

Advising the Behavioral Investor: Lessons from the Real World

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INTRODUCTION

U.S. President Franklin Delano Roosevelt, during his first inaugural address in 1933, stated that “The only thing we have to fear is fear itself.” He made this statement when the country was in the throes of the Great Depression. More than 80 years later, academic research in the field of behavioral finance demonstrates that this celebrated line applies equally to investing. Investors are often their own worst enemies because they are susceptible to mental mistakes and emotional responses. These biases often lead to poor decision-making and, ultimately, inferior financial outcomes.

One of the greatest services a financial advisor can provide to clients is helping to ensure that in times of market turbulence, reason, discipline, and objectivity triumph over emotions such as fear, greed, and regret. This chapter explores some reasons for which overcoming emotional and cognitive biases in investing is both vital to individuals’ long-term wealth creation and also a perennial challenge for financial advisors. It explains common emotional biases and how these impact the development of investment strategy and, ultimately, investment results. Additionally, this chapter draws on both academic theories in the area of behavioral finance and the real-life manifestations of behavioral and cognitive biases on investors’ long-term wealth.

The chapter is organized as follows: The first section examines the complex relationship among risk, return, and the investor. Next, the chapter outlines several common emotional biases that can jeopardize an investor’s prospects for long-term wealth creation. The next section discusses the impact of investor behavior on portfolios, including why investors tend to underperform the asset classes and funds in which they invest. The chapter then details approaches financial advisors can use to help investors avoid emotionally driven decision-making and stay on track to meet their long-term goals. Finally, the chapter explores strategies that seek to turn predictable, common investor behavioral biases into profit opportunities.

RISK, RETURN, AND THE INVESTOR: A COMPLEX RELATIONSHIP

Consistent opportunities for excess returns with zero extra risk relative to a market index simply do not exist because market participants arbitrage them away. In other words, there is no free lunch in investing because investors must incur risk in order to earn return. The fact that equities have historically outperformed fixed income stems largely from the fact that equities are inherently riskier. That is, investors must be compensated for that additional risk in the form of additional return. Otherwise, why would they incur it?

A Premium for Stock Risk

Normally, investors are compensated for the additional risk that equities entail over so-called riskless assets such as short-term Treasuries in the form of the equity risk premium (ERP). Equation 15.1 shows a simple calculation of the ERP:

$$\text{MKT} - \text{RFR} = \text{ERP} \quad (15.1)$$

where MKT is the equity market return and RFR is the risk-free rate, commonly measured as the one-month Treasury bill.

The ERP is not supposed to be negative (recall that it is referred to as a premium). Yet, investors have actually been penalized instead of rewarded for taking on risk during some multiyear periods. During the Great Depression between 1930 and 1939, the ERP averaged -0.60 percent a year, using the S&P 500 Index to measure MKT and the one-month U.S. Treasury bill to represent RFR. For the decade starting in January 2000 and ending in December 2009, the ERP was -3.7 percent a year. Over the long term, however, the ERP has been positive: more than 6 percent annualized over the period between January 1926 and December 2012, which makes intuitive sense given the “normal” relationship between risk and return.

Investors will not realize the longer-term ERP if they panic and sell their equity holdings based on short-term, negative market events. In fact, weakening prices can represent buying opportunities from which long-term investments have the potential to gain great value. When price volatility or an increase in uncertainty about the future value of assets occurs, opportunities are available for investors to be rewarded for placing or keeping assets in the stock market.

The Sentiment Roller Coaster

Unfortunately, even prudent risks that investors objectively know should pay off are often psychologically difficult to incur. Hence, the advisor’s challenge is to keep clients who are nervous and fearful in the market after a protracted downturn. While most investors understand the concept of market cycles, when the economy has been stuck in a trough for an extended period they often have difficulty believing that stock markets will eventually recover. This is when investors should be reminded that one of the greatest long-term wealth hazards they face is having no or minimal ownership in stocks when the cycle turns up because they panicked, sold their equity holdings, and moved into cash when stocks were in a severe downturn.

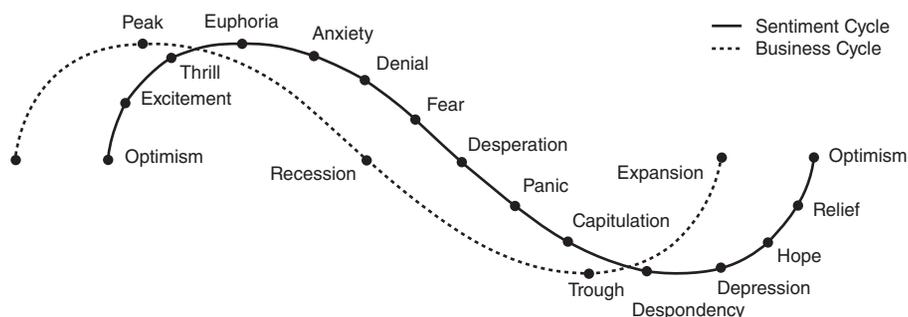


EXHIBIT 15.1 Investor Sentiment and the Business Cycle

Note: This exhibit depicts the relationship between investor sentiment and the business cycle. The points on the investor sentiment curve (solid line) correspond to the various stages of the business cycle, with a certain lag time.

The scariest times to invest have often proven to be the best times to invest. Warren Buffett famously advised investors to “be fearful when others are greedy and greedy when others are fearful” (Buffett 2008). Yet, market participants often tend to do just the opposite. Exhibit 15.1 depicts how investor sentiment relates to the business cycle. The points on the investor sentiment curve generally correspond to the various stages of the business cycle (as indicated by the dotted line).

Even a cursory look at Exhibit 15.1 reveals how emotions such as fear, regret, optimism, and pride can have a detrimental effect on the size of an investor’s overall portfolio. For instance, if one invested at the first point of the graph, while being optimistic about the market, would adding even more money at that point have been a good idea? The answer is probably not. However, based on historical fund flows as shown in Exhibit 15.2, that is what many people do. Similarly, being depressed about recent underperformance often leads investors to exit the market just when opportunity is actually highest.

