

Common Investment Mistakes

Imagine that you have placed most of your retirement investments in an index fund, a relatively “boring” investment that seeks to match the performance of a large group of stocks (for example, the entire Standard & Poor’s 500 index of large U.S. companies). Your best friend, learning of your investment practices, argues that a bright person like you should be able to outperform that boring index fund. When you counter that you don’t enjoy spending time searching for the best investment, he advises you simply to switch your retirement funds to the actively managed mutual fund that he uses. An actively managed fund is run by professional stock-pickers who trade stocks on a regular basis, seeking to own the right ones at the right time. His mutual fund, it turns out, beat your index fund by two percentage points last year.

A year goes by, and your friend brags to you that his fund had another great year, beating the market by 4 percent (over the overall percentage that the market returned that year). He tells you it’s time to switch—that you’re losing too much money. Still, you decide to stick with your index fund. Another year goes by, and your friend is back to brag about outperforming the market for the third year in a row—this time by 2 percent. Is it time for you to listen to him?

Now consider some more data. In recent years, the Vanguard Index 500 fund, which tracks the S&P 500, has outperformed about 75 percent of the actively managed mutual funds in existence each year. Of course, you do not plan on investing in one of the 75 percent of funds that performs worse than the market; you plan to choose among the top 25 percent like your friend. The only problem is that substantial evidence demonstrates that past stock performance is not predictive of future performance (Bazerman, 1999). While some research suggests minor relationships between past and future performance, these relationships have been small and inconsistent. But, on the other hand, your friend’s fund has been consistent!

Now consider that there are a lot of funds—approximately 8,000—and that all of them are being managed by people who would like you to believe they can outperform the market, though only an average of 25 percent will succeed in any given year. In other words, each year approximately 2,000 of these 8,000 funds will outperform the

market. Of these, 25 percent, or 500, will outperform the market again the next year. And among these winners, 25 percent, or 125 funds, will again outperform the market for a third year in a row. The key lesson is that there will always be funds that outperform the market for multiple years in a row, but this trend will happen roughly at random, and past performance will still have little predictive power.

By contrast, index funds are certain to perform at the level of the overall market to which they are indexed, minus a very small operating fee. One reason index funds outperform the majority of mutual funds is simply that their fees are so low—often below 0.2 percent. Actively managed mutual funds have far higher expenses—often as high as 2 percent annually, or up to ten times higher than some index funds. What's more, the actively managed funds often trade stocks faster, leading to higher brokerage costs that are subtracted from their returns. By definition, the aggregate of active funds (in which managers choose stocks) is likely to match the market, before fees are subtracted (Sharpe, 1991). In the end, high expenses significantly reduce the returns of these actively managed funds.

But it was your friend who told you to switch from an index fund to actively managed mutual funds three years ago, and you trust your friend. This is not unusual. Lots of people rely on others for investment advice. Of course, those friends whose choices underperform the market eventually become too sheepish to make recommendations; we only continue to hear from those who have been lucky. Friends are not the only source of tips on the past performance of mutual funds. Ads in magazines, in newspapers, and on television promote mutual funds that have done very well over the last year and try to make investors feel guilty for not having chosen that fund earlier. In fact, in any given time period, any large family of mutual funds (Fidelity has over 150 funds) will always have some funds that have performed well above the market and some that have performed well below the market. The mutual-fund company, of course, will advertise only those funds that performed above the market. If all large mutual-fund companies selected their portfolios by throwing darts at dartboards, companies could still advertise the funds with the luckiest dart throwers. In all likelihood, this system would produce the same numbers of winners and losers as under the current system—but it would be difficult for the dart throwers to justify charging high operating fees for their “expert” opinions.

This may be true, but you, like your friend, are investing for the long term, and you plan to select one of the most successful actively managed mutual funds. This is possible—but not likely! An amazingly small number of funds outperform the S&P 500 index over longer stretches. For the period 1982–1992, for example, forty-eight of the 205 leading mutual funds underperformed the S&P 500 by at least three percentage points per year, while only three of the 205 funds outperformed the market by at least three percentage points per year (Bogle, 1994). Thus, as the time span lengthens, the performance of actively managed mutual funds looks even worse.

While you might hope to invest in one of the three mutual funds that perform three percentage points or more above the index, don't forget that every other investor who is picking actively managed funds also intends to pick a winner. Of course, you might choose a fund that boasts of having outperformed the market over the last ten or even twenty years. Be careful, Bogle (1994) warns:

Marketers of mutual funds have a fairly easy time achieving—and then bragging about—returns that mark their fund as ‘#1.’ Here is the strategy: Select a fund that ranks first in any class of funds with similar objectives and asset size . . . over any specified period of time (the past quarter or year or even twenty-five years). Advertise it as #1. When the ranking subsequently drops (and it will), select another fund . . . and advertise it as #1 . . . These promotions provide simplistic information that is easily manipulated and has absolutely no predictive value . . . Similar rankings published in the financial press lack the fund sponsor’s bias . . . However, these rankings are also utterly without predictive value . . .

Bogle’s evidence is very good. For the twenty-year span of 1972–1992, he found that the average of the twenty best-performing mutual funds for the first ten years was ranked 142 out of 309 in the next ten years. While this performance is marginally better than that of the average fund, it is a far worse deal than buying into an index fund and avoiding expenses. Specifically, while the average total return of these “top” twenty funds during the second decade (+14.3 percent) beat the allfund average (+13.1 percent), it was far short of the +16.2 percent return of the unmanaged S&P 500 Index (Bogle, 1994).

