

# Perspectives on Active and Passive Money Management

This chapter introduces key perspectives designed to help you get the most out of the readings, exercises, and activities featured in the chapters that follow. The learning objectives for this chapter are:

1. Display an understanding of the chapter terminology and describe the top-down fundamental analysis process.
2. Explain why stocks with superior fundamentals often have higher returns and lower risk over long horizons.
3. Summarize the results of studies that investigate the performance of professional investors and what motivates investors to trade more actively.
4. Identify the three major theories of the way information gets incorporated into stock prices, and summarize the major premises of each theory.
5. Summarize the perspectives of esteemed investors and authors provided in the chapter.
6. Interpret the insights into financial markets from Chapter 12 of John Maynard Keynes's *General Theory of Employment, Interest and Money*.
7. Discuss the importance of an investment policy statement.

## TERMINOLOGY: INVESTORS, INVESTMENT VEHICLES, RISK AND RETURN

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Equity investing can be divided into two main categories: passive and active. *Passive investors* buy and hold stocks for the long term. They construct portfolios or choose investment vehicles that minimize costs, including research costs, trading costs, administrative costs, performance fees, and taxes on realized gains. The most popular types of passive investment vehicles include “index” mutual funds and exchange-traded funds (ETFs), which are designed to imitate the performance of indexes like the S&P 500. *Active investors*, however, seek to outperform the indexes by identifying individual stocks to buy and sell. Because they trade more often, active investors turn their portfolios over more frequently than passive investors and usually incur higher costs.

## Relative versus Absolute Return Investing

Active investing can be further divided into two main categories. *Relative return* vehicles seek to outperform a benchmark index (like the Standard & Poor's [S&P] 500), where "outperformance" is measured as a combination of either earning higher returns and/or achieving lower risk exposure. Most equity portfolios, including equity mutual funds and student investment funds, are relative return vehicles, where the fund's performance is evaluated relative to a widely followed benchmark. *Absolute return* vehicles seek to deliver returns that are less risky but are also usually lower than the returns of most index benchmarks. Many equity hedge funds are absolute return vehicles. Examples include long-short funds that make both positive bets (by owning stocks long) and negative bets (by selling stocks short).

You may notice that the terms active and passive are, to some degree, "loaded" words. In many cultures (especially the United States), being passive is usually considered less desirable than being active. Later in this chapter, you will learn that this is rarely the case in investing, however. The results of numerous research studies show that one of the main reasons passive, buy-and-hold investing is so prevalent is that the majority of active professional investors underperform their benchmarks.

## Alpha and Beta: Excess Returns and Market Risk

*Alpha* refers to the *excess* returns earned by relative return investors, either above or below the market index to which their performance is benchmarked. When a portfolio outperforms its benchmark index, the percentage return by which the portfolio exceeds the index return will be termed positive alpha. If a portfolio underperforms its benchmark index, we'll say it earned a negative alpha.

*Beta* is a measure of risk that can apply to an individual stock or to a portfolio of stocks. The average market beta = 1.0. In the case of an individual stock, beta measures how much risk, or *volatility*, that stock is expected to contribute to the overall volatility of a diversified portfolio. High-beta stocks usually exhibit a more volatile reaction to market-wide or macroeconomic news, on both the upside and downside. Examples of high-beta stocks include *cyclical stocks* like Caterpillar and Ford. The stock prices of these companies are more volatile because businesses and consumers buy more tractors, cars, and trucks during strong economic times, and cut back on investments in capital assets and purchases of durable goods during weak economic times. Low-beta stocks tend to be less volatile, however, and therefore contribute less volatility to a diversified portfolio. Examples include consumer staples stocks like Nestlé and pharmaceutical stocks like Bristol-Myers. These companies produce items consumers tend to buy regardless of economic conditions.

When applied to a well-diversified equity portfolio, beta is a measure of the market risk, or volatility, of the portfolio. If a portfolio emphasizes high-beta stocks, its returns will tend to be more volatile, and vice-versa if it emphasizes low-beta stocks. Finance theory asserts that *risk and expected returns are positively related*, which implies that high-beta stock stocks should earn higher returns and low-beta stocks should earn lower returns over long holding periods. Thus, high-beta stock portfolios should outperform low-beta portfolios, as higher returns compensate investors for bearing greater risk. One of the principles of this book is that investors can construct winning portfolios by investing in *low*-beta stocks, which contradicts the basic

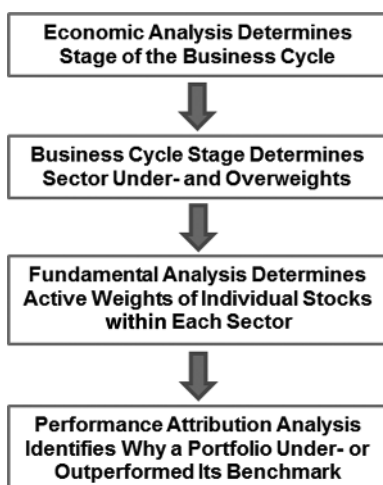
wisdom of finance. After introducing a clearer picture of the job of the fundamental analyst in the following section, we will revisit this apparently contradictory assertion. Can investors really have it both ways—lower risk and *higher* returns?

## THE TOP-DOWN FUNDAMENTAL ANALYSIS PROCESS

Next we'll take an overview of the fundamental analysis process featured in this book. Our process is termed *top-down* because it begins with an analysis of the overall economy, with an emphasis on gauging the stage of the business cycle in which the economy is operating (the topic of the following chapter). As we'll see, this activity helps the analyst identify sectors of the stock market in which to deploy new capital, and sectors from which capital should be withdrawn and redeployed.

Analysts divide the stock market into 10 sectors. When an actively managed portfolio allocates funds by sector in a way that differs from their current market weights, we will say the portfolio manager is employing *sector overweights and underweights*. In Chapter 7 we will attribute the under- or outperformance of a portfolio relative to a benchmark to the sector weights used in the portfolio (in addition to other factors). Once an analyst determines the sectors to over- and underweight relative to the market, he will next determine the stocks with the best prospects to overweight within each sector (and the stocks to sell or sell short, if the fund allows short selling). Figure 1.1 depicts the stages of the top-down fundamental analysis process.

The decision to buy a stock and hold it in a portfolio indicates confidence, or conviction, in the security. But it is unlikely that managers will have the same degree of conviction regarding each stock they own. Figure 1.2 shows the possible “weights” (the percentage of total portfolio wealth invested in each stock) in a 12-stock portfolio, ranked by analyst conviction. Notice how the highest-conviction stocks receive the highest weight and the lowest-conviction stocks receive the lowest



**FIGURE 1.1** The Top-Down Fundamental Analysis Process.

Security	Portfolio Weight	
Stock 1	20.0%	} High Conviction
Stock 2	15.0%	
Stock 3	15.0%	
Stock 4	10.0%	
Stock 5	10.0%	
Stock 6	5.0%	} Medium Conviction
Stock 7	5.0%	
Stock 8	5.0%	
Stock 9	5.0%	
Stock 10	5.0%	} Low Conviction
Stock 11	2.5%	
Stock 12	2.5%	
<b>Total</b>	<b>100.0%</b>	

**FIGURE 1.2** Analyst Conviction and Active Portfolio Weights.

weight. Active investors therefore allocate portfolio wealth among stocks differently than these stocks' market-determined weights in the benchmark index. The active investor's weighting scheme will be called *active portfolio weights*.

### Why Stocks with Solid Fundamentals Outperform over Long Horizons

Now that you understand the overall fundamental process, let's take a closer look at exactly how portfolios emphasizing stocks with solid fundamentals outperform over long horizons. First, let's be more specific about what we mean by fundamentals. We're going to learn how to identify stocks whose prices are well supported by the basic building blocks, or fundamentals, that support intrinsic value: revenues, profits, free cash flows, and a commitment to return a large share of that free cash flow to investors, preferably in the form of cash dividends. These characteristics conform to another basic finance principle, which states that *an asset's intrinsic value equals today's value of the future free cash flows the asset is expected to generate over its lifetime*. This means that we'll learn to identify:

1. Stocks with steadily growing revenues, profits, free cash flows, and dividends.
2. Stocks that achieve this growth by making prudent capital investments.
3. Companies with strong competitive positions that allow them to defend and maintain their market presence, which supports further growth in their fundamentals.