For example, as Exhibit 15.2 shows, in 1990 average cash allocations were as high as 50 percent just as the S&P 500 was poised to take off on a 10-year run. In other words, many investors had withdrawn their money from stocks for emotional reasons when their growth potential was at its highest.

Poor Timing

Historically, groups of individuals exhibit herd behavior that results in stock market bubbles because long-term investors start to act like short-term traders. People have a tendency to chase returns; to overinvest money in sectors and asset classes that have exhibited strong recent outperformance in the hopes that their superior performance persists into the future. For example, in the late 1990s and early 2000s, approximately \$18 billion of new assets flowed into domestic growth equity funds, fueled by investor enthusiasm for the growth-dominated tech industry. In the three years before their peak level of net inflows, U.S. large cap growth stocks had returned more than 14 percent annualized and had outperformed the global equity markets by almost 4 percentage points a year. Investors also suffered from representativeness bias during this time period because they overweighted their portfolios in

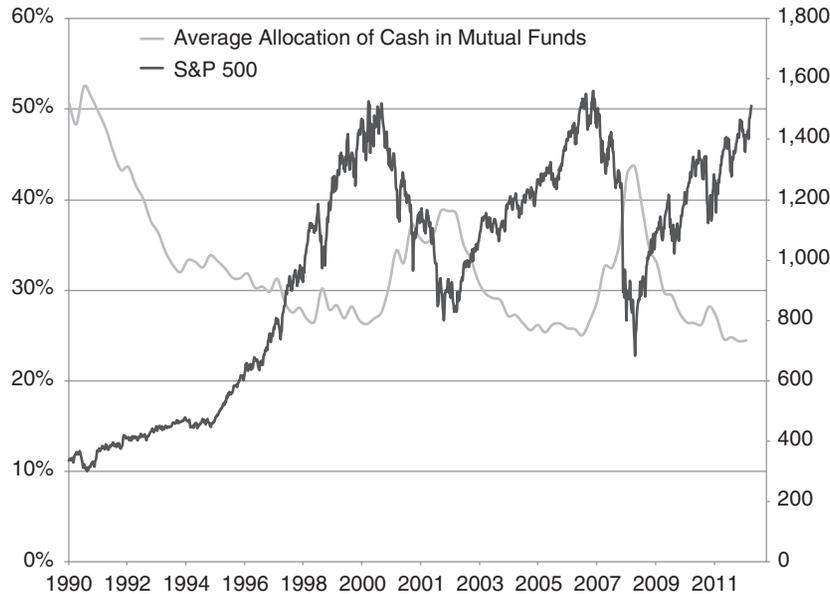


EXHIBIT 15.2 Average Cash Allocations of U.S. Mutual Fund Owners versus S&P 500 Price Return: 1990–2012

Note: This graph demonstrates the historic relationship between S&P 500 movements and the cash allocations of investors. When the stock market level is high, as in 2000 and 2007, investors are heavily invested in stocks and their cash holdings are relatively low. By contrast, investors exit stocks and build cash allocations after markets fall, as in 2002 and 2008.

Sources: Standard & Poor's Index Services, Investment Company Institute.

growth stocks and underinvested in value stocks. The *representativeness bias* states that individuals have a tendency to project past and current investment returns into the future. Investors were expecting growth stocks to continue to outperform other assets classes for several more years. However, shortly thereafter the dot-com bubble burst, wiping out trillions of dollars in market value over the ensuing two years.

When investors examine past returns to determine their investment strategy going forward, they often find themselves on the wrong side of the old adage, “buy low and sell high.” Indeed, Morningstar reports that the mutual fund categories with the greatest inflows tend to underperform those with the greatest outflows over the following three- and five-year periods (Morningstar 2009). Exhibit 15.3 illustrates this phenomenon by showing the performance in the three years leading up to and the one year following peak mutual fund flows into U.S. large cap growth funds. The peak flows occurred in February 2000.

Too often, when perceived risk increases, investors become risk averse at the wrong time and lower their equity allocations within their overall portfolios. As such, they are reducing their chances for long-term wealth creation. A recent example involves the euro zone debt crisis. At Gerstein Fisher, an independent investment management and advisory firm, the volume of calls to client advisors spiked as nervous clients called to ask why the firm continued to own European equities. Some wanted to sell their European equity holdings. Yet, research conducted by

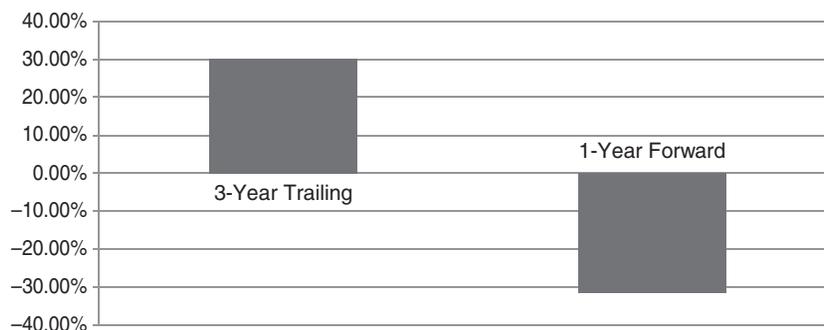


EXHIBIT 15.3 Three-Year Trailing Returns from Peak Fund Flows and One-Year Forward Returns from Peak Fund Flows (Annualized)

Note: This bar chart shows how investors tend to base their investment strategy on past market returns. Peak flows into U.S. large-cap growth funds in February 2000 occurred after three years of strong performance and were followed by a year of very poor performance.

Sources: Morningstar, Bloomberg.

the firm illustrated that between 1970 and 2011, the cost of capital (or the returns investors demand for holding companies' equity shares) for the United States, euro zone countries, and Japan was nearly equal. Short-term differences such as those witnessed in 2011 and 2012 do occur. However, such changes usually are triggered by systemic events such as the Greek/euro zone debt crisis and effectively make access to global companies that happened to be based in one region of the world available to investors at a substantial discount.