More recently, the *New York Times* provided performance results for the portfolio selections of five investment pros—Eric Kobren, Sheldon Jacobs, Jack Brill, Russel Kinnel, and Harold Evensky—for a seven-year period ending June 30, 2000 (“A Seven-Year Lesson in Investing,” Carole Gould, 9 July 2000, p. B18). All five portfolios were invested primarily in stock funds for the seven years, and the decision makers were financial experts regularly featured in the press. The seven-year returns achieved by the five portfolios were 210 percent, 204 percent, 200 percent, 147 percent, and 124 percent, respectively. These numbers sound good—but how did the Vanguard 500 Index do over the same period of time? This unmanaged, low-cost, boring index fund provided a return of 278 percent for the same seven-year period. Yet another victory for less management and lower fees.

Why *do* people buy actively managed mutual funds, despite this strong, easily available evidence that they are getting a bad deal? Jason Zweig (2000) warns in *Money Magazine*, “The folks who run mutual funds have always been good at cooking up clever ways to gouge you on fees, confuse you about performance, make you pay unnecessary taxes and goad you into buying funds you don’t need.” Mutual-fund companies also engage in creative strategies to help them look like they are performing better than an objective assessment would suggest. In addition to advertising their winners, mutual fund companies can take their losers out of business—and they do! In 1996, 242 of the 4,555 stock funds tracked by Lipper Analytical Services were merged or went out of business (Damato, 1997). Note, these funds did not go out of business at random; they were the laggards, and the fund companies were ashamed of their performance. When a fund dissolves, its old track record is erased from history, removed from the databases kept by research organizations like Morningstar and Lipper. Thus, because dropped funds are not part of the analysis, the average performance of a mutual-fund company is often much lower than the company typically reports it to be.

You may argue that some analysts offer good advice and are capable of identifying the few long-term best funds—after all, they are quoted in financial magazines and newsletters and interviewed on television. Perhaps it is possible to form a fund managed by allstar portfolio analysts selected on the basis of their long-term performance.

Bogle (1994) describes a fund that was actually created in this manner. A good idea? Maybe, but in this case it just didn't work. The unmanaged S&P 500 beat the experts by more than one percentage point per year (13.9 percent versus 12.8 percent) between 1986 and 1992.

No individual who buys an active mutual fund expects that it will perform far worse than average. Yet, lots of people buy actively managed funds and continue to hold onto them long after receiving evidence of their failure. The cost of these mistakes adds up to billions of dollars. Why do people make these mistakes? While I believe the answers can be found in the first six chapters of this book, researchers have developed a related field of inquiry: behavioral finance.

Essentially, behavioral finance is an application of what we know about common judgment errors to the world of investment. In the 1980s and early 1990s, behavioral decision research was applied most extensively to the area of negotiation (which we will cover in Chapter 9). In recent years, the most active area for new insights has been in the area of investments. This research gives us a better understanding of an important set of life decisions, and also offers clear evidence that the decision errors described in this book are broad in scope. Behavioral finance focuses on how biases affect both individuals and markets. This chapter focuses on the former application; Shleifer (2000) and Shefrin (2000) are good sources on the latter.

In this chapter, we will specifically: (1) apply some of the core findings from earlier chapters to investment decisions, (2) explore the scary practice of daytrading that became popular in the late '90s, (3) consider the role of investment groups (have you heard of those nice grandmothers from Beardstown?), and (4) close with some clear, common-sense investment advice. As you read, I encourage you to compare these insights to your own beliefs about investing and to your current investment portfolio.

THE PSYCHOLOGY OF POOR INVESTMENT DECISIONS

Investors love new books promising that the market will go up by 300 percent or 1,000 percent in the next year. Glassman and Hassett's (1999) *Dow: 36,000*, for example, received enormous media attention. Such titles achieve their success by tapping into the psychological mistakes of investors. This is a great development for the authors who get rich from these books, but this success is unlikely to be passed along to the books' readers. As shown in earlier chapters, even very bright people make poor decisions that cost time, profitability, and in some cases, their financial future.

As you read this chapter, my argument against active investing may sound too strong. However, the evidence is amazing, and it contradicts the massive amount of money and advice changing hands in financial markets. Investors pay high fees to actively managed mutual funds, to brokers to pick stocks, and to electronic trading companies to make frequent trades. These fees are how funds, brokers, and companies make their money. Are all of these investors making mistakes? The great majority of them are! Incorporating the themes of previous chapters with new research on

investors, this section will document how investment decisions are affected by: (1) overconfidence; (2) optimism; (3) denying random events and the regression to the mean; (4) anchoring, the status quo, and procrastination; and (5) prospect theory.

Overconfidence

Chapter 2 demonstrated that people are generally overconfident in their decision making. In the area of investing, this overconfidence translates into a tendency to believe that you can pick mutual funds or stocks that will perform better than the market. This overconfidence leads people to engage in more active investing. Why should you be concerned about overconfidence? Because it is likely to lead you to believe that the stocks or actively managed mutual funds that you pick will perform better than they actually will, while also leading you to discount the likelihood of failure. In the investment arena, an additional pattern is vicarious overconfidence. That is, we overestimate the likelihood that our friends or our investment adviser will outperform the market.