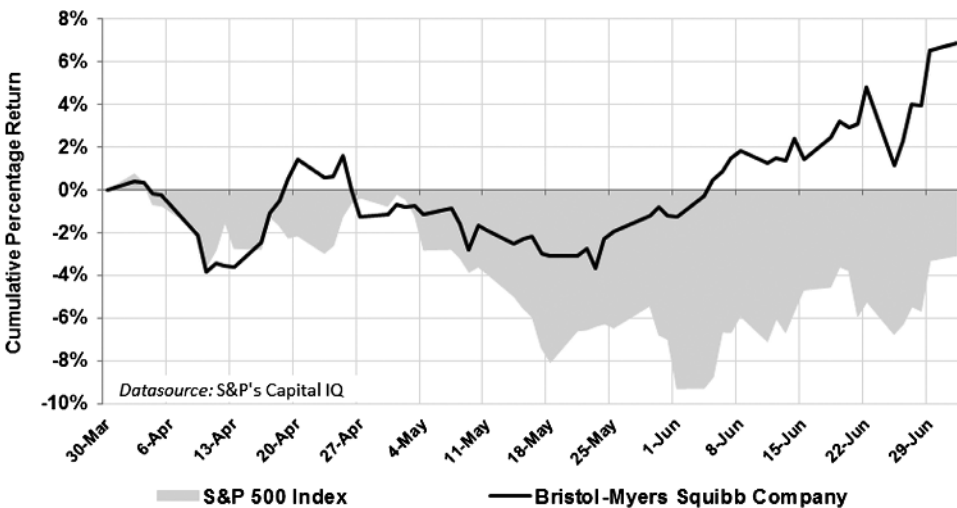
Next, recall the idea of beta—the index of how volatile a stock is likely to be and how much volatility it will contribute to a diversified portfolio. Beginning students

of finance often ask an obvious question about volatility that shows more savvy than finance theorists have been able to handle: “Don’t we only want to avoid *downside* volatility?”

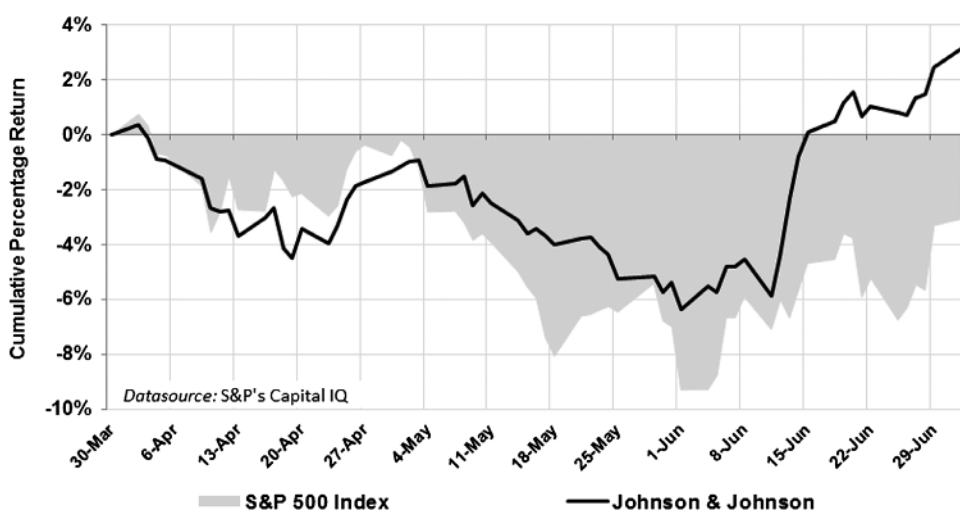
There is a lot of wisdom contained in that question, because it indirectly describes how stocks with superior fundamentals win. These types of stocks almost never surge ahead during the market’s bull phase. But when markets correct or enter a bear phase—and they always do—stocks with superior fundamentals tend to decline in value much less than their high-beta counterparts. Moreover, after the market correction is over, these stocks usually resume following the market’s next upward trend, albeit at a somewhat slower pace. We’ll consider three examples to help you better understand these tendencies.

The second quarter of the year is an excellent period to study how the stock market works. Research shows that the stock market tends to earn much of its total annual return early in the calendar year (usually beginning in late December). After the first quarter, however, an old adage holds that investors can “sell in May and go away,” as the market tends to trend sideways or correct after the early-year euphoria fades and investors become more discriminating about the specific stocks they want to own. Let’s take a look at the returns of several stocks with solid fundamentals during the second quarter of 2012: Bristol-Myers and Johnson & Johnson.

Figure 1.3 shows how Bristol-Myers (BMJ) follows the market through early April, but as investors become increasingly nervous about an impending correction, buyers gradually bid BMJ’s stock price up until it decouples from the market trend. This occurs because during market corrections, investors sell many of their risky, high-beta stock positions and invest the proceeds in stocks with superior fundamentals. The prices of these stocks are supported by their fundamentals, which makes them most attractive to investors during the market’s darkest moods. And because these stocks have a predictable tendency to decline in value by much less than the market, investors’ portfolios suffer far less damage (known as drawdowns) during



**FIGURE 1.3** Bristol-Myers Rises During the Spring 2012 Market Correction.  
 Source: S&P’s Capital IQ.



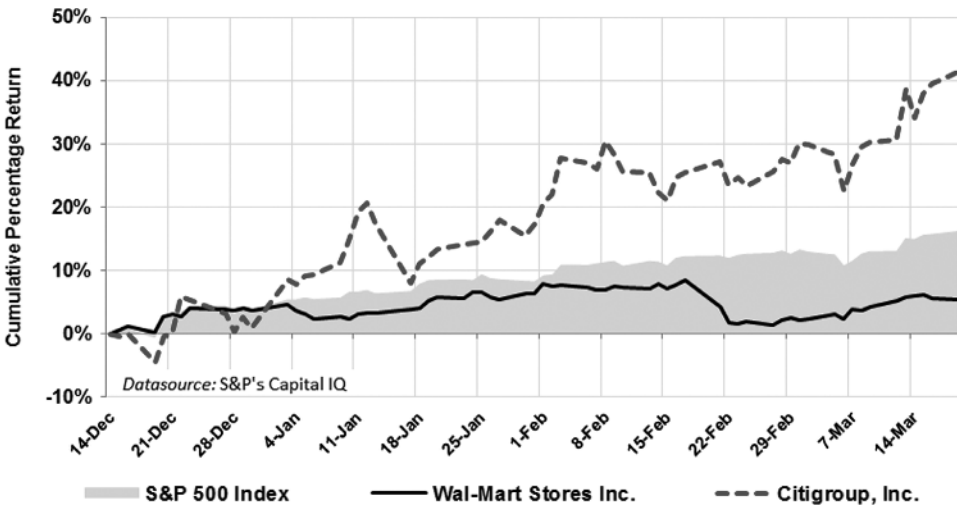
**FIGURE 1.4** J&J Reaches a 3-Month High During the Spring 2012 Market Correction.  
*Source:* S&P's Capital IQ.

corrections and bear markets. Warren Buffett best summed up this essential principle of investing when he said, “The best way to make a dollar is not to lose a dollar” (Lowe, 1997).

Figure 1.4 depicts a similar pattern for Johnson & Johnson (JNJ), which is one of the “most widely held stocks” among institutional investors. The graph reveals why so many institutions hold JNJ: because it’s a great portfolio diversifier. Notice how the stock initially follows the market’s downward move, but investors only allow it to fall so far before it offers compelling value in a declining market. Toward the end of the three-month market correction, JNJ has outperformed the market by almost 6 percent. And, in the world of investing, not losing 6 percent is just as good as gaining 6 percent. This is how stocks with solid fundamentals contribute to superior portfolio returns and lower volatility over long horizons.

