

Yet many professional investors fail to consider base-rate information in identifying skilled asset managers and choosing to retain or terminate them. Foster and Warren [2016] found that investment professionals choose asset managers by representativeness information, such as recent returns, overlooking base-rate information about the performance of the average asset manager.

Professional investors are much better than amateur investors at overcoming the *disposition effect*—the disposition to realize gains quickly and to procrastinate in the realization of losses. Still, overcoming the disposition effect is a challenge, even among professional managers. Utilitarian benefits in the form of lower taxes urge investors to be quick in realizing losses, but expressive and emotional costs, especially the emotional costs of regret, retard loss realization.

Putative rational investors are born with perfect self-control, whereas real-world investors acquire imperfect self-control with difficulty. One trader described this difficulty to Kleinfield [1983]: “When you’re breaking in a new trader, the hardest thing to learn is to admit that you’re wrong. It’s a hard pill to swallow. You have to be man enough to admit to your peers that you’re wrong and get out. Then you’re alive and playing the game the next day.”

Professional traders set rules and control systems that track trades and force the realization of losses when traders’ self-control fails. One rule and associated control system mandates that traders settle their trading positions at the end of each day, realizing gains on good days and losses on bad days. The ability of control systems to force traders to realize losses is, however, only as good as the ability of those systems to prevent rogue traders from thwarting them. Major trading frauds combine traders’ reluctance to realize losses with their ability to thwart control systems. Infamous traders Jerome Kerviel of Societe Generale and Kweku Adoboli of UBS knew their banks’ control systems and how to hide losses by thwarting these systems. Reluctance to realize small losses led to larger bets in attempts to get even by recouping losses, leading instead to larger losses that were impossible to hide.

More commonly, however, rules and control systems lead professional traders to realize losses quickly.

An analysis of the trades of professional currency traders by O'Connell and Teo [2009] revealed that this is especially true later in the year and among older and more experienced traders. Similarly, analysis of the trades of mutual fund managers by Da Silva Rosa, To, and Walter [2005] revealed that they are generally quick to realize losses.

Asset Managers Satisfy Investors' Wants

Asset managers can use behavioral finance lessons to identify investors' wants and help satisfy them, delivering utilitarian, expressive, and emotional benefits. Consider wants for staying true to values. Vanguard offers the FTSE Social Index Fund, a general social responsibility fund, noting that "some individuals choose investments based on social and personal beliefs." The fund screens companies whose stocks it includes according to criteria related to the environment, human rights, health and safety, labor standards, and diversity. The fund excludes companies involved with weapons, tobacco, gambling, alcohol, adult entertainment, and nuclear power.

The annual fee of the Vanguard FTSE Social Index Fund is 0.20%, higher than the 0.04% of the conventional Vanguard 500 Index Fund that does not engage in such screening or exclusion. Investors in the FTSE Social Index Fund would likely earn less than investors in the 500 Fund, reflecting the difference in fees, but their choices indicate that they are willing to sacrifice some utilitarian returns for the expressive and emotional benefits of being true to their values.

Satisfying the wants of some investors requires more than a general social responsibility fund, such as the FTSE Social Index Fund. These investors might be willing to sacrifice even more returns for the expressive and emotional benefits of specialized funds focused on causes such as providing housing for the poor, combatting child labor, or adhering to the precepts of Catholicism or Islam.

The Monetta Young Investor Fund "seeks to strike a balance between investing, learning and fun!" The fund sends kids quarterly newsletters that include a Laughing Studio with kid-friendly jokes and financial quizzes in which kids can win prizes. It also offers interactive games and activities to encourage kids to learn basic money concepts in a fun and entertaining way. The Monetta Fund's annual expense ratio is 1.26%.

Socially responsible funds and funds targeted specifically toward children note their expressive and emotional benefits in prospectuses. Other funds do not note expressive and emotional benefits in prospectuses, but do note them in ads and other marketing media.

A mutual fund company ad shows a father holding a sleeping child on his shoulder below a stock market ticker tape showing the word "priorities" among tickers of stocks whose prices move up and down. It says: "Over time, our financial investments provide us opportunities to enjoy what we treasure most." Another fund notes the utilitarian benefits of tax-free bonds in its prospectuses, but it highlights their expressive and emotional benefits in ads showing a smiling man next to a swimming pool and saying, "Nowhere on any tax form does it say you can't be crafty."

Some investment companies, such as those offering hedge funds, rely on general knowledge potential investors gain from financial media and word of mouth. Investors in hedge funds derive the expressive and emotional benefits of social status as they hint at their income or wealth without shouting it. Hedge funds are exclusive clubs, admitting only so-called "accredited" investors.

The quest for expressive and emotional benefits is also evident among investment professionals. A survey of investment consultants and chief investment officers of large Australian pension funds by Bird, Gray, and Scotti [2013] revealed that members of both groups seek the expressive and emotional benefits of playing and winning, made available by active investing. Brown et al. [2016] found that hedge fund managers seek expressive and emotional benefits in thrills and sensations. Hedge fund managers who own powerful sports cars take on more investment risk but do not deliver higher returns. Performance-car owners possess other attributes associated with sensation seeking, such as a preference for lottery-like stocks, unconventional strategies, and active trading.

Some Asset Managers Exploit Investors' Ignorance and Errors

Active asset managers satisfy their investors' wants for the utilitarian benefits of high returns and the expressive and emotional benefits of playing the beat-the-market game and winning. Yet some active asset managers exploit investors' ignorance and errors.