Overconfidence is especially pertinent to stock-market investing strategies. The expense associated with owning individual stocks is largely created by the costs of buying and selling them. These expenses, which include transaction costs and differences between buy and sell prices, are dramatically higher for investors who make frequent trades. Collectively, these expenses can add up to a surprisingly large amount of money over time. While I have argued that investing in an index fund is a better strategy than frequent stock trades, it is not your only good option. For an investor with a moderate amount of wealth, a low-cost alternative to an index fund would be to buy a diversified portfolio of stocks and hold them for many years. Thanks to the emergence of a variety of investment vehicles designed to help you build a portfolio cheaply and conveniently, this strategy is becoming easier and more commonplace (Zweig, 2000).

Unfortunately, many stock-market investors fail to recognize the advantages of following this pattern. Barber and Odean (2000a) studied 66,465 households that held an investment account with a large discount broker during the period 1991–1996. In contrast to the buy-and-hold strategy, the average account turned over 75 percent of its portfolio annually. That is, on average, investors with this brokerage house sold 75 percent of their investments in any given year. Similarly, Carhart (1997) reports that the average turnover of mutual funds is 77 percent annually, while the New York Stock Exchange (2000) determined that in 1999, its total turnover rate was 78 percent. These numbers mark a dramatic increase since 1970, when the turnover rate for the New York Stock Exchange was 19 percent, and in 1980, when it was 36 percent. This growing frenzy can be attributed in part to bright people thinking they can predict the moves of the market. Are they right?

The average investor in the Barber and Odean (2000a) database earned a return of 16.4 percent during a booming market, just 1.5 percent lower than the overall market return of 17.9 percent for this same period. Most interesting are the 20 percent of accounts (more than 12,000 accounts) that had the highest turnover rates—those who actively traded stocks. Presumably, these investors believe they can assess the direction stocks will take, and are willing to incur the costs of buying and selling stocks to own the “right” portfolio at the right time. On average, the 20 percent with the highest turnover

earned a return of just 11.4 percent. Thus, in comparison to the overall market return, by spending time and money trying to track, buy, and sell stocks, investors *lost* 6.5 percentage points. If active trading is so hazardous to your wealth, why do so many people engage in it? One simple explanation is that they are overconfident in their ability to outperform the market.

Overconfidence does not affect the genders equally. Examining 35,000 investment accounts at a large discount brokerage, Barber and Odean (2001) sorted the accounts by gender and found that women achieved better results than men. In comparison to the market as a whole, women underperformed the return that they would have obtained by holding the same portfolio for a year by 1.72 annual percentage points, while in a similar comparison, men lost 2.65 percentage points. Does this mean that women pick better stocks than men? No! Actual returns of stocks picked by men and women were not significantly different. Rather, turnover patterns differed; the men had a harder time sitting still. Women had average turnover rates of 53 percent annually, while male turnover rates were 77 percent annually. It was the added costs of these more frequent trades that led men to underperform women; with each trade, the brokers got richer while the investors themselves fell further behind. Barber and Odean conclude that overconfidence among men leads to increased turnover, which in turn leads to lower performance after brokerage costs are carved out of the returns. Before women readers become overly confident about these findings, it is important to note that Barber and Odean are describing men performing worse than women whose results are *already far behind* those of the market. In other words, women did less badly than men—not an achievement worth celebrating.

Optimism

If you have money invested in the stock market, what was the total percentage return of your portfolio last year? Did you beat the market—in other words, did your performance compare favorably to the S&P 500? Now, go check your answers based on the actual data: Look up your account statements or call your brokerage or fund adviser, and don't forget to ask for last year's return on the S&P 500. How did your memory of your performance compare to your actual performance? My guess is that your comparison will be consistent with evidence showing that people tend to be optimistic about a variety of behaviors, such as expected career advancement, driving ability, etc. (see Chapter 4). Once people make an investment, they tend to be overly optimistic about its future profitability, and later maintain optimistic recollections of the investment's past performance. Optimism is closely related to overconfidence, yet distinct from it. When investors make overly confident decisions, they will hold unwarranted optimism regarding future success; retrospectively, they will maintain this optimism, even when the disappointing results of their investments are easily available.

Moore, Kurtzberg, Fox, and Bazerman (1999) created an investment simulation based on the actual performance of the nine largest mutual funds, plus one index fund, over a ten-year period, 1985–1994. MBA students received a computer disk with an investment assignment. Starting with \$100,000, for each six-month simulated period, participants were allowed to invest their balance in any of the ten funds, or in a

money market account, with the goal of maximizing their ending balance at the end of the simulated ten years. (The entire task took the typical student forty-five minutes to complete.) After making a six-month investment decision, participants received extensive feedback on their return, the return of all funds, and the return on the overall market; they were then prompted to place their next six-month investment. Investing the entire account in the index fund for the entire ten-year period would have led the \$100,000 initial portfolio to grow to \$380,041. However, the average investor ended up with only \$349,620 in his or her account—a return consistent with the evidence from real-world databases presented earlier. The typical investor made too many trades, incurring far too many fees.