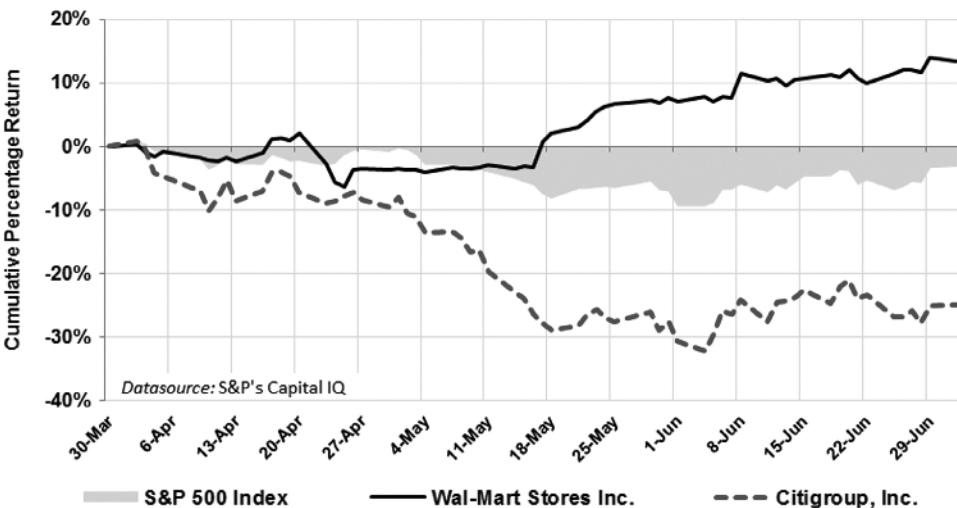
Let’s consider one more example to fully make the point. Figure 1.5 depicts the cumulative returns to Wal-Mart, Citigroup, and the S&P 500 during the first quarter of 2012 (we begin in mid-December, which is when large turn-of-the-year moves in the stock market often begin). The stock market gained 16 percent through late March, propelled by speculative names like Citigroup. Years of blunders by this financial services giant directly contributed to the financial crisis of 2008, and it has subsequently suffered through a series of scandals and mismanagement—none of which prevented it from accepting government assistance that enabled it to continue operating without proper financial discipline. In late 2011 through early 2012, a bet on Citigroup was a purely speculative play.

Notice how a stock like Wal-Mart, which models up well on a fundamental basis, initially gets left behind in the market’s turn-of-the-year frenzy. During the first quarter of 2012, Wal-Mart’s stock earns less than half of the total market return, and far less than Citigroup. At this point you might be thinking “Why *wouldn’t* an investor want to own Citigroup?”

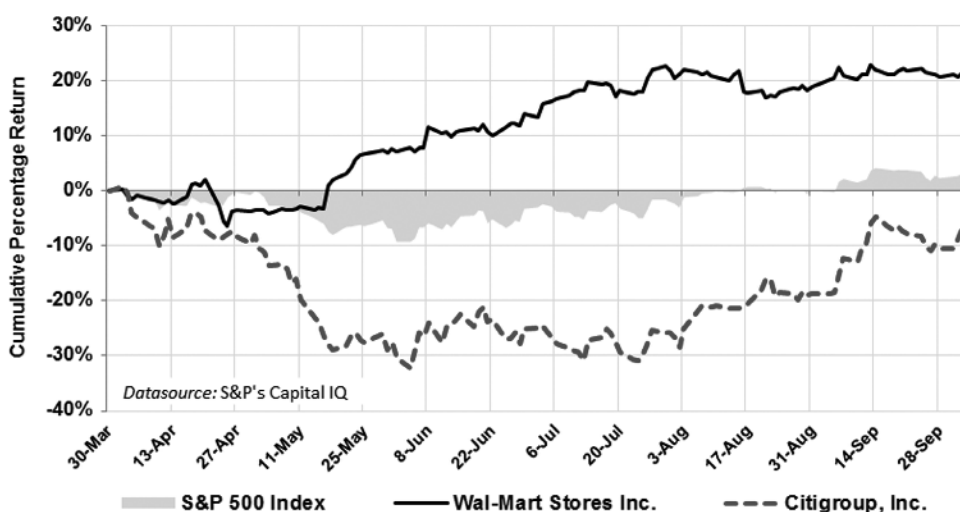


**FIGURE 1.5** Citigroup Outperforms Wal-Mart in Early 2012.  
 Source: S&P’s Capital IQ.

Next we’ll shift our attention to Figure 1.6, which shows the cumulative returns to Wal-Mart, Citigroup, and the S&P 500 during the second quarter, when the market corrected downward by approximately 10 percent. What a difference 90 days makes. Citigroup’s stock declines by more than three times as much as the market because they were weighed down by poor fundamentals. Notice how midway through the market correction, investors began the same predictable rotation into safer stocks with strong fundamentals. Wal-Mart outperforms the S&P 500 by approximately 16 percent during this period, and it beats Citigroup by almost 40 percent!



**FIGURE 1.6** Wal-Mart Outperforms Citigroup During Spring 2012 Market Correction.  
 Source: S&P’s Capital IQ.



**FIGURE 1.7** Citigroup Plays Catch-up for the Rest of the Year.

Source: S&P's Capital IQ.

Figure 1.7 completes the story. Despite Citigroup's strong showing in the first quarter, Wal-Mart handily outperforms Citigroup through spring, summer, and most of the fall, albeit in a sort of tortoise-versus-the-hare manner. Fundamental investors might have felt a little nervous early in 2012 when Citigroup was bounding ahead, but in the slow and patient buy-and-hold race, the stock with the superior fundamentals eventually won out—as most often happens. Moreover, Wal-Mart outperformed with lower volatility, taking investors on less of a roller-coaster ride. Wal-Mart's beta versus the S&P 500 equals only 0.35, versus Citigroup's beta of approximately 2.0.

Now that we understand why fundamentally sound stocks outperform over long horizons, we're going to take a closer look at the long-term track record of professional money managers.

## THE RECORD OF PROFESSIONAL MONEY MANAGERS

Earlier in this chapter, we reduced fundamental analysis to a multistep process that sounded as easy to implement as following a recipe. As we'll see, things are not quite that simple. In this section we'll review the record of professional money managers, and consider why they often achieve such disappointing results.

Most research into active money management concludes that the majority of managers underperform their benchmarks (they earn negative alphas). Let me assure you that this is not some abstract academic result, or a partisan misreading of the facts. It's probably one of the best-kept secrets on Wall Street, however. The prevalence of negative alphas among mutual funds (net of expenses and trading costs) is well documented by studies conducted by respected researchers, including Elton et al. (1993), Carhart (1997), and John Bogle (2002), the founder of Vanguard. More recently, Standard & Poor's Indices vs. Active Funds (SPIVA) 2009 scorecard reported that over the period 2004–2008, 63 percent of large-cap mutual funds, 74 percent of



mid-cap funds, and 68 percent of small-cap funds underperformed their benchmarks. Among international mutual funds, the underperformance rates ranged between 60 and 90 percent. If those results aren't bad enough, Standard & Poor's reported that 84 percent of actively managed funds underperformed in 2011. And these findings are not confined to calendar-year periods. For example, Ludwig (2012) reports that almost 90 percent of professionally managed funds underperformed from June 2011 through June 2012. These findings are not unusual. It is extremely rare for active investment vehicles to outperform passive vehicles in the aggregate, and it has never occurred consistently over any extended period of time.

The performance of investment managers in the absolute return/hedge fund space is similarly disappointing. Malkiel and Saha (2005) conclude that hedge fund returns are lower than commonly supposed, and that hedge funds are significantly riskier than more conventional investments. Fung, Xu, and Yau (2004) also report negative average alphas for hedge funds, and Pojarliev and Levich (2008) find negative risk-adjusted alphas among a sample of funds that invest in international currencies. Writing about long-short funds for *Institutional Investor* magazine, O'Hara (2009) asks, "If managers can't beat the market, what purpose do they serve?" Statman (2010) provides one possible answer to O'Hara's question. His research suggests that investors use their relationships with money management firms to express their social class and lifestyles, implying that investors are willing to accept lower returns if they can place funds with prestigious firms and/or managers.

Mark Hulbert is well known for publishing the *Hulbert Financial Digest*, a newsletter that tracks the performance and sentiment of mutual fund managers. Hulbert's survey shows that investment manager sentiment is a contrarian indicator (meaning that investment managers are too pessimistic at market bottoms and too optimistic at market tops).

Hulbert is also a columnist for the *New York Times* and *Dow Jones Market-watch*. In 2008 he reviewed a working paper by Barras, Scaillet, and Wermers (published in 2010) that concludes that even fewer managers beat the market than previously thought. After accounting for fees, the vast majority of active mutual funds had negative returns. But these authors also conclude that the proportion of zero-alpha mutual funds is *higher* than previously thought. They find that 75 percent of funds earn zero alphas, implying that the pros earn just enough to cover their fees and other costs. Less than 1 percent of funds delivered positive alpha in a way that is consistent with manager skill, however.