Over the long run, markets are a good mechanism for pricing (known) risk. While markets are reasonably efficient, pricing in all known information, they are not perfectly efficient due largely to investor behavior. As individual theories, the efficient market theory and behavioral finance theory do not sufficiently explain how security prices work in the marketplace. Rather, the interplay between efficient markets and behavioral finance helps to explain the complex reality of market performance.

Part of this reality is the fact that the emotions of fear and regret often overcome the power of facts and logic. Although investors may objectively understand the relationship between risk and return, they often are resistant to embrace the concept in practice. This is one of the myriad ways in which financial advisors can help improve their clients' investment success, as is discussed later in the chapter.

INVESTMENTS WITH PEOPLE PROBLEMS

All too often, investors jeopardize their long-term portfolio returns and financial goals through cognitive and emotional biases. Many financial advisors can likely relate to the saying, "We don't have people with investment problems; we have investments with people problems." The following examples illustrate some common investor lapses that stem largely from heuristics (i.e., cognitive or mental mistakes) or emotional tendencies.

Failing to Rebalance

Rebalancing is a simple yet important investment principle that entails systematically selling winners (i.e., securities whose prices increase to the point that their portfolio weight now exceeds their strategic target) and buying losers (i.e., securities whose prices have substantially declined in value) on a periodic basis. Yet too often, investors instinctively seek to do the opposite when the market is rising or falling.

Rebalancing is an important form of portfolio risk management. Consider an example where an investor has set strategic asset allocations at 60 percent in the S&P 500 Index for stocks, 30 percent in five-year Treasuries for bonds, and 10 percent in the Dow Jones-UBS Commodity Index as part of an investment policy statement that reflects not only his desired exposure to certain asset classes but also the risk and return goals of his portfolio. If he allows allocations to drift as asset prices fluctuate over time, however, the more volatile asset classes will tend to become a larger share of the total and increase overall portfolio risk. Hence, the investor needs to periodically rebalance his portfolio. For example, comparing the performance of a quarterly rebalanced 60/30/10 portfolio from January 1992 to December 2012 with a portfolio never rebalanced, the rebalanced one achieved an annualized return of 7.78 percent (compared to 7.36 percent for the portfolio never adjusted), with a standard deviation of 9.37 percent versus 10.67 percent.

An equally large problem is the tendency for workers to ignore the allocations in their defined contribution retirement plans, such as a 401(k). In managing their own defined contribution accounts, investors seem prone to *status quo bias*, perhaps out of sheer inertia. That is, employees tend to adopt a “set it and forget it” approach with their retirement portfolios, with the result that initial asset allocations and portfolio risk migrate to levels that are inappropriate for the investor’s long-term goals and risk tolerance.

Overlooking Human Capital

Many workers also compound investment risk by failing to consider their human capital (i.e., the present value of a worker’s expected future labor income during her working lifetime) when investing. Perhaps due to *overconfidence* and *familiarity bias*, employers and employees very often overestimate their investment skills and overweight familiar assets within their retirement funds. This results in a lack of diversification within their overall portfolio and raises the odds of both human and financial capital being simultaneously devastated.

Instead, as a worker allocates personal assets, she may be better off underweighting investments that are closely correlated with her employment and instead allocating more money toward better diversifiers. For example, if she works for a brokerage firm, which is vulnerable to volatile stock market cycles, then she might consider a higher weighting in bonds and a below-market-weight allocation to financial sector stocks. If she is in the real estate business, she could consider underweighting property stocks. Consider the wealthy client of an advisor whose entire human capital is tied up in ownership of stores that sell a major consumer brand. The bulk of his investable assets are also tied up in the same brand’s stock. The advisor might recommend that the client sell a large portion of the stock in his tax-deferred account, where the realized capital gains are not subject to taxes.

Reaching for Yield

Particularly in very low interest rate environments, generating portfolio income can be a challenge for investors—one that may push them to display greed and cognitive bias. Investors who overweight their portfolios in high yield bonds and preferred stocks can be employing a risky strategy. Some fail to recognize, for instance, that high yield bonds are highly correlated with stocks; and that preferred stocks are highly concentrated in one sector (financials), tend to move with common shares and are potentially more vulnerable to inflation. Investors nearing or in retirement are often those who reach for yield most consistently, ignoring the fact that an income-dominated portfolio is particularly vulnerable to the long-term effects of inflation.

Underestimating the Impact of Inflation

Inflation presents a special challenge for all investors, one that is detrimental and unforgiving to an investment portfolio. In fact, for some investors, “risk” is not so much the risk of investment loss in the near term as it is the risk of outliving their assets (referred to as *longevity risk*). Because people are living longer, retirees often underestimate the need to preserve purchasing power during decades of retirement and also might be overly risk averse. Investors who reduce their exposure to equities in favor of bonds are basically making a trade: acquiring higher current income in exchange for a higher risk to their future income. A more balanced and prudent approach is one that includes income-generating investments within the framework of a well-diversified, total return-oriented portfolio that includes equities and other assets with the potential for capital appreciation.

Thinking Too Much or Too Little about Taxes

Regarding taxes, behavioral biases reduce investor returns. Due to *loss aversion*, people own losing stocks longer than they logically should. Instead, they should sell the losers and deploy tax-loss harvesting techniques to realize a tax loss that can be used to offset capital gains. This approach could effectively add money to a portfolio and improve after-tax cash flow. By contrast, people with large, concentrated stock positions and substantial embedded capital gains resist selling positions because they dislike realizing taxable gains. In doing so, however, they are increasing systemic risk in their portfolios.

Another area in which investors make detrimental judgments as related to taxes is compartmentalizing their financial lives—separating their tax returns from their investment portfolios in an example of *mental accounting*, a cognitive bias in which people treat a sum of money differently from another equal-sized amount depending on the mental “account” to which they assign the money. Investors may lose an annualized percentage or more of their total return to taxes but often do not fully comprehend this because the information appears on two different documents. Investors should focus much more on after-tax returns. For investors in taxable accounts, how much return an investment earns matters less than how much of that return the investor actually keeps after taxes. Adept tax management can add a full percentage point each year (Arnott, Berkin, and Ye 2001) to an investor’s after-tax return, which is substantial when compounding returns over a long investing career.