False optimism was clearly a factor in the participants' investment strategies. Despite the fact that the market performed very well overall during this ten-year period (1985–1994), participants consistently predicted that their portfolios would grow faster for the next six-month interval than they actually did. Specifically, participants predicted that their portfolios would rise 8.13 percent per six-month period; in fact, they grew by only 5.50 percent. Even more interesting, participants had optimistic illusions about their past performance: At the end of the game, most participants reported that they had matched the market's performance. In fact, participants obtained an average return 8 percent *below* the market. More specifically, Moore et al. (1999) asked participants whether they had performed (1) more than 15 percent below the market, (2) 10–15 percent below the market, (3) 5–10 percent below the market, (4) within 5 percent of the market, (5) 5–10 above the market, (6) 10–15 percent above the market, or (7) more than 15 percent above the market. On average, participants overstated their performance by one entire level.

In a parallel study, Goetzmann and Peles (1997) obtained very similar results. Participants remembered obtaining more favorable returns than they actually obtained. Goetzmann and Peles conclude that optimism helps investors justify their past behaviors, allowing them to maintain illusions about the superiority of their investment strategy. I argue that optimism also encourages investors to continue active trading, rather than pursuing wiser, time-saving investments in index funds.

By the way, before reading this chapter, had you ever compared your investment decisions to the market? Most investors have not. Why not? I argue that most investors want to protect their overly optimistic view of their investments—and are willing to pay a high price to maintain their illusions. Similarly, if you use an investment adviser, have you ever instructed this “expert” to provide systematic follow-up on his or her recommendations? It might be instructive for you to ask the adviser to compare the returns on his or her advice to the market's performance during the same period of time. The psychological need to perceive good news may be insulating you—and your hired experts—from the truth about investing, and costing you a great deal of money in the long run.

Plenty of external sources encourage investors' natural optimism. Financial magazines remind us of the wise advice they provided in the past, but generally neglect to mention the advice that was flat-out wrong. These publications also tend to supply anecdotal evidence of past success, rather than risking their reputation by tracking it in a systematic manner. Overall, I have to admit that this is a wise business strategy:

If they revealed the true returns on their past advice, they would probably sell fewer magazines.

Denying that Random Events Are Random

As we saw in Chapter 2, people tend to deny that random events are random, and find patterns where none exist—such as having a “hot hand” in basketball. When investors are led to believe that a specific fund is “hot,” they will become more willing to pay the fees associated with active investing. For example, when a fund outperforms the market two years in a row, investors rarely attribute its success to random variation. It is more likely that they will overgeneralize from these few data points and assume that the manager of the fund has great skill and is therefore worthy of their investment. In fact, there is a great deal of randomness in the investment arena, and even more denial of this randomness by investors. In their eagerness to outperform the market, most investors are unwilling to accept that performing at the level of the market, while minimizing expenses, may be a level of performance that they should be happy to accept. The most important conclusion? Be wary of any advice that predicts the market’s future based on past performance.

Consistent with research by Bogle (1994), Carhart (1997), and Thaler and DeBondt (1992), in the ten-year database used in the Moore et al. (1999) study (1985–1994), the performance of mutual funds tended to regress to the mean. Nevertheless, study participants expected their portfolios’ future performance to be highly correlated with past performance. In fact, their expectations were negatively correlated with actual returns. Overall, participants expected “hot” funds to stay hot, usually because they think talent lies behind the investment decisions. This is the same false assumption that leads real-world investors to hold onto expensive funds.

There is some minor evidence that past performance of stocks predicts their future performance. Jegadeesh and Titman (1993) document a momentum effect in which stocks that have done well continue to do well the next year. The only problem is that this pattern then reverses itself in following years (DeBondt and Thaler, 1985). Odean (1999) argues that biased investors who expect past patterns to continue in the future may influence a stock’s performance. However, after the last of these momentum traders enter the market and push the value of the stock beyond the underlying value of the company, the price will begin to fall, causing the inevitable reversal.

DeBondt and Thaler (1985) compared the future performance of two groups of stocks: one group of extreme losers from the past three years and one group of extreme winners from the past three years. They found that, over the following five years, the “loser” portfolio dramatically outperformed the “winner” portfolio. DeBondt and Thaler (1985) attribute reversals to the tendency of investors to assume that the past is a good predictor of the future, and thus to their penchant for overbuying winners and overselling losers. The market eventually adjusts, and owners of the underpriced “loser” portfolio will find themselves with a better set of investments than owners of the overpriced “winner” portfolio.

Inspired by Jegadeesh and Titman’s (1993) results, you might be tempted to adopt the strategy of buying recent stock-market winners. On the other hand, DeBondt and Thaler’s (1985) findings might motivate you to buy recent losers. Unfortunately, it is extremely difficult to predict when the last momentum buyers

have entered the market. Once again, the past is not an accurate predictor of the future. Personally, I am more comfortable admitting that I have no way of knowing which stocks will do better in the future and sticking with index funds.

Anchoring, the Status Quo, and Procrastination

Much of this chapter suggests that many investors think too much about their investments, frantically trading stocks and shifting mutual funds based on the most recent advice of too many experts. However, evidence also exists that most people think too *little* about the type of assets they should hold. Thinking through one's asset allocation and developing a long-term plan makes a great deal of sense. This is where investment advice (e.g., free software programs provided by many mutual fund companies) may be helpful. For example, Shefrin (2000), Belsky and Gilovich (1999), and most other sources of good financial advice suggest that most people place too little of their *long-term* investments in stocks. This observation is based on the amazing long-term superior performance of stocks over bonds and other standard investments. Yet, people use fairly naïve strategies for asset allocation, sticking with what they or others have decided in the past; in other words, their investment decisions tend to be fairly mindless.