### **Why Do Active Managers Underperform?**

The research reviewed in the previous section convincingly concludes that in the aggregate, active managers underperform their benchmarks, and they do so with surprising consistency. These results were not covered with the purpose of picking on the pros—just the opposite, as the key mission of this book is to teach you to conduct your own stock research effectively and professionally. It's necessary to confront the track record of the pros to illustrate the challenging and competitive landscape of professional money management, however. We need to understand why such a group of intelligent, competitive, well-trained individuals consistently post such disappointing results so that we don't make the same mistakes. We'll start by taking a closer look at step 3 of the top-down process: conducting fundamental

analysis to determine which stocks to under- and overweight relative to their weights in the overall market.

As we'll learn in Chapters 3 and 4, after we determine the financial health and stability of a company, we will conduct a valuation analysis to determine if the company's stock is trading above or below what we'll call its *intrinsic value*. As mentioned previously, a stock's intrinsic value equals today's value of all the free cash flows the company is expected to generate over its remaining lifetime. Estimating intrinsic value is as much a science as an art, as it involves forecasting the company's future revenues, expenses, and a variety of other income statement and balance sheet items.

This step of the fundamental analysis process involves a logical inconsistency, or paradox, that only the best analysts confront. The paradox occurs whenever an analyst concludes that a stock is under- or overvalued, because the analyst is implicitly asserting that the market is making a mistake in the way it's valuing the stock. Notice that market mistakes are a possibility that we must allow for if we're going to be active investors. If we believe the market price is correct 100 percent of the time, then only low-cost indexing makes sense. Why would anyone spend time and money researching companies and estimating the intrinsic value of stocks when all they have to do is check their market price?

So here's the paradox: if the analyst believes the market is mispricing a stock today, why shouldn't it be the case that this mispricing will continue to persist? For an analyst to rationally make the case, for example, that shares of ABC are worth \$100, but are temporarily undervalued at \$80, he should also be able to identify the upcoming information or change of perception that will convince other investors and traders to begin paying more for the stock. There must be an event that changes the market's mind about the value of ABC, or the analyst will simply own many shares of a stock whose price is stuck at \$80.

Therefore, identifying a mispriced security (an irrational valuation by the overall market) is a necessary but insufficient step in the fundamental analysis process. The final step is to anticipate the *catalysts* that will help the rest of the market recognize the true value of the under- and overvalued securities identified by our fundamental process. There are many stocks that model up as undervalued—some based on their dividends alone. But concluding that a stock is undervalued is not the same as concluding that it's overdue for a significant price correction. Yet the investment theses of many professional analysts fail to include this important perspective.

Before an analyst can anticipate the forthcoming catalysts that will finally move a stock's price closer to his estimate of fair value, he needs a theory, or model, of how the market processes information under certain conditions. This model will inform his understanding of why the market may be mispricing a certain security, and also guide his thinking about how information regarding the company's true value will eventually become reflected in its stock price.

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## **MARKET EFFICIENCY, BEHAVIORAL FINANCE, AND ADAPTIVE EXPECTATIONS**

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In this section we'll consider three competing explanations of the way investors process information and incorporate it into their trading decisions, and thus securities prices as well. The first explanation, the *efficient markets hypothesis* (EMH), is the

oldest, known for emphasizing a high level of rationality in investor behavior and aggregate market outcomes. The second comes from the newer field of *behavioral finance*, which allows investor emotions to play a larger role in securities pricing. Behavioral finance recognizes that pricing errors can not only exist but sometimes persist for long periods. The third explanation, the *adaptive markets hypothesis* (AMH), is the newest of the three. The AMH views the interactions among investors, securities, markets, and institutions as a dynamically evolving ecosystem. Within the AMH framework, winners are determined by their ability to both compete and adapt to constantly changing circumstances.

## **Market Efficiency**

We begin with a discussion of the concept of market efficiency, formally known as the efficient markets hypothesis, or EMH. No matter how much you may have heard this theory praised or ridiculed in previous coursework or via other exposure, it's important to understand what this theory says and its implications for active investors. Any time we're talking about "beating the market"—actively investing to earn risk-adjusted returns that are higher than the returns of a benchmark index—we're talking about market efficiency, because we're asserting that we possess tradable information that the market does not fully understand, or cannot accurately pass through to a security's price for some reason. Understanding market efficiency is a useful first step in understanding and exploiting deviations from efficiency. When information is not accurately reflected in a stock's price, there may be an opportunity to buy or sell the mispriced security and earn excess returns.

Based on the typical textbook treatment, one could get the idea that market efficiency is a theoretically abstract concept that has no application in the real world, yet nothing could be further from the truth. Securities traders and finance professionals of all types are concerned with the issue of market efficiency (as we'll see in the Morgan Stanley investment policy statement below). They just employ a perspective and use a vocabulary that's different than those of finance professors. This point is best illustrated by comparing an academic perspective on market efficiency with a practitioner perspective.

The academic perspective says: "A securities market is informationally efficient when news is rapidly and accurately reflected in the prices of financial securities." Although that's a perfectly accurate statement, representing the usual treatment of this topic in finance textbooks, thinking about market efficiency this way makes it sound dull, abstract, and uninteresting.

The practitioner perspective, however, asks the question: "Are there any trading strategies based on historical and/or publicly available information that outperform the market with reasonable consistency after adjusting for risk?" Although both definitions are concerned with whether all available information is accurately reflected in the price, approaching the topic from this perspective allows for the possibility that our understanding of market efficiency will make us better investors, which is our main goal.

## **Securities Prices in an Efficient Market**

The prices of stocks and other securities in an efficient market will react rapidly and accurately to news, where news is defined as information that is (1) relevant to the

value of the security and (2) unanticipated by the market (in other words, “new”). Thus, securities prices are thought to reflect all information that is relevant regarding stocks’ valuation all the time. Markets are thought to be efficient due to the research conducted by rational, wealth-maximizing analysts and investors. The large potential profits from making the right call motivate analysts to work hard to identify new information, assess its relevance for securities prices, and immediately trade on the results of their analysis. It’s the diligent efforts of investors that keep prices efficient.

### **The Three Levels of Market Efficiency**

Market efficiency is often described as having three possible “levels,” which define the type and amount of information assumed to be fully reflected in prices. This classification can be understood by inserting one of the three bullet-point phrases into the first and second blank spaces shown in the following sentence: “Securities markets are \_\_\_\_\_ efficient if gathering and analyzing all \_\_\_\_\_ information does *not* consistently produce excess returns.”

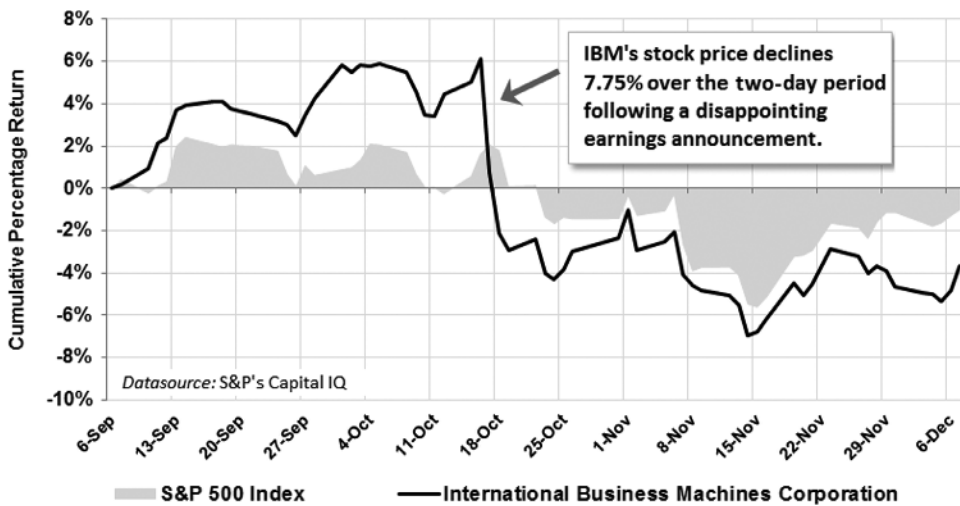
- Weak form/historical
- Semistrong form/current and publicly available
- Strong form/private or inside

If you believe market prices fully reflect all historical information, but not necessarily current, publicly available information, then you are classifying the market as weak form efficient. In other words, all historical information is so well reflected in market prices that it’s almost always impossible to trade on that information to earn excess returns. If, however, you believe market prices fully reflect both historical and current, publicly available information, then you are classifying the market as semistrong efficient. In this case, analyzing past *and* current information is not useful in consistently outperforming the market (although occasional outperformance by investors is not ruled out). There’s not much point in talking about whether prices fully reflect private or inside information because it’s impossible to investigate scientifically (questionnaires asking about illegal trading are never completed and returned for some strange reason). We will focus on the semistrong level of efficiency and assume that investors are proficient in both technical analysis (studying past price patterns by using charts) and fundamental analysis (studying all historical and current information, including financial statements, research conducted by other analysts, etc.).