Indeed, taxes and sound tax management should be key considerations when formulating and executing an investment strategy.

THE IMPACT OF INVESTOR BEHAVIOR ON PORTFOLIOS

Investors who are subject to emotions such as fear, greed, and regret often act against their own best interests when investing. But how, in practice, do these biases manifest themselves in portfolios and ultimately in investor returns? This section examines this question and offers both qualitative and quantitative answers.

Suboptimal Strategies

Perhaps the best place to begin this discussion is how financial advisors should build emotions and behavior into portfolio construction. A basic assumption of modern portfolio theory (MPT) is investor rationality (Markowitz 1952). With the emergence of behavioral finance, the paradigm shifted to include psychological variables that can influence and distort investors' decision-making. Instead of debating which school is more accurate, an investment advisor should borrow from both. The result will be an investment portfolio and strategy that may be suboptimal from an MPT standpoint, but may be the right approach for the investor. In other words, sometimes "the right portfolio isn't the right portfolio" as prescribed by traditional finance.

Dollar-Cost Averaging Dollar-cost averaging (DCA) is a popular investment strategy among some individual investors and investment professionals. In dollar-cost averaging, individuals gradually invest money in the market by setting aside an amount at a certain frequency, such as monthly. Nonetheless, Gerstein Fisher Research (2011) finds that a lump-sum investment strategy produced superior results over 20-year rolling periods from January 1926 to December 2010. This evidence is consistent with the findings of Constantinides (1979), Rozeff (1994), and Leggio and Lien (2001).

Yet, despite studies that point to the superiority of a lump-sum approach, risk-averse investors find the structured and disciplined approach of DCA strategies emotionally comforting and satisfying. In practice, people typically use DCA when markets are down and they are fearful, which is frequently a time when they would be better off investing lump sums. By contrast, they demonstrate a greater willingness to invest lump sums when markets are rising and they are overconfident. Indeed, DCA's greatest (behavioral) value may be as a good exercise for people to become comfortable with investing, particularly in volatile markets.

Variable Annuities Before investing a client's money, an advisor should attempt to identify that client's risk tolerance. During bull market cycles, however, getting individuals to conceptualize how they will behave when turbulence occurs is difficult. For example, assume an investor is in his late fifties and eagerly planning for retirement when the market suddenly drops. The logical side of his brain knows that, long-term, stocks are generally a good investment that should maintain or increase purchasing power during retirement. But his emotional side simply cannot handle

the volatility. In this scenario, a variable annuity invested in a diversified equity portfolio may be a good compromise for the behavioral investor.

From an MPT perspective, a variable annuity, which provides downside protection in the form of a guaranteed income stream regardless of stock market performance, is suboptimal. Contract fees tend to be very high, reducing equity investment returns. But if the alternative is for an anxious investor to liquidate stocks and exit the market completely, then an annuity with an aggressive allocation to equities may be preferable to an “uninsured” portfolio. This scenario exemplifies the late economist Herbert Simon’s concept of *satisfice*, which combines “satisfy” and “suffice” to describe decisions or solutions that are acceptable and adequate but not optimal (Simon 1955).

A typical case illustrates the dilemma. In the fall of 2002, suppose an investor in her late fifties, unnerved by the 40–50 percent stock market collapse, says she wants to sell \$400,000 of stocks (nearly 10 percent of her portfolio) and buy \$400,000 of bonds. Based on her financial profile (she already had an adequate amount in cash, bonds, and other liquid instruments to meet 10 to 15 years of expenses), she has no logical reason to make the sudden change in her portfolio. Typical of the behavioral investor, she was extrapolating recent events into the future and feared that the market would fall yet another 40 to 50 percent. Despite valiant effort, Gerstein Fisher could not keep her in the equity market and thus introduced her to the idea of a variable annuity invested 100 percent in stocks. This allowed her to keep the \$400,000 invested in the market, but within a variable annuity structure. The insurance costs her 1.5 percentage points per year more than not having it, reducing her expected annual stock return by that amount. Yet, this was still preferable to liquidating equities to buy bonds on the heels of a major stock market downturn. As it turns out, she had sought to exit stocks right near the bottom of the market, and by October 2007, five years later, the value of her annuity account had nearly doubled (i.e., a 100 percent cumulative return). If she had instead put the money into five-year Treasuries in the fall of 2002, the money five years later would have been worth only about 16 percent more.

When Suboptimal Is Better Another real-life example will help to illustrate the trade-offs between optimality from an MPT standpoint and what may be optimal for a given investor’s circumstances. Take the case of an investor with two children who is in her forties when her husband passes away, leaving her with the payout from a \$2 million life insurance policy. She earns a decent salary and has a mortgage and some student loans. An MPT-based portfolio optimizer might advise her to invest the entire insurance proceeds aggressively, perhaps 100 percent in stocks, and simply accept the volatile cycles in the markets for the next 30 years. But this is probably the wrong advice for her. What if the market falls 50 percent and she still has that mortgage on her house? Based on information about this individual, as well as experience with other clients in similar situations, an advisor might conclude that she would panic and sell equities at a major loss at the market bottom.

As a financial advisor, the best advice may be to recommend that this investor pay off the mortgage and student loans with the insurance money before investing in risky assets. Again, no standard finance optimizer will recommend this strategy, but the advisor’s role is to keep the client invested so that she can earn the equity risk premium, which she would not do if she sold stocks in a moment of panic.

Reducing or eliminating leverage will provide her with some peace of mind and increase the chances that she will stay the course and remain rational in a turbulent stock market. In short, doing certain “boring” things during peaceful times, such as properly diversifying the portfolio, building up adequate emergency funds, purchasing insurance, and reducing leverage, may be irrational under MPT but will feel very rational in times of crisis and should help to improve long-term equity returns for the client.