In a study of scholars who enroll in retirement plans offered by TIAA-CREF, Benartzi and Thaler (1999) found that most professors, facing a choice between investing their retirement funds in either TIAA (bonds) or CREF (stock), commonly allocated their money 50:50 to the two accounts. In addition, the median number of changes that professors made to this allocation over their career was zero. That is, professors (maybe not the smartest of people, but also not the dumbest) made a fairly naïve allocation, and then never adjusted their decision—even as their life circumstances changed over time.

The professors' 50:50 allocation meshes with another of Benartzi and Thaler's (1999) findings: When firms offer a choice of investment options for retirement accounts, the percentage of stock funds offered is an excellent predictor of the percentage of dollars that employees will choose to invest in stocks. That is, if a company offers four funds, three stock and one bond, employees put about 75 percent of their money into the stock funds. In contrast, if the company offers one stock fund and three bond funds, then employees hold, on average, 75 percent of their retirement investments in bonds. Thus, people choose their investments the way many diners order food in a Chinese restaurant: one dish from the "Vegetables" column, one from "Chicken," one from "Beef," and so on. That may be a good way to pick a satisfying meal, but it's not the best investment strategy; history shows that if your money will remain invested in a retirement fund for decades, stock funds will offer the best return. The point is that people should think carefully about this allocation, rather than being led naïvely by the choices their employers offer them.

By this point in the chapter, I hope that many of my readers are reconsidering their investment decisions. However, there is a strong force competing against change—the status quo bias. This is the effect that prevented Benartzi and Thaler's (1999) professors from making even one allocation change in a lifetime. Samuelson and Zeckhauser (1988) find that people tend to keep their investments the way that they are. In an experimental study, they presented a thought exercise to a group of individuals with a

working knowledge of economics and finance. The participants were asked to imagine that they had inherited a large amount of money from a great uncle, and were asked which of four possible investments they would pick: (1) a stock with moderate risk, (2) a risky stock, (3) U.S. Treasury bills, and (4) municipal bonds. Each investment was described in a bit of detail. Four other randomly selected groups were told that they inherited an investment from their great uncle, and that it consisted of one of the four investments listed above (one group was told that they inherited a stock with moderate risk, a second group was told that they inherited a risky stock, a third group was told that they inherited a U.S. Treasury bill, and a fourth group was told that they inherited a municipal bond). These participants were asked whether they would keep the investment or trade it for one of the three other investments listed above. They chose overwhelmingly to keep the investment that they received, rather than picking the investment best suited to their unbiased preferences. Essentially, the study participants accepted the status quo, rather than switching to the investments that best suited their particular needs.

Finally, the bias against action also leads many people to procrastinate making investments in the first place. Studies of automatic enrollment in 401(k) employee savings plans powerfully illustrate just how passive people can be about very important economic decisions. 401(k)s are attractive savings vehicles not only because taxation is deferred until the money is withdrawn, but because some companies offer to match the contributions of their employees up to a certain amount. Most companies use an “opt-in” savings plan, which means that their employees must enroll in the 401(k) on their own initiative, usually by filling out a form or calling a phone number. Others use automatic enrollment, where the default is enrollment at a set contribution rate. In this scenario, an employee must make an extra effort if he or she does not want to contribute. The difference in employee enrollment rates between these two different types of enrollment schemes is striking. Madrian and Shea (2001) found that initial enrollments in 401(k)s jumped from 49 percent to 86 percent within the same company when they switched from an opt-in system to automatic enrollment. Choi, Laibson, Madrian and Metrick (2003) found that a third alternative, no default, which forces the employee to think about the decision, also increases enrollment, but not as much as automatic enrollment (Choi et al., 2003).

Similarly, it is not uncommon for people to hold a large amount of money in their checking, savings, or money market account with the intention of investing it soon. Months pass, and they find themselves facing the same decision—but suddenly the market has gone up in value by 6 percent, and they’ve missed out on a great opportunity. By procrastinating, you may be sacrificing your long-term financial well-being. Somewhat paradoxically, investors procrastinate on making allocation decisions, while being overly active in moving funds within a category (e.g., stocks)—thus putting too much effort into the less important financial decisions and not enough effort into the far more vital ones.

Prospect Theory, Selling Winners, and Keeping Losers

Consistent with Shefrin and Statman (1985), Odean (1998) found that investors have a strong preference to hold on to stocks that are selling below purchase price, so that they will avoid becoming “losers,” and to sell stocks that are selling above the purchase

price, so that they will come out “winners.” Similarly, Barber, Odean, and Zheng (2000) show that investors tend to hold on to losing mutual funds and oversell winning mutual funds. If your goal is to make as much money as you can, then the choice of whether to buy or sell a fund should be based solely on how much you expect its value to increase in the future. Thus, the price at which you bought it is an arbitrary and meaningless reference point, except with regard to taxes. From a tax perspective, when you sell a winner, you must pay taxes on your earnings, and when you sell a loser, your taxes are reduced. Therefore, with respect to taxation, it makes sense to sell more losers than winners. In addition, Odean (1999) finds that the winners that investors sell end up outperforming the losers that they keep. In sum, when investors seek to become winners, stock selection and taxes actually increase their chances of being losers.