### **The Behavior of Securities Prices in an Efficient Market**

Let’s say that news is released regarding a large, unexpected change in the profit outlook for a firm. In an efficient market we would expect to see the stock price react immediately upon release of that information. Since the market is so competitive, only the investors who receive the news first and immediately act on it will earn excess returns. Everyone else will be too late to use the news profitably, as the trades of the first investors cause the stock’s price to quickly correct to fair value.

Figure 1.8 depicts an efficient market reaction to news. IBM announced its earnings for the third quarter of 2012 after the market closed on October 16. Analysts were expecting earnings of \$25.4 billion, but IBM came in a little light at \$24.7 billion. As shown in the graph, IBM’s stock price reaction was swift. The stock declined



**FIGURE 1.8** IBM’s Earnings Miss Analysts’ Expectations in October 2012.  
 Source: S&P’s Capital IQ.

4.92 percent on October 17, and another 2.83 percent on October 18. Over those two days the S&P 500 rose 0.17 percent, so IBM’s large price decline was clearly due to the company-specific news release and not broader information pertaining to the entire market.

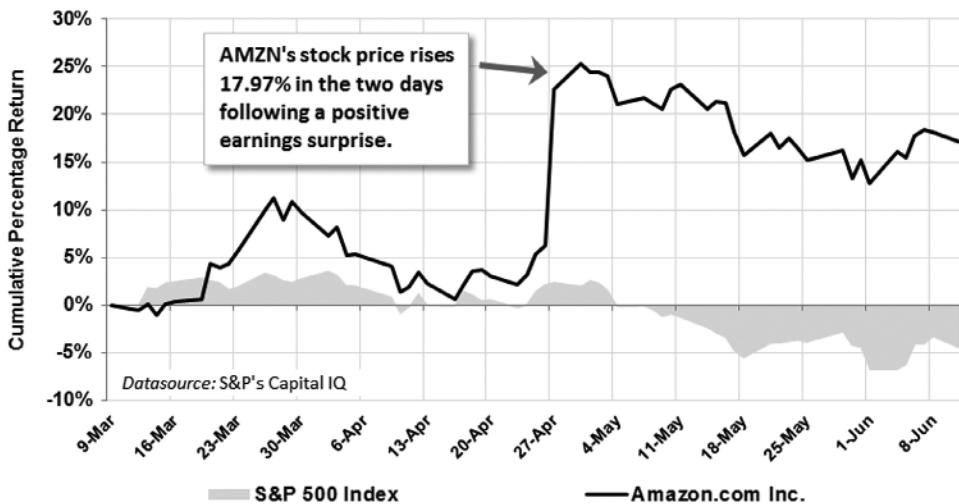
IBM’s reaction is also considered efficient due to the way the stock price behaves *after* the announcement. Notice that after the two-day price adjustment, IBM’s price begins following the market trend once again. There is no significant price “drift” in either a positive or negative direction. For the following two trading months, IBM loses another 1.5 percent and the market loses 2.9 percent. IBM’s reaction to the earnings news therefore appears to be confined to the two-day period following the announcement, consistent with the predictions of the EMH.<sup>1</sup>

Now that we’ve considered an example of when the efficient markets theory works, let’s consider a more subtle example that is representative of the type of criticism many have leveled at the EMH. This criticism concerns market participants’ ability and willingness to see all the way through the numbers reported by companies. Do analysts really think critically, or are they too eager to parrot back the information that’s fed to them?

**Do Analysts Dig Deep Enough?**

Figure 1.9 shows Amazon’s stock price reaction to its April 26, 2012, earnings announcement. The market was expecting Amazon to earn 7 cents a share, but the company reported 28 cents—*four times* the expected number. There was a large, positive stock price reaction of 17.97 percent over the following two trading days. Over those same days, the S&P 500 declined by 0.15 percent, so once again, the stock price reaction was almost certainly due to the release of company-specific news rather than market-wide information.

Next we’ll focus on Amazon’s stock returns following the announcement. Through mid-June, the stock lost 6.58 percent. Is it possible that Amazon’s price



**FIGURE 1.9** Amazon's Earnings Beat Analysts' Expectations in April 2012.  
 Source: S&P's Capital IQ.

overreacted to the news, and the market “took back” some of those large gains from the April earnings announcement? In this case, probably not. Even though the downward postannouncement price drift is evident in the graph, the market declined by 5.27 percent over the same period. Amazon's stock returns following the announcement are therefore most likely due to the overall market trend, and not a reconsideration of Amazon's valuation based on their earnings.

Thus far, it looks like the market was efficient around Amazon's earnings announcement. There are actually several reasons to think that the market was not functioning with perfect accuracy and objectivity in this case, however. The first reason is that Amazon was on pace to report earnings per share of 7 cents in the weeks leading up to the earnings announcement, according to the “guidance” the company provided to analysts in the preannouncement period. It was only a last-minute decision to transfer profits from other entities in which Amazon has minority ownership onto their income statement that allowed Amazon to report earnings that were four times larger than analysts anticipated. Of course, there was nothing illegal about this move. It is allowed based on the “equity-method investment activity, net of tax” provision in U.S. generally accepted accounting principles (GAAP) rules. What's concerning about Amazon's decision to declare these profits is that the average value for that equity-method account was  $-\$500,000$  for the past eight quarters. Amazon's decision therefore looks a bit like opportunistic “earnings management,” a practice used by many companies to make their profits look larger and more consistent than they would be without some manipulation.

The second, somewhat more disturbing criticism regarding the accuracy of the market's reaction was described by Peter Eavis, writing for the *New York Times*' Deal-Book blog on April 27, 2012. Mr. Eavis's article makes note of the following facts:

- Amazon's first-quarter earnings diverged significantly from the guidance provided by the company.

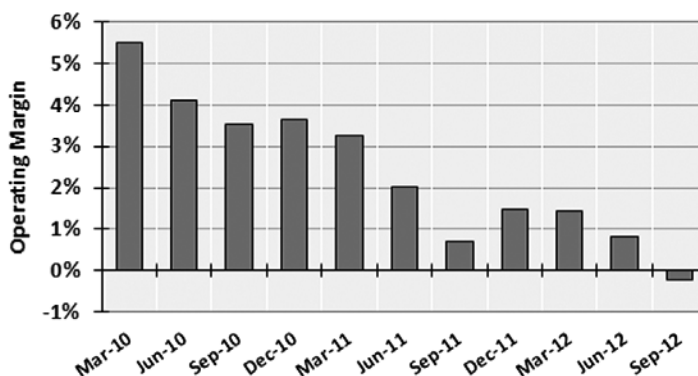
- Amazon offered no explanation for this large divergence.
- There were 17 analysts on the earnings call, yet none thought to ask why earnings were four times larger than the preannouncement number.
- Amazon’s investor relations department did not respond to Mr. Eavis’s subsequent e-mail inquiries and phone messages.

I find it odd that there were 17 analysts on the earnings announcement call, but none of them asked the simple question, “Why were your profits four times larger than expected?” That type of behavior is not consistent with analysts’ digging deep to uncover the ultimate truth about a company. The criticism of the EMH in this case is that without access to all relevant information, including information that requires fervent due diligence by analysts, markets can’t be efficient.