Holding period returns reported by mutual funds, such as for the most recent three or five years, depend

on both the most recent return observation added to the calculation and the oldest return observation dropped from the calculation. Dropping negative oldest returns gives the false impression of improved fund returns. Investors misled by false impressions chase illusory returns by investing more money in such funds Phillips, Pukthuanthong, and Rau [2016]. found that some fund managers take advantage of the predictable nature of investors' reactions to dropping negative oldest returns, timing advertising campaigns to promote false impressions of improved fund returns. Managers also use this opportunity to raise fees.

Some active managers exploit availability errors by advertising their 4- and 5-star funds but never their 1-, 2-, or 3-star funds, making 4- and 5-star funds more available to investors' minds than their actual proportion should suggest. Other active managers exploit availability errors by *window dressing*, changing the composition of their portfolios to increase their appeal when disclosed to investors Agarwal, Gay, and Ling [2014]. found that managers who perform poorly are more likely to window dress near quarter ends, buying stocks whose prices rose during the quarter and selling stocks whose prices declined. Funds charging high fees engage in more window dressing.

Active managers mislead investors, and likely themselves, into representativeness errors by insisting that they be evaluated based on their own investment performance without regard to the average performance of all active managers. The performance of one active manager is *representativeness information*, whereas the average performance of all active managers is *base-rate information*. Representativeness errors mislead investors into assigning too much weight to the representativeness information of the good investment performance of one active manager and too little weight to the base-rate information of the poor average performance of all active managers. Representativeness errors encourage investors to invest with active managers who have had good recent performance and, when performance falters, to jump to other active managers who have had good recent performance.

THE MARKETING MODEL OF ASSET MANAGERS

Some financial advisers are paid by two groups, one directly and one indirectly. Clients pay advisers

directly, commonly a percentage of clients' assets under management. Clients also pay advisers indirectly in loads and 12b-1 fees collected by mutual fund companies, paid to advisers, and included in mutual fund fees paid by clients when they buy mutual funds through advisers. Such advisers are, in effect, sales agents of mutual funds.

Arrangements in which producers pay sales agents are common in many industries, but most are different from arrangements in the investment industry. Supermarkets are sales agents for cereal producers, whereby cereal producers pay supermarkets for the shelf space where their cereals are placed. When consumers buy boxes of cereal, they pay the supermarket a price that possibly reflects payments by cereal producers to supermarkets, but consumers are charged only by supermarkets, not also by cereal makers.

Arrangements in the investment industry are different from arrangements in the supermarket industry, but not entirely unique. Arrangements in the medical industry are similar to those in the investment industry: Physicians in private practice receive direct payments from patients, and some also receive payments from pharmaceutical and medical-device companies whose drugs and medical devices they prescribe. Ultimately, patients pay in higher drug and medical-device prices for the payments made to physicians by pharmaceutical and medical-device companies.

The conflicts of interest facing financial advisers are obvious. Nevertheless, the support that mutual fund companies provide to advisers can benefit investors. Cici, Kempf, and Sorhage [2017] found that investors who purchase mutual fund shares through advisers tend to avoid taxable distributions better than investors who buy shares directly. The difference is especially pronounced for distributions that have large tax consequences. Furthermore, the difference is larger in December, but only when investors face large capital losses, indicating that financial advisers guide investors to realize losses. Schmeiser and Hogarth [2013] found that financial advisers improved the financial behavior and well-being of both working and retired people. Kramer [2012] found that advised Dutch investors reduced risk by diversifying their portfolios more widely than nonadvised investors.

We can debate the overall benefits to investors of a marketing model promoting active mutual funds whereby financial advisers are paid directly by clients and indirectly by mutual fund companies, but several

forces are pushing against this marketing model, which is evident in the shift of investor money from active funds to passive ones Mauboussin, Callahan, and Majd [2017]. noted that since the end of 2006, investors have withdrawn nearly \$1.2 trillion from active U.S. equity funds and have allocated roughly \$1.4 trillion to passive U.S. equity index funds and exchange-traded funds (ETFs).

Regulations are one force pushing against active funds. Regulation Fair Disclosure (Reg FD), ratified in 2000, reduced the information advantage of active managers by requiring companies to disclose material information to all investors simultaneously. The more recent fiduciary rule disadvantages active managers further by mandating that financial advisers assessing two funds with similar characteristics select the less expensive one, giving an edge to low-cost index funds.

Technology, especially the Internet, adds to the disadvantage of active managers because it allows investors to obtain information such as company data, regulatory filings, and stock quotes at very low cost. An important part of information access is an improved ability to make comparisons, such as between fees of two similar funds, directing investors to low-fee index funds. More important is the rise of fintech in general and robo-advisers in particular. Robo-advisers serve well younger investors with relatively few assets and few needs for specialized advice. Moreover, robo-advisers tend to invest clients' money in low-fee index funds and ETFs, and their fees to clients are much lower than those charged by typical advisers.

CONCLUSION

Typical asset managers operate within standard finance, in which investors are described as rational, or within the first generation of behavioral finance, in which they are described as irrational. Asset managers do well, however, to operate within the second generation of behavioral finance, in which investors and people more generally are described as normal, with a wide range of normal wants, such as hope for riches and freedom from the fear of poverty, being true to values, and gaining high social status. Asset managers who enter the second generation of behavioral finance understand the importance of marketing in identifying investors' wants, and they understand the importance of educating investors about financial facts and human

behavior, as well as helping them avoid errors on the way to satisfying wants.

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