Why do investors follow this losing pattern? As we learned from prospect theory in Chapter 3, decision makers tend to compare outcomes to a reference point. For most investors, the most common reference point is the price that they paid. Investors holding stocks valued at a price higher than they paid for them are faced with a sure gain (selling now and becoming a “winner”), or holding the stock and risking the current gain for an unknown return. With gains, we tend to be risk averse; investors tend to sell to guarantee the gain. Investors holding stocks valued lower than their initial purchase price, on the other hand, are faced with a sure loss (selling now), or holding the stock for an unknown return. With losses, we tend to be risk seeking; investors tend to take the risk of holding onto the loser in the hope of becoming a winner. This pattern is also consistent with a regret minimization strategy—an effort to avoid “booking” a loss. As long as you let the loss “ride,” you can pretend it doesn’t exist; but once you sell the stock, you have to enter it, in your mental accounts, on the loss side of the ledger. However, for three reasons, this pattern leads investors to lose money relative to the market’s overall performance: high costs associated with making trades, selling the wrong stocks, and paying too much in taxes. Recognition of these errors should encourage investors to adopt wiser and simpler strategies.

ACTIVE TRADING

Starting in the late 1990s, online trading became the dramatic growth area of the investment world. Electronic trading was, and still is, simply cheaper than going through a stockbroker, and as more people began to trade online, the costs went down. From 1996 to 1998, the average online trading commission fell by 75 percent. In addition, the Internet has enabled regular people to have access to a vast amount of financial data, research, and tools, including up-to-date information, low-cost trades, and almost instantaneous transactions.

First, the good news about online trading. If you are planning to invest in stocks, bringing your costs down will be a key to your success. So, for those investors who follow a long-term buy-and-hold strategy, investing online rather than through a full-service broker makes a great deal of sense. However, buy-and-hold is not the strategy of the typical online trader. Especially during the late 1990s bull market, online traders tended to be actively engaged in trading stocks. In the worst case, they quit their jobs to be professional traders. Many of them were headed for disaster!

The typical investor who engaged in online trading around this time was someone whose trades had recently beat the market (most likely because they were lucky). In a 1992–1995 sample of online trading, Barber and Odean (2002) found that the average new online trader outperformed the market by two percentage points the year before switching to online trading. Note that these investors' confidence was further bolstered by the fact that these were very good years for the stock market. Unfortunately, after switching, these traders' average performance regressed to the mean and was further lowered by the costs of frequent trades. As a result, these online traders lagged the market by three percentage points.

Lagging a very successful market by three percentage points is no disaster, particularly if you engage in online trading in your spare time. However, because online traders tend to be the most overconfident of investors, many of them quit their regular professions to trade full-time, becoming members of the now notorious pseudo-profession called daytrading. Under the strict definition of "daytrading," individuals initiate and close out high-volume positions by the end of the same trading day, but the term refers to extremely short-term trades in general. Daytraders try to capitalize on price fluctuations of highly volatile, usually technology-related, stocks.

The extreme frequency of their trades doomed these full-time traders to underperform the market by even more than three percentage points. Jordan and Diltz (2003) studied records of 324 daytraders during 1998 and 1999, the time of an immense stock market bubble, and found that only 36 percent made money during this heady period. In addition, nearly all of a daytrader's profits are short-term capital gains, which are taxed as ordinary income (with a tax rate of up to 35 percent, depending on the investor's income bracket); a more patient investor would be taxed on long-term gains at a much lower 15 percent. In addition, nearly all of a daytrader's profits are short-term capital gains, which at that time were taxed at the highest marginal rate (up to 39.6 percent); a more patient investor would be taxed on long-term gains at a much lower 20 percent. Even before the market plummeted, one particularly distraught Atlanta daytrader went on a shooting spree after a streak of "bad luck." Tragically, when the market went down, many more sad stories emerged about those who had quit their jobs and subsequently lost life savings by daytrading.

What caused reasonably smart people to decide to become daytraders? In Chapter 2, I presented evidence that people respond to vivid data. Barber and Odean (2000b) document the barrage of ads that made daytrading success vivid to all Americans. In one commercial, Discover Brokerage introduced us to an intrinsically motivated tow-truck driver with a postcard on his dashboard. "Vacation?" his white-collar passenger asks. "That's my home," the driver responds. "Looks more like an island," comments the passenger. The driver explains, "Technically, it's a country." Where did the driver get his wealth? Online trading, of course—it was that easy. This type of commercial, as well as real-life stories of the lucky, inspired more and more people to trade online, leading in many cases to tragic consequences.

When I used to run into daytraders (they were often also taxi drivers), I liked to ask them why they thought they knew more than the party on the other side of the trade. Most of the daytraders I met had never considered this question. When they asked me to clarify, I tried to explain: When a daytrader is buying a stock, it is because someone else has sold it. Similarly, when a daytrader sells a stock, someone else is buying it.

Odds are that the other party is an institutional investor of some sort. Thus, most day-traders are typically paying fees to make an exchange with someone who has better information, more experience, and quicker hardware to make the trade than they do. Overall, I argue, this sounds like a bad bet. But, as I will explain in Chapter 10, people are not very good at considering the other side of a transaction.