Paying for Bad Behavior: Why Investors Underperform Investments

The data show that investments consistently outperform investors. Using Morningstar data, Maymin and Fisher (2011a) examine the average investor’s actual return in mutual funds from January 1996 to December 2010. Their evidence shows that fully one percentage point of the investor’s annual underperformance relative to the funds can be attributed to trading activity.

Dalbar, a financial services market research firm, studied the average equity investor’s returns during the 20 years ending in December 2011 as compared to the annualized returns of the corresponding benchmarks (Dalbar 2012). The findings show that investors lagged their benchmarks by a stunning 4.23 percentage points per year. In other words, investors who attempt to time the market are unsuccessful. Too often investors depart from a well-designed long-term strategy to pursue short-term approaches that entail excessive trading, higher costs and taxes, and ultimately result in subpar long-term returns. No wonder investment sage Warren Buffett, in a play on Sir Isaac Newton’s laws of motion, has said, “For investors as a whole, returns decrease as motion increases” (Buffett 2005).

For many investors, the hardest decision is to invest in equities when the market is down. When confronted with the kind of fight-or-flight scenario that down markets present, one’s reflexive system comes into play. The same system motivates people to satisfy their basic needs and to avoid harmful situations quickly. For instance, advisors often heard such statements from clients in the wake of the market crash in 2008 as: “I want out of the market until it starts doing better—put my money in cash” and “I would like to stop investing until the markets go back up, then I will start again.”

Investors also tend to chase returns by allocating more to “hot” funds or asset classes. Incessant media noise and aggressive advertising and marketing by mutual fund companies exacerbate this tendency for investors to make emotionally charged decisions. Evidence by Barber, Odean, and Zheng (2005) shows that mutual fund investors are attracted to funds through current high performance, marketing, or advertising. For instance, in the second half of 2011, a turbulent period in the stock market, an investor observes that gold is surging. Bombarded by negative news headlines that create high levels of anxiety, he is convinced that gold is going to \$3,000 an ounce and he does not want to miss the ride. Despite the fact that he has a well-diversified portfolio that is appropriate for his long-term objectives, he calls his advisor to say that he wants to liquidate the entire portfolio and put everything into gold.

Maymin and Fisher (2011b) study the relationship between gyrations in the equity market and the volume of Gerstein Fisher client inquiries and attempts to alter portfolios from 1993 to mid-2010. Perhaps unsurprisingly, the volume of client inquiries was highest right after the sharpest rises and falls in the market (excluding

the high volume of client contact right after opening an account). The data show that clients waited until the period of greatest volatility had passed and then wanted to do exactly what any advisor would tell them not to do: sell at the bottom or buy at the top of the cycle.

Consider the example of a chronic market timer whose risk tolerance is inconsistent. When markets are buoyant, he calls to increase his allocation to stocks; when stocks are plummeting, he seeks to reduce his exposure to equities and buy bonds. Intellectually, he knows his diversified portfolio, designed expressly for his situation, is rational. Yet, due to *recency bias*—placing undue weight on recent observations—and other emotions, he obsesses about short-term risks. As Nobel Laureate Daniel Kahneman notes, investors frequently hurt themselves by exaggerating the importance of and focusing on recent news. Kahneman (2011, pp. 286–287) describes the investor’s dilemma as follows: “Humans are . . . guided by the immediate emotional impact of gains and losses, not by long-term prospects of wealth.”

The next section discusses some ways in which financial advisors can help investors increase their returns by adhering to their strategy and maintaining discipline even during turbulent market conditions.

HOW ADVISORS CAN HELP THE BEHAVIORAL INVESTOR

Being an effective financial advisor requires an understanding of investor psychology. Every day, advisors face the challenge of recommending rational investment strategies to behavioral investors. As long as investors are human, this challenge will remain. Sometimes facts and figures are no match for the emotions of individuals who have experienced a large decline in wealth in a market downturn. Advisors can add value to the client relationship by factoring the investor behavioral component into their thinking and actions as it relates to working with their clients in both calm and turbulent times in the market. Following are key strategies and tactics for doing so.

Know Clients’ Investing and Risk-Taking History

An investor whose first experience in the market was the dot-com bust will likely have a different attitude toward risk and investing than one who has never had a substantial loss of wealth over such a short period. Investors’ histories often inform the decisions they make in the present and in the future. Such histories sometimes cause them to be inherently more risk-averse than they need to be given their goals and time horizon, or in some instances overly aggressive based on past successes. Understanding a client’s past experiences up to the point at which he meets with the advisor helps to frame discussions and decisions in a way that will increase the likelihood that the client will act objectively in his own best interests as it relates to his investments.

However, drawing conclusions or making assumptions about risk-taking behavior based solely on past experiences also entails risks. The reality is that neither advisor nor investor really knows how the investor will react to a situation until that situation presents itself. One way to try to preview this is by talking through scenarios with clients. For example: “How would you feel if your daughter’s 529 savings plan for college was down 30 percent next year?” By using specific,

plausible scenarios and engaging in honest dialogue with clients about how they would likely react, advisors can gain additional insight into the level of risk the investor is able to bear (as opposed to what he tells the advisor he can bear). When that risk materializes, both advisor and client are better equipped to handle it.

Lay the Groundwork during Calm Times

The time to question an individual's investing strategy is not when it is being tested by volatile markets. Perhaps the best defense against behavioral biases is a disciplined investment strategy based on sound portfolio structure and managed in an equally disciplined manner. Advisors should work with investors to develop a clear road map and plan based on their near-, medium- and longer-term objectives and constraints, and build downside protection for unexpected negative events. Although building portfolios entirely around low-probability negative events is inadvisable, the advisor and client should account for the fact that rare events may occur and position portfolios to weather events such as a 40 percent market correction or a loss of employment without the need to sell securities to meet liquidity needs when stock prices may be significantly down. As discussed earlier, the only way an investor can realize the long-term equity risk premium is by staying invested for the long term and not selling during hard times.