Taking a longer-term perspective on this issue, analysts have consistently ignored a variety of “inconvenient truths” about Amazon’s profitability for quite some time. Figure 1.10 depicts Amazon’s operating margin from the first quarter of 2010 through the third quarter of 2012. The graph shows that Amazon’s operating margin has been in a steady downtrend for years. The company does not comment on this trend, and analysts don’t ask. As shown in the graph, Amazon’s operating margin turned *negative* in the third quarter of 2012. The only way to declare positive profits with negative margins is via accounting gimmicks, such as suddenly switching to the equity method for reporting subsidiary profits described above. As of early 2013, the market remained unconcerned, and Amazon’s stock price continued achieving new record highs. The key question is whether Amazon’s stock price objectively reflects all relevant information about the company.

**Anomalies the EMH Cannot Explain**

While the efficient markets hypothesis is a good starting point for understanding markets, researchers have documented numerous empirical facts about investing and markets that are inconsistent with the EMH. The existence of consistent patterns in securities prices and price volatility implies tradable opportunities based on past and



**FIGURE 1.10** Amazon’s Operating Margin 2010–2012.  
 Source: S&P’s Capital IQ.

current information that would not exist in a highly efficient market. A short list of these anomalies includes:

- *Correlations in security returns.* Individual security returns are negatively correlated on a daily basis, positively correlated over intermediate horizons, and negatively correlated over long horizons. Consistent correlation patterns would not exist in highly efficient markets.
- *Mean reversion or a reversal effect in securities prices.* Portfolios of stocks with the best records over the past two to three years subsequently underperform the market, and portfolios of stocks with the worst records over the past two to three years go on to outperform the market.
- *Underreaction to news.* There is significant short-term “drift” in prices following both good and bad news announcements (drift is the tendency for stock prices to keep moving in the same direction).
- *The size effect.* Small stocks outperform large stocks by more than would be expected based on their higher volatility. From 1931 to 1975, the 50 smallest stocks on the NYSE outperformed the 50 largest by 1 percent per month.
- *The price-to-earnings ratio (P/E) or value stock effect.* Studies show that the risk-adjusted returns of the lowest P/E stock portfolios are as much as 7 percent per year larger than the risk-adjusted returns of the highest P/E stock portfolios.
- *The January effect.* Stocks of small-cap companies experience unusually high returns in the first two weeks of January, then their returns revert to average for the rest of the year.
- *Patterns in volatility.* Returns are more volatile during bear markets, market volatility is greater at the open and the close than during the trading day, and overall market volatility is excessive relative to changes in the fundamentals affecting stocks’ intrinsic values.

While the EMH remains the most studied theory of how information is reflected in securities prices and is a good entry point for understanding the extent to which prices accurately reflect relevant information, it is also clear that the EMH is subject to much criticism because it does not explain many outcomes observed in financial markets. Next, we’ll consider an alternative explanation for investor behavior and the level of rationality reflected in securities prices, known as behavioral finance.

## **Behavioral Finance**

The growing field of behavioral finance can trace its roots to a study by Amos Tversky and Daniel Kahneman, published in *Econometrica* in 1979. Their paper, “Prospect Theory: An Analysis of Decision Under Risk,” is the most widely cited work in the history of this influential journal. Their original “prospect theory” has evolved into what we now call behavioral finance, a theory of information, securities prices, and investor behavior that competes with and frequently contradicts the highly rational premises and predictions of the efficient markets hypothesis.

Behavioral finance maintains that investors suffer from cognitive biases, or inefficiencies in the way they process information and draw conclusions. Some of the major biases include the use of *heuristics*, or mental shortcuts that make decision making easier. These mental “rules of thumb” can lead to biased reasoning and



suboptimal investment decisions, however, especially when circumstances are changing (because the old mental shortcuts are no longer applicable). *Extrapolation errors*, which occur when investors assume that current and recent conditions will prevail well into the future, also cause them to ignore evidence of changing circumstances. Research by Barber and Odean (2001) shows that people tend to be *overconfident* regarding their abilities, which leads to mistakes such as too little diversification and too much trading. Barber and Odean find that men are more overconfident than women and thus trade more, despite the fact that the performance of their stock portfolios worsened as the tendency to trade increased.

Statman (2010), Nofsinger (2010), and others have identified additional cognitive biases that often derail investors' thinking. Some of the most popular biases include *hindsight error*, which tricks people into thinking they can foretell the future because they can easily observe the past. *Confirmation errors* occur when investors place too much weight on information that confirms their prior opinions (*cognitive consonance*), but underweight or completely disregard evidence that contradicts their prior opinions (*cognitive dissonance*). Whitney Tilson (2005), managing director of the T2 Partners Hedge Fund, cites additional biases that affect the behavior of value investors, including *misunderstanding randomness*, which involves seeing patterns where none exist, and *vividness bias*, which causes investors to overweight particularly memorable experiences, even though they may not be relevant given current circumstances.

A complete treatment of behavioral finance is beyond the scope of this book, but the point should be well made: recent research in this field leaves little doubt that individuals are not consistently rational and frequently make cognitive errors. Behavioral finance adds to our understanding of markets because it alerts us to the many intellectual errors that investors and traders are capable of committing, and allows that aggregate market outcomes can reflect these errors (such as systematic market mispricings, or *bubbles*). Next, we'll consider the latest theory of information and investor behavior, the adaptive markets hypothesis.

### **The Adaptive Markets Hypothesis**

The adaptive markets hypothesis (AMH) views financial markets from a biological perspective. This theory of investor behavior asserts that the interactions among markets, institutions, securities, and investors result in an evolutionary-type process that unfolds according to the laws of "economic selection." The AMH allows for economic agents to adapt via their competitive interactions, but does not require that markets and institutions evolve toward optimal outcomes (see Farmer and Lo 1999; Farmer, 2002; and Lo, 2002, 2004, and 2005). This is the first major conflict between the AHM and the EMH, which maintains that market outcomes are always optimal.

The roots of the AMH can be found in E.O. Wilson's (1975) concept of sociobiology, which applied the principles of competition and natural selection to social interactions. Joseph Schumpeter's (1942) view of business cycles, which emphasized the need for "creative destruction" in capitalism that clears the way for "bursts of entrepreneurial activity," also provides a foundation for the adaptive markets theory.

According to Lo (2008), one of the major proponents of the adaptive markets view, the AMH is preferable as a theory of investor behavior because it allows for the

cognitive biases identified by behavioral finance while also recognizing that the high level of competition prevailing in markets requires agents to continually adapt to change. The AMH can explain how market behaviors that appear anomalous under the EMH can emerge, persist for a while, and then disappear. This would include pricing bubbles that can plague markets for years, as well as shorter-term trading fads, such as the “dollar down, stocks up” trade that dominated the U.S. stock market in 2011, and the “risk-on, risk-off” trade, which seemed to be all markets were concerned with for much of 2012. These (and many other) trading opportunities often become popular overnight, dominate traders’ thinking for months or years, and then vanish just as quickly as soon as traders adapt and invent new ways to stay ahead of the competition.

Researchers continue to make progress in understanding the connections between emotions, rationality and investor behavior. Some of this research appears to come full circle, such as Lo and Repin’s (2002) study, which asserts that emotional responses are not always confusing or harmful, but can actually be important in helping investors understand financial risk in real time. These authors document that the ability to channel emotions in specific ways under certain market conditions can be a valuable tool for traders, which contradicts the EMH-based view that strong emotions confound the decision-making process because they interfere with rationality.

### **Summary of the Three Theories**

In this section we considered three competing explanations of how information becomes incorporated into securities prices. The first, known as the efficient markets hypothesis, emphasizes a high degree of rationality in the market pricing mechanism. The second, behavioral finance, expressly recognizes that investors commit numerous cognitive errors and that these mistakes can affect market prices. The third, the adaptive markets hypothesis, views markets as a complex evolutionary system in which investors are constantly evolving and adapting to both rational and irrational circumstances. Under the AMH, real-world investors aren’t concerned with being rational or irrational—they are just trying to figure out if what worked yesterday will still work today. If not, they quickly move on and invent new methods for remaining competitive.

In the sections that follow, we will consider additional perspectives from well-known investors to further synthesize our understanding of these three theories into a practical investment framework. Renowned investors like John Bogle and Charles Ellis will caution us against careless attempts to beat the market; as we’ve already established, this can be much harder than it sounds. We’ll also consider the results of recent research that examines why some investors trade excessively, and finish with a review of Chapter 12 of John Maynard Keynes’s *General Theory of Employment, Interest and Money* (1936), a work that anticipated the efficient markets versus behavioral finance debate decades before academics embraced it in earnest.