These days it is rare to hear dinner-party guests boast of quick online profits. Dreams of buying a laptop and earning a living by trading on a remote tropical island have been mostly forgotten. I hope the lessons of the aftermath of the bubble will stick around, however, because the low costs of online trading remain. The tendency to trade too actively may still be enticing to the uninformed. Believe it or not, with the market picking back up, there are a handful of individuals who are stepping back up to the daytrading plate, willing to take another swing at making a huge profit. Perhaps they are goaded on by their past successes or urban legends of someone else making it big. I wish them luck; both history and data show they are going to need it.

THE BEARDSTOWN GANG AND OTHER GROUPS THAT LIMIT INVESTMENT RETURNS

Perhaps, you think, you can get better returns on your investment by pooling your knowledge with others. That's the core concept of investment groups. In fact, a group of nice grandmothers from Beardstown, Indiana, wowed investors with reports of very high returns. Their bestseller, *The Beardstown Ladies' Common-Sense Investment Guide*, claimed that the club's members had outperformed the market and made a 23.4 percent return on their investments over a ten-year period by following the simple, straightforward strategy of investing in well-known companies (such as McDonald's and Wal-Mart). The women appeared as investing experts on many of the most popular talk shows and were profiled by film crews from Great Britain, Germany, and Japan. They produced five books, a video, and a Web site, and held numerous book signings, seminars, and speaking engagements.

In the midst of the media frenzy, Shane Tritsch, a reporter for *Chicago* magazine, noticed a curious disclaimer on the copyright page of the 1996 edition of the Beardstown Ladies' book. Clarifying a detail not mentioned in previous editions, the disclaimer stated that the members' dues were included in the club's annual return figure. In other words, the Beardstown Ladies calculated their annual returns quite differently from the way mutual funds (and virtually all professionally run investments) calculate theirs. The Ladies set returns equal to the sum of stock appreciation plus dividends plus monthly dues; by contrast, the returns of mutual funds are based only on stock appreciation plus dividends. According to Price Waterhouse, from 1984 to 1993, the decade covered by the Beardstown Ladies' *Investment Guide*, the club's average annual return, as it should have been calculated, was actually *only 9.1 percent*—far below the 23.4 percent return they reported, and also significantly lower than the 15 percent average return of the overall stock market from 1984 to 1993.

While the Beardstown Ladies' investments underperformed the market, the American public's desire to believe in their incredible story turned out to be a cash cow for the retirees, whose book royalties more than made up for returns. Readers shelled out money for the book, and many of them made far poorer investments as a result.

Why did the media and the public fall for this story? One possibility is that investors fail to accept the true difficulty of outperforming the market. False optimism allowed the public to believe the story, rather than double-check the amazing record.

Nevertheless, the false claims from Beardstown fueled the growth of investment clubs nationwide; from 1994 to 1998, the number of such groups rose in the United States from 13,000 to 35,000 (Barber and Odean, 2000b). In a study of 166 investment clubs from 1991 to 1997, Barber and Odean found that the groups earned a 14.1 percent annual return, while the S&P index returned 18 percent and individual investors earned 16 percent. All told, 60 percent of the clubs underperformed the index. The investment clubs turned over their investments far too often (65 percent annually), causing them to pay too much in brokerage costs.

There are a variety of reasons to join an investment club. Perhaps your friends are tired of hearing you talk about investments. Perhaps you like the people in the club, or maybe they serve good food. But if you belong to the investment club to increase your return, it may be time to rethink your investment strategy.

ACTION STEPS

More than any other chapter in this book, the ideas presented in this chapter have action implications for virtually all readers. I hope I have provided a thorough overview of mistakes that many people make and explained the psychology behind those mistakes. Now that we have observed these mistakes in the investing context, I close with some specific thoughts to consider as you strive to reduce the biases that affect your investments. I begin with the issue of saving for retirement and then close with broader investment advice.

In Chapter 1 of this book, I argued that a key aspect of making more rational decisions is to clearly identify your final goal. Many investors have never put much thought into this issue. Some may have the goal of “accumulating as much money as possible.” But, if you are able to take this goal to the extreme—by earning a good income, living frugally, and investing your savings wisely—you could end up dying with mountains of money in your accounts. A different goal is to acquire the funds you need to buy whatever bundle of goods you want to surround yourself with for the rest of your life. This goal is the central theme of the investment bestseller *Die Broke* by Pollan and Levine (1997). I have no objection to a mixed strategy of buying the goods you desire and providing funds for other people and charitable organizations. However, many of us fail to think even this far about our monetary objectives.

The goal of investing to acquire the funds you need for a comfortable retirement seems straightforward. However, a 1997 survey found that only 6 percent of U.S. citizens felt they had surpassed their retirement savings goal, while 55 percent felt that they were behind (Laibson, Repetto, and Tobacman, 1998). Laibson et al. (1998) report that the median U.S. household retires with liquid wealth of \$10,000 and net worth of \$100,000 (including house equity and autos). This finding is consistent with a broad array of evidence that Americans are saving too little for retirement.

Assuming that we are capable of saving more, why do we fail to do so? Perhaps the most critical answer comes from the want/should distinction developed in Chapter 4. People know that they *should* save more for retirement, but they *want* to consume more now (to buy a new TV, eat dinners out, etc.). The evidence in Chapter 4 suggests that

our desires typically overcome what we think we should do, particularly when the benefits of listening to our “should self” are decades in the future. This will be particularly true for those who avoid financial planning; the less we plan, the more we allow our desires to gain the upper hand. To assist our want self in defeating our should self, people become overly optimistic that solutions for retirement will suddenly appear. This optimism works out fine for a small minority of citizens—maybe Uncle Edgar will keel over and leave you a fortune in his will, or your numbers will come up in Powerball—but the majority may be in for a rude awakening upon retirement.