Show, Don't Tell: Conduct Research for Clients

Instead of stating their opinions and beliefs, advisors are likely to have greater success with clients when advisors support what they are recommending with facts and evidence. Rather than behaving as though they can predict the future, advisors can conduct relevant historical studies that often help to convince clients to maintain the preselected portfolio choice. For instance, when clients were impatient with underperforming international markets in 2012, Gerstein Fisher conducted research demonstrating that, from January 1997 to September 2012, a global equity portfolio had outperformed a U.S.-only portfolio during all 10-year rolling periods (Fisher 2012). Likewise, during turbulent times, an advisor can show clients a convincing piece of research evidence, such as Exhibit 15.4, to remind them that, while 1-year returns can fluctuate substantially, 20-year rolling returns are much more tightly clustered in the 6 to 14 percent (annualized) range. This may temper investors' emotions and keep them focused on the long-term time horizon.

Share Experiences

When logic and facts fail to prevail over investor emotions, drawing on past experiences gained from working with other investors with similar fact patterns is often useful. Individuals typically relate better to others and their experiences than they can to financial data or a research study. By saying to a client, "We worked with a person last year with a similar financial profile as yours who unexpectedly lost a spouse, and here is what her experience was and what we did," an advisor is framing the discussion and connecting with the client on a human and emotional level. Additionally, when advisors have worked with investors to help them navigate through financial and life events, they can add real value to the client relationship.

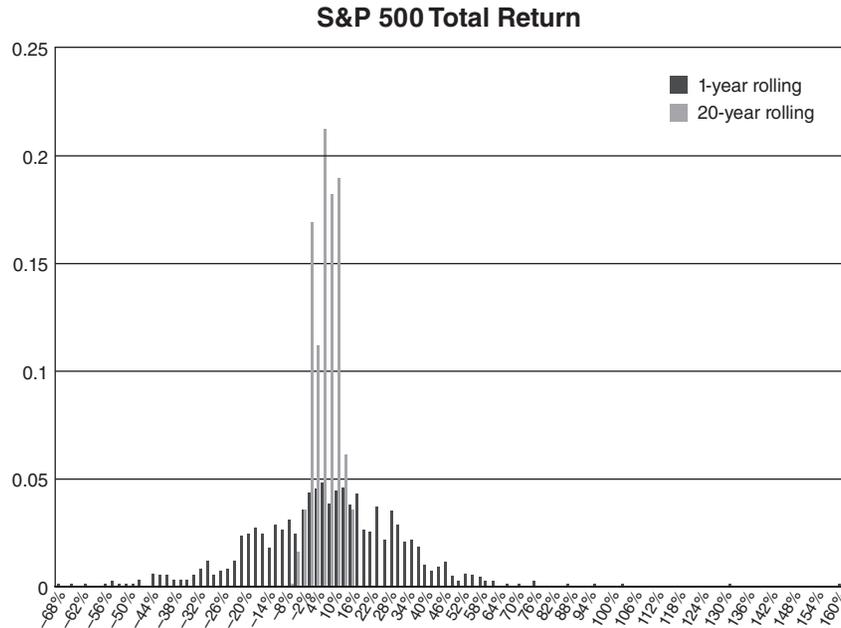


EXHIBIT 15.4 Distribution of S&P 500 Returns, 1926–2012: 1-Year Rolling versus 20-Year Rolling

Note: This graph depicts the stark difference between stock market returns during 1-year and 20-year rolling periods. During single-year periods, stock returns vary dramatically from large negative to large positive numbers. Over rolling 20-year periods, annualized returns are clustered more tightly in the 6 to 14 percent range.

Source: Standard & Poor's Index Services.

While knowing how every client scenario will play out is impossible, past experience with similar scenarios can provide a useful guide.

Obtain Discretion

If a financial advisor has been given discretion over a personal account, that advisor is able to make investment decisions on behalf of the client, and the risk of a client being harmed by emotionally driven actions can be mitigated. For advisors, having discretion over client accounts enables them to act in their clients' best interests and presumably make sound, healthy, and timely decisions. When advisors must first discuss portfolio changes with their clients before implementing them, the risk increases that the client will prevent the change from happening for behavioral reasons (e.g., not wanting to sell a position at a loss even when harvesting that loss will lower her overall tax bill). Such discussions may also prolong the time needed to implement the change due to additional discussions and coaching that may be required to help the client feel comfortable with the decision. Building trust and periodic communication between the financial advisor and the client are also required to ensure that this type of relationship agreement is successful for both parties.

Maymin and Fisher (2011b) conclude that an important way an advisor adds value to the client relationship is by restraining clients from their own tendencies to aggressively trade based on emotions such as fear, regret, and greed. The best conceived investment strategy is useless if the investor cannot maintain discipline due to emotional issues.

TURNING BIAS INTO BENEFIT: HOW TO PROFIT FROM INVESTOR BEHAVIOR

The possibility exists to harness and turn to an advantage predictable investor behavior during various parts of the economic cycle. Understanding the sentiment of market participants can help inform decisions on when to adjust market exposures. Because small (individual) investors are often an accurate contrarian indicator in the markets, a profitable strategy may be to implement an approach that is the opposite of this investor group (i.e., buy (sell) when small investors are selling (buying)).

Investors may also create long-term investment strategies by studying investor behavior. Substantial volatility in stock prices over any given year does not reflect the actual change in the relatively stable values of the underlying businesses. Exhibit 15.5 shows the wide historical discrepancy between stable dividend yields and movements in stock prices of the same businesses.