## **ADDITIONAL PERSPECTIVES ON INVESTING**

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This section of the chapter presents a variety of perspectives that will further inform our investment philosophy and guide our efforts to construct and manage a portfolio of stocks that outperforms its benchmark. This section reviews the main points

of several articles representative of the approach and analytical methods featured in the chapters that follow.

### **John Bogle: An Index Fund Fundamentalist (2002)**

John Bogle is the founder of Vanguard Investments and is widely credited as the creator of the equity index fund. Bogle was invited to review and extend his work regarding the superiority of indexing by the *Journal of Portfolio Management*, one of the leading investment journals. Bogle shows that for almost all types of equity portfolios (various combinations of large versus small and growth versus value stocks), passively managed index funds earn higher returns with lower risk versus actively managed funds. This finding holds for every category except small-capitalization growth stocks, implying that active managers were able to add value only for stocks that require the most research to fully understand. (Small-cap stocks are less widely followed by analysts, therefore, less information is available about these stocks; growth stocks have little or no previous track records, which means that most of their success or failure is dependent on future activities that are hard to predict.)

Bogle also refutes a view regarding market efficiency by Minor (2001). (If the founder of Vanguard thinks understanding the subtleties of market efficiency is important, then we probably should as well.) Minor makes a clever argument: If investors increasingly believe in market efficiency, they will engage in more indexing and less active investing. After a while, security prices will reflect greater mispricings from this lack of research, and active investors will once again have an advantage as the market becomes less efficient. Bogle disagrees, arguing that Minor does not take the higher costs of active investing into account. Bogle argues that even if active investors earn higher gross returns, after considering the fees they charge, their clients would still have been better off indexing. As reviewed earlier, subsequent research by Barras, Scaillet, and Wermers (2010) confirms that Bogle's view is correct.

### **Charles Ellis: "Levels of the Game" (2000)**

Charles ("Charley") Ellis is a legendary investment manager and the author of 16 books at the latest count. In addition to managing a significant portion of the Yale Endowment for years, he sits on the board of Vanguard Investments, and serves as an associate editor of the two most influential investments journals, *The Journal of Portfolio Management* and *Financial Analysts Journal*. Like John Bogle, Ellis is a valuable source of well-intentioned advice regarding investments and financial markets.

In his 2000 article "Levels of the Game," Ellis cites Bogle's earlier research, which shows that over the most recent 10-year period (at the time the article was published), 89 percent of all actively managed U.S. mutual funds had underperformed their benchmarks. Ellis attributes this underperformance to the increasing competitiveness of the active money management industry, which is dominated by highly educated, motivated professionals—consistent with the view of efficient markets developed earlier in this chapter.

Ellis points out that over the past several decades, professionals have become the market. Well over 90 percent of all trading volume is now generated by the pros, with over 50 percent generated by the top 50 firms. This means that the pros are constantly buying and selling shares to and from each other. Thus, if a firm raises its

rating on a stock from hold to buy and wants more shares, they're probably buying from another professional who wants to sell (as Meir Statman (2010) humorously phrases it, "the idiot on the other side of the trade"). Ellis also classifies investing activities into one of five "levels":

- *Level 1: Asset Mix.* Determining the optimal proportion of equities, bonds, currencies, commodities, real estate and cash to hold in a portfolio or fund.
- *Level 2: Equity Mix.* Establishing a "normal" policy of growth versus value stocks, large-cap versus small-cap, and domestic versus international stocks.
- *Level 3: Active versus Passive Management.* This level involves further implementation of the normal policy established in Levels 1 and 2, specifically addressing the proportion of an investor's assets that should be in active versus passive vehicles.
- *Level 4: Specific Manager Selection.* Deciding which investment firms will manage each component of the investor's portfolio.
- *Level 5: Active Portfolio Management.* Deciding when to change portfolio strategy, the selection of specific securities or assets, and how to execute transactions.

Ellis's experience has led him to believe that keeping investors focused on Levels 1 and 2 helps them avoid major mistakes and, most important, maximizes their wealth accumulations over long horizons. Notice that Ellis's advice regarding the need to diversify and hold positions for long periods is consistent with the efficient markets hypothesis, and how his recommendation that investors avoid complex, higher-level activities that result in more errors that lower their portfolio returns follows from behavioral finance.

### **Charles Ellis: "The Winner's Game" (2003)**

One of the most valuable perspectives Ellis provides in his 2003 article "The Winner's Game" is to partition life's activities into one of two categories: winner's games and loser's games. In loser's games, outcomes are most often determined by participant mistakes—like amateur tennis. In winner's games, however, outcomes are usually determined by decisive winning moves, as is the case in most high-level professional sports. Ellis's point is that individuals are the amateurs in the game of investments, and should focus more on minimizing mistakes instead of attempting higher-level winning moves versus professional investors. Additionally, with so many well-trained investments professionals competing against each other, individuals should not be incurring the costs of competing with the pros. Ellis stresses that individuals need to remain aware that in most cases they are disadvantaged in terms of the information they possess, the trading strategies they're capable of executing (and the skill with which they can trade), and their total cost of trading.

Perhaps the most valuable perspective Ellis brings to the active investing debate is his belief that *active investing triggers a higher error rate*, and that this is the most plausible explanation regarding why actively managed equity funds underperform their benchmarks so consistently. His recommendation: "Most investors would benefit from giving more attention to their defenses, and to not losing." Ellis is also well

versed in behavioral finance, as illustrated by the following advice regarding which mistakes to avoid:

1. We are confirmation-biased—we seek out and overweight the significance of data that support our initial impressions.
2. We allow ourselves to use an initial idea or fact as a reference point for future decisions even when we know it is “just a number” (the behavioral error known as “framing” or “anchoring”).
3. We distort our perceptions of our decisions, almost always in our favor, so that we believe we are better than we really are at making decisions (cognitive consonance).
4. We have a tendency to be overconfident.

Ellis closes his article by pointing out that another common error he sees investors make is switching to a new money manager with a superior record just as that manager is about to begin underperforming. This is consistent with the previously reviewed research findings on mean reversion, which describes how portfolios that outperform their benchmarks for two- to three-year periods tend to underperform over the next two to three years (and vice versa).

### **Dorn, Dorn, and Sengmueller: “Why Do People Trade?” (2008)**

This article by Dorn, Dorn, and Sengmueller (2008) is based on a previous paper entitled “Trading as Entertainment.” The bottom line of the study is that investors who indicated on surveys that they “enjoy investing” and “enjoy risky propositions” traded twice as much as peer investors. The authors provide us with an important conclusion: “Entertainment appears to be a straightforward explanation for why... active traders trade much more than others, and why active traders underperform their peers after transactions costs.” The Dorn et al. findings complement results from the behavioral finance literature and Ellis’s advice: sticking to a simple game plan and avoiding cognitive errors should be an important part of an investor’s strategy. These authors remind us to ask ourselves: “Am I trading for strategic or tactical reasons, or simply to entertain myself?”

### **John Maynard Keynes: Chapter 12 of the *General Theory***

Keynes’ *General Theory of Employment, Interest and Money* is an inarguable classic in the economics literature. In Chapter 12 Keynes dispenses practical advice for investors, along with many keen observations about human nature. His genius—and elegant writing style—are on full display. Keynes’s unique perspectives can be attributed to the many roles he undertook in his lifetime. He served as chancellor of the Exchequer in England (equivalent to secretary of the Treasury in the United States) during the Great Depression. Accordingly, much of his *General Theory* is concerned with understanding how free-market economies can jolt themselves out of depressionary cycles. In addition to being recognized as one of the most brilliant economists of his day, Keynes was also a currency speculator; much of his advice therefore stems from his practical experiences as an investor. He amassed a significant fortune through his trading activities, lost it

all, and earned it back again. In the analysis of Keynes's Chapter 12 that follows, notice in particular how he anticipates both the efficient markets and behavioral finance theories, which would be further developed by economists and psychologists decades later.

### **Long-Term Expectations**

Keynes begins with a thought experiment on how investors form their expectations regarding the future. Keynes writes that it would be foolish to put too much weight on matters that are highly uncertain (the future is, of course, inherently unknown). In particular, Keynes has noticed that humans have a habit of taking the current situation—whatever it is—and extrapolating it into the future, until they see definite evidence that they need to change that expectation (behavioral finance now refers to these tendencies as “extrapolation errors”).