With regard to investments, the U.S. government provides support for people who want to make conscientious decisions about their futures by offering tax incentives for retirement investments—IRAs, Keoghs, etc. By investing in these plans, you are not only acting wisely from a long-term perspective, but getting a bonus from the government as well. Quite simply, virtually all readers should be investing as much money as they can to reduce their taxable income.

What’s more, your own employer probably gives you incentives to save. As mentioned previously, many 401(k) retirement plans allow you to contribute a portion of your salary and then have your employer “match,” or augment, a portion of that money. Some employers match 25 percent, 50 percent or more—instantly and automatically turning each dollar you contribute into \$1.25, \$1.50, or even higher rewards. The power of the status quo bias has already been discussed in reference to enrollment in 401(k) plans. When enrollment in a lucrative plan is not the default, many people never take the initiative to participate.

Unfortunately, participation is only the first hurdle. After deciding whether to join, you must then decide what percentage of your income to save. If you are not contributing the maximum percentage of your salary that your plan allows, then you are missing out on one of the best and safest ways to build your long-term wealth. Yet, among the too few who do participate in 401(k)s, most are contributing too little. A large percentage of people think that they do not save enough, but they lack the willpower to do anything about it. A parallel problem is procrastination. People think they will increase their savings rate, but never get around to it.

Benartzi and Thaler have found a way to help overcome the lack of self-control and initiative preventing optimal contribution rates (Thaler and Benartzi, 2001). Using the psychological principles described in this book, they motivate people to increase their contributions to their 401(k)s through a program called “Save More Tomorrow.” Under this program, workers commit ahead of time to increase their contribution rates a set amount every time they receive a raise. The success of the program is dependent on its understanding of the concepts of hyperbolic discounting, procrastination, and loss aversion. Their design makes the program easy to adopt, because it’s easier to make difficult choices when you are discussing future rather than present events. It remains effective, because it’s very rare that people will take the initiative to opt out of the program once they have started. Finally, it is not that difficult for the saver to stomach; because the savings rate increases just as the size of their paycheck does, they will never experience a decrease in their disposable income. The Save More Tomorrow plan more than tripled the savings rates of those who joined in just over two years. It is an important example of how knowledge of our psychological biases can help improve

our decision making and, specifically, financial planning. The principles of Save More Tomorrow can easily be applied to your own personal savings. Think ahead about how to schedule savings increases to coincide with windfalls, and construct ways to prevent avoiding these deadlines when the time comes.

Once you have allocated money to savings, decisions regarding where you place your retirement money should be based on a clear asset allocation plan. Benartzi and Thaler (1999) make a convincing case that most people have far too low a percentage of their retirement funds in stock. The fact that retirement funding is for the distant future means that it should be easier to accept the higher risk of stock in return for the higher returns that stocks achieve over a long period of time. A few bad years are unlikely to lead stocks to underperform bonds between now and the time when most readers will retire. As you approach retirement, it may make more sense to move more money into bonds to reduce risk.

As retirement approaches, for those investors with the goal of buying their desired bundle of life goods, annuities also make a great deal of sense. In return for a lump sum of money, the investor gets a guaranteed amount of funds periodically for the rest of their life. If you die ahead of schedule, you lose—but then again, you won't need the money anyway. However, if you outlive expectations, you will get a great return, and you are more likely to need these additional funds. Green (2000) argues that annuities are underused in comparison to the financial benefits that they create. In addition, annuities are now provided by a number of charitable organizations, allowing you to obtain guaranteed income for life and tax benefits, and to provide funds to your preferred charity. These annuities create more total benefit than what you could obtain privately, while making a similarly valued contribution to society. However, while annuities will be logical for many investors, you need to choose them carefully. Some annuities, pushed by the sleaziest outfits in the financial business, come with a slick sales pitch and are wildly overpriced. I recommend sticking with a highly reputable, well-known mutual-fund family that charges low fees, such as T. Rowe Price, Schwab, or Vanguard.

Beyond retirement, the key argument of this chapter is that very bright people are currently paying billions of dollars per year for collectively useless advice. Why? Because they are committing the errors described throughout this book in the area of investing. Now that you understand the psychology behind these mistakes, you must learn to confront them and identify a better plan for the future. This plan should include taking the time to formulate an asset allocation plan. You should strive to achieve this allocation in a low-cost manner; avoid paying fees to people and companies who do not truly add value. While many investors now know to avoid "loads" (commissions that are paid when you buy a mutual fund), far too many are still buying funds with very high annual expense ratios (Barber, Odean, and Zheng, 2000). Once you have your plan in place, continue to invest on a regular basis. If you combine these three tasks—appropriate asset allocation, low-cost investing, and adding regular investments—you are well on your way to an excellent investment strategy. Then relax, go back to work on tasks that you enjoy, or play more tennis—there is little reason to be thinking about your investments more than a few hours per year.

Some final words of caution: Changing your allocation of funds according to the advice in this chapter does require some care on the tax front. Before selling securities

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that have appreciated in value, you must first seek to understand the taxable consequences of doing so; you may want to check with your accountant. The advice in this chapter is relevant to existing investments, but must be applied to them with care. It should be easiest to follow when you are thinking about making new investments.