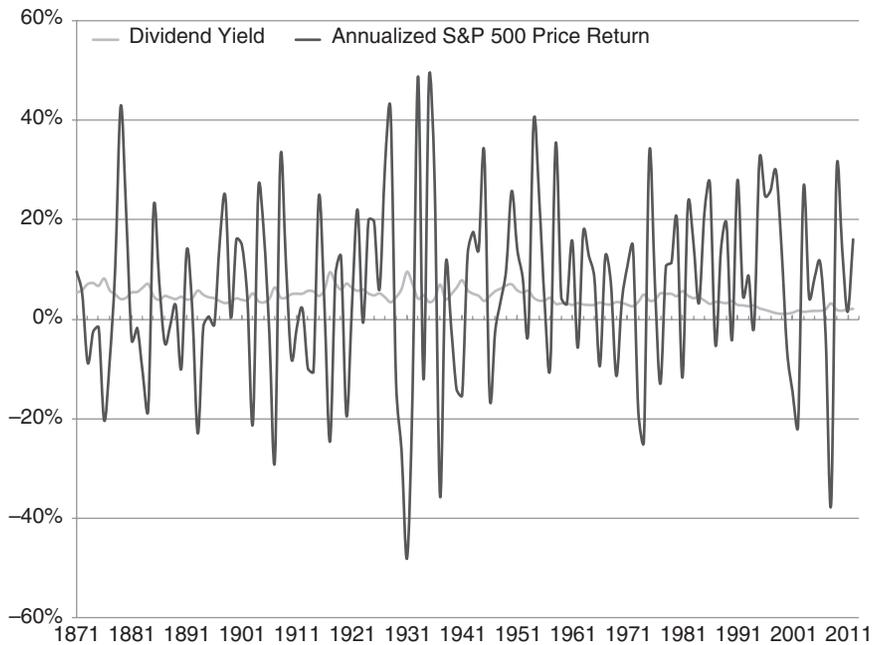


EXHIBIT 15.5 The Market Fluctuates Much More Than the Fundamentals: Dividend Yield versus Annualized S&P 500 Price Return: 1871–2012

Note: This graph demonstrates the wide historical discrepancy between volatile stock prices and the relatively stable values of the underlying businesses listed on the market, as captured by the dividend yield.

Sources: Robert Shiller, Gerstein Fisher Research.

Gauging Sentiment

Mutual fund flows are a good indicator with which to measure investor sentiment. As previously discussed, investors tend to buy stocks when the market has risen and they are feeling confident about investing. History shows this is generally not a good predictor of future returns. For example, in 2007 net inflows into equity funds were \$75 billion (Investment Company Institute 2008). In 2008, the S&P 500 Index plunged 37 percent.

By contrast, past periods in which investors have been fearful and avoided risk have often portended strong market returns. In 2008, the worst year of the global financial crisis, investors withdrew \$228 billion (net) from stock funds, only to witness a market increase of 27 percent the following year. Similarly, in 2011, a year punctuated by the euro zone sovereign debt and U.S. debt ceiling crises and high volatility, investors sold a net \$98 billion of equity funds. In 2012 the S&P 500 Index jumped 16 percent (S&P Index Services 2012).

The VIX index is another gauge of investor sentiment. Often called the “fear index,” VIX measures implied volatility in the stock market. VIX typically spikes when investors are nervous about markets and perhaps the economy, as depicted in Exhibit 15.6. Importantly, the VIX index generally rises **after** stocks have fallen sharply, not before. In other words, bearish markets lead to high volatility (e.g., in the summer of 2011) and bullish markets lead to lower volatility (e.g., during most of 2012). Most often, individuals are panicking and selling when the bad news is already priced into the market and the VIX is soaring. Therefore, an investor could

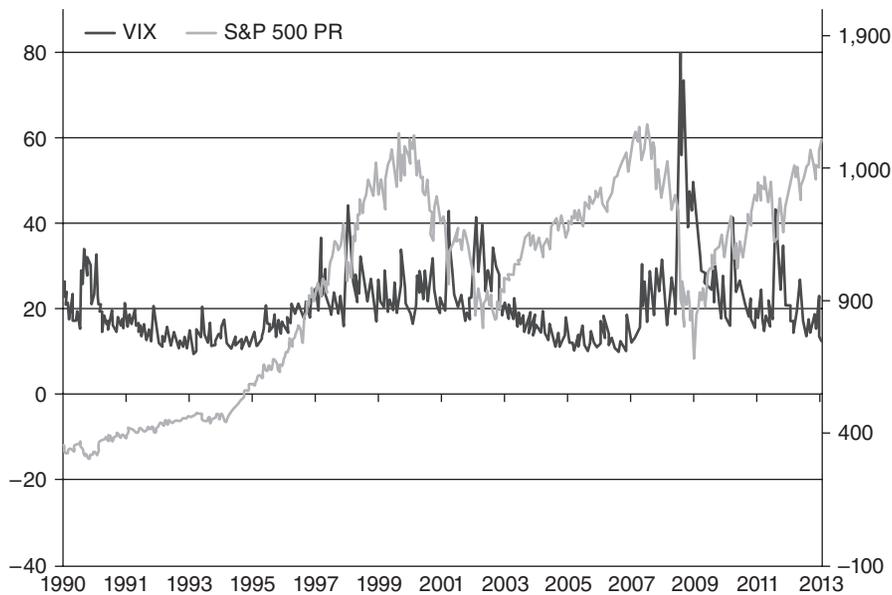


EXHIBIT 15.6 VIX versus S&P 500 Price Return: 1990–2012

Note: The VIX index, also called the “fear index,” is a measure of implied volatility in the stock market. This graph demonstrates how VIX spikes, as in 2008, when investors are nervous and anxious about the market. The VIX index generally rises after stocks fall sharply, not before.

Sources: Standard & Poor’s Index Services, Bloomberg.

create a strategy to increase equity exposure when the VIX, a good contrarian indicator, has risen to a certain level.

Embracing the Risks Others Won't

Because investors are so consistently illogical, this behavior can be predicted. Therefore, studying other investors' recurring patterns of irrational behavior can enable the development of long-term investment strategies that profit from the lack of perfect efficiency in markets driven by cognitive lapses and emotional biases. If markets provide an accurate assessment, on average, of pricing risk and if a riskier investment provides a higher rate of return, then the riskier the asset, the greater is the expected return. But the riskier the asset (i.e., perhaps it is more volatile, less liquid or not as well understood), the less willing investors will be to allocate to it.

As a result and as first formalized by Fama and French (1993) as a factor-based model, investors who are willing to take risks by overweighting portfolios toward small-company and value stocks historically have been rewarded with superior risk premia. From January 1926 through December 2012, the smallest 20 percent of stocks returned 12.02 percent annualized, compared to just 9.32 percent annualized for the largest 20 percent of listed companies (Center for Research in Security Prices 2012). Owing to the power of compounding over those 87 years, a \$1,000 investment in small-cap stocks increased to \$19.4 million, or more than eight times more than an identical investment in large companies over the same time frame. However, this higher return was associated with higher volatility because the annual standard deviation for small caps was 32.6 percent, or 80 percent higher than for large stocks.

In a similar vein, from July 1926 to December 2012 domestic large-company value stocks returned an annualized 11.67 percent, compared to just 9.34 percent for large growth stocks based on the Fama/French Large Cap Value and Large Cap Growth indices, respectively. Value stocks generated 6.2 times more wealth than growth did over this time frame but came with 35 percent more volatility.

Profiting from Momentum

Momentum is another behavioral-linked factor that can be used to enhance investment returns. Jegadeesh and Titman (1993) first identified momentum as a systematic source of risk for equity investors. Their research reveals that momentum investing provides excess stock returns over a market index. Although finance academics widely acknowledge the notion that momentum exists in the market, no agreement prevails as to why it exists. One common theory is that some of the momentum premium can be understood in the framework of investor behavioral biases.

Momentum is the tendency of stock market winners to keep winning and losers to keep losing relative to their peers. This results from the fact that people tend to take pleasure and pride in holding onto their winners, often longer than they should. Investors also tend to hold losing stocks longer than they should because they do not want to realize losses by selling (i.e., *loss aversion*) and experience an emotional loss such as regret. Just like Newton's first law of motion, which posits that objects in motion will stay in motion, stocks on a winning streak often tend to stay on a winning streak until they reach highs well above their fundamental values. Likewise, stocks on losing streaks tend to fall lower than an unemotional assessment of their

inherent values would indicate they should. The pattern occurs so frequently that Jegadeesh and Titman (1993) find that by applying an investment strategy to the momentum phenomenon, investors could earn returns of about 1 percent per month, which is a substantial premium to the standard market results.

Investors can potentially profit from momentum investing by making it a component of a comprehensive investment strategy. As discussed earlier, history shows that over the long term, investors tend to be compensated with returns in excess of the market's average in exchange for assuming certain types of excess risk. Along with small cap and value stocks, momentum stocks are characterized by both higher volatility and higher long-term returns than the market as a whole.

SUMMARY

Investors are not the rational actors that traditional finance theory would make them out to be, which has considerable implications for both their investing experience and other market participants. Investors' cognitive and emotional tendencies such as heuristics, overconfidence, fear, greed, or regret often drive them to trade excessively, which results in lower investment returns than they would otherwise earn.

Historical fund flows and other data demonstrate that individual investors tend to exit or enter the market at the wrong times. That is, they enter the market (buy) right after a dramatic increase in market values at the peak or cash out (sell) just after a substantial decrease in prices at the bottom. Although risk and return are inextricably linked (investors need to incur risk in order to earn return), investors find that being greedy when others are fearful or vice versa is psychologically difficult no matter how logically compelling the data are.

The environment in which investors and their advisors operate today is complex and imperfect. While the reality of markets cannot be explained solely by the tenets of standard or traditional finance, behavioral finance by itself also is insufficient to fully explain security prices. Rather, understanding the interaction between the two is essential to comprehending the entire decision-making process experienced by investors. As discussed in this chapter, an investment strategy or portfolio structure that may be suboptimal from an MPT standpoint may be the most appropriate solution for a specific individual given the circumstances or how the person is likely to act in different market scenarios.

Against this backdrop, individual investors are likely to value financial advisors who can manage the emotional and behavioral aspects of the client relationship. By educating their clients on an ongoing basis and helping them to maintain perspective and to stay focused during times of market stress, advisors should be able to help them make better decisions and ultimately experience improved investment results. Additionally, by designing investment strategies that capitalize on common investor behavioral biases, advisors can help their clients actually profit from these phenomena.

DISCUSSION QUESTIONS

1. Provide several examples of ways in which investors are their own worst enemies.

2. Explain why investors underperform the actual funds and asset classes in which they are invested.
3. Discuss the meaning of suboptimal investing, provide some examples of suboptimal strategies, and explain why suboptimal may actually be right for some investors.
4. Discuss how investment advisors can help their “behavioral” clients.
5. Indicate some strategies that investors could employ to profit from investor behavior.

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DISCLOSURE

Different types of investments involve varying degrees of risk. Therefore, readers should not assume that future performance of any specific investment, investment product, or investment strategy (including the investments and/or investment strategies referenced in this chapter, or any of the chapter's non-investment related content), will be profitable, prove successful, or be applicable to any individual's specific situation. Readers should not assume that this chapter serves as the receipt of, or a substitute for, personalized advice from Gerstein Fisher, GFA Securities, LLC, or from any other investment professional. Should readers have any questions regarding the applicability of any portion of the chapter's content to their individual situations, they are encouraged to consult with the professional advisors of their choosing.

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Gregg S. Fisher, CFA founded independent investment management and advisory firm Gerstein Fisher in 1993. Gerstein Fisher was one of the first organizations to integrate investment management, financial planning, and tax management within a single firm. Today, Gerstein Fisher manages investments on behalf of individuals, families, other financial advisors and institutions using a quantitative, research-based investment approach that incorporates both risk and investor behavioral factors. As Chair of the firm's Investment Strategy Group, Mr. Fisher is responsible for the management and oversight of Gerstein Fisher's investment strategies. He also spearheads research projects on areas of study that have included momentum and valuation models and tax-efficient investment strategies. Through the Gerstein Fisher Research Center, which he established in 2009, Mr. Fisher partners with leading academics in the areas of finance, risk engineering, and economics to conduct research that has immediate, real-world applicability to the practice of investing. Some of the Center's studies have been published in leading industry journals including *Journal of Wealth Management*. Mr. Fisher holds a degree in finance from the State University of New York at Buffalo.