Keynes goes on to write that our long-term expectations should not depend only on the best forecast we can make, but also on the certainty with which we can make this forecast. Predictions regarding the future are usually made on an extremely precarious basis, but investors are overconfident regarding their ability to forecast (here he anticipates the overconfidence bias identified by the behaviorists).

Keynes then launches into a long meditation on the state of business and financial markets in the 1930s. He notes that, in earlier times, business ventures were started by people who focused less on precise calculations of profits and returns, and more on the adventure associated with the enterprise. These old-time entrepreneurs often earned lower returns than they had planned on—but, according to Keynes, earning high returns was not their primary focus; they were more concerned with building something.

Keynes is particularly concerned with how the stock market allows for such a profound disconnection between ownership and management—something that was relatively new in his day, but we take for granted in the twenty-first century. With this observation Keynes anticipates another field of finance and economics, known as agency theory, which has long recognized the “separation of ownership and control” as a key factor contributing to suboptimal corporate performance.

### **Long-Term Expectations and Stock Values**

Keynes connects his ideas regarding how long-term expectations are formed and the way modern financial markets allow for investment valuation to be determined by those who are far removed from the operations of the businesses. Thus, he notes, stock values may often reflect irrelevant concerns and ideas, and not the close knowledge of the people actually running the companies. Keynes not only anticipates the efficient markets hypothesis with this statement but goes on to criticize the idea. He notes that the convention in the stock market is to assume that whatever value a stock is selling for is correct, and that the habit of continuously projecting the current state of affairs into the future is what led to both the 1920s stock market bubble and the prolonged bear market of the 1930s (extrapolation errors). Keynes asserts that in both cases prices remained on a trend determined by people who don't really know what's going on in the businesses they are valuing (a question of market efficiency). Additionally, note that Keynes is working

on the problems of asset bubbles and market crashes over half a century before the dot-com, credit, and residential real estate bubbles wreaked havoc on modern markets.

### **Keynes Says Markets Can't Be Efficient**

Keynes reinforces his point that market valuations cannot be correct most of the time because they result from a flawed expectations-forming process conducted by people who are far removed from the businesses they are valuing. Keynes says these conventions persist because people like the appearance of stability and continuity in their daily lives. This makes people feel that, at least in the short term, they are not exposed to excessive risk, because stock values must at least be close to their fair value (cognitive consonance). Of course, Keynes believes people are deluding themselves in this regard:

*Due to the gradual increase in the proportion of equity owned by persons who neither manage nor have special knowledge of the enterprise, the element of real knowledge in the valuation of investments has declined. Day-to-day fluctuations in the profits of existing investments, which are obviously of an ephemeral nature, have an excessive—even absurd—influence on markets.*

### **Groundless Expectations are the Source of Excessive Volatility**

One of the criticisms of the EMH is that securities prices exhibit more volatility than would be justified based on changes in companies' fundamentals alone. Keynes asserts that investors' "groundless expectations" are actually the source of this excess market volatility:

*A conventional valuation that is established as the outcome of the mass psychology of a large number of ignorant individuals is liable to change violently as the result of a sudden fluctuation of opinion due to factors that do not really make much difference to future returns, since there will be no strong roots to hold it steady.*

Keynes goes on to say that during abnormal times when things are changing fast, and investors are deprived of the comfort of believing in the "indefinite continuance of the existing state of affairs," markets will be subject to waves of optimistic and pessimistic sentiment that is irrational, but also somewhat legitimate, because no solid basis exists for reasonable calculations of any sort. Even though Keynes is describing his own mid-1930s period, his observations also apply to the behavior of global financial markets from 2008 to 2013, an era characterized by alternating periods of both unusually high and low volatility.

### **Investment Professionals and Market Efficiency**

Keynes goes on to write that there is one viewpoint in particular that deserves our attention. We might suppose that competition among expert professionals, who are supposed to have knowledge beyond that of the average private investor,

would correct the pricing mistakes committed by ignorant individuals. Not exactly, Keynes says:

*The energies and skill of the professional investor are not concerned with making long-term forecasts of the probable return of an investment, but with foreseeing changes in valuation a short time ahead of the public. Professional investors are not concerned with what an investment is worth to a man who buys it “for keeps,” but rather what the market will value it at, under the influence of mass psychology, three months or a year hence. Moreover, this behavior is not the result of a wrong-headed propensity...it is not sensible to pay \$25 for an investment you believe is worth \$30 if you also believe the market will value it at \$20 in three months.*

### **How the Pros Play the Game**

Keynes further writes that the professional investor is therefore forced to concern himself with the anticipation of impending changes—in the news or in the atmosphere—that most influence the mass psychology of the market. This is an inevitable result of investment markets organized with the goal of so-called “liquidity” (which Keynes calls a “fetish”). Keynes’s point is that there is no such thing as liquidity for the entire investment community at the same time. When everyone wants to sell, there is no liquidity without dramatic price declines (a.k.a. panic). This, of course, describes the essence of our recent global financial crisis. From 2000 to 2007 there was a boom in the origination of mortgage loans to people who could not afford to make the payments. Many of these loans were created simply because they could be bundled into complex financial instruments and sold to the next greater fool. Everything worked fine until the day that *everyone* wanted to sell their securities, which caused the market—and the balance sheets of most large banks—to collapse.

Keynes goes on to say that the game of investing might be called “beat the gun.” The investors he knows are more concerned with outwitting the crowd and passing the “bad, ever-depreciating half-crown to the other fellow.” Keynes further notes that this game can be played by professional investors among themselves. No uninformed individuals are required, and it is not even necessary that any of the players believe in the long-term validity of the value of any of the securities they are trading.

### **Keynes's Famous Beauty Contest Analogy**

This is probably Keynes’s most memorable passage. He compares professional investing to newspaper competitions that were popular in his day in which readers voted for the prettiest faces from a hundred photographs. Depending on which face they voted for, readers’ choices were placed into a jar, and a winning card was randomly selected from the jar containing the most votes. Keynes says that the stock market works just like this game. Intelligent investors don’t simply pick the stocks they think are best, but the winning strategy instead involves anticipating which face will get the most votes. If your card is not in the right jar—determined by popular opinion—then you cannot win the contest:

*It is not a case of choosing those faces which, to the best of one’s judgment, are really the prettiest, nor even those which average opinion genuinely*



*thinks the prettiest. We have reached the third degree where we devote our intelligences to anticipating what average opinion expects the average opinion to be.*

### **The Reduced Role of Fundamental Investors**

Next, Keynes anticipates—and refutes—the type of objections that believers in market efficiency still raise today:

*If the reader is motivated to interject that there must surely be large profits to be gained in the long run by a skilled individual who remains undistracted by the prevailing pastime and continues to purchase investments on the best genuine long-term expectations he can frame, he must be answered, first of all, that there are such serious-minded individuals, and that it makes a vast difference to an investment market whether or not they predominate in their influence over the game-players.*

But Keynes adds that there are several factors that jeopardize the predominance of such individuals in modern investment markets:

*Investment based on genuine long-term expectation is so difficult today that it is basically impractical. He who attempts it must surely lead more laborious days and run greater risks than he who tries to guess better than the crowd how the crowd will behave; and, given equal intelligence, he may make more disastrous mistakes.*

This statement echoes Ellis’s advice about the importance of avoiding mistakes.

### **Keynes's Warning for Long-Term Investors**

*Notice that it is the long-term investor—he who most promotes the public interest—who will in practice come under the greatest criticism whenever investment funds are managed by committees or boards or banks. For it is the essence of his behavior that he should appear eccentric, unconventional and rash in the eyes of average opinion. If he is successful, that will only confirm his rashness; and if in the short run he is unsuccessful, which is very likely, he not receive much mercy.*

Keynes has a little career advice for us as well: “Worldly wisdom teaches that it is better for one’s reputation to fail conventionally than to succeed unconventionally.” (I have found this to be an ironic truth in my own professional career path from time to time.)

### **Keynes on Bubbles**

*Speculators may do little or no harm when they are only bubbles on a steady stream of long-term investors; but they can be seriously harmful when long-term investors become the bubble on a whirlpool of speculators. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done.*

And Keynes coins a term—bubble—that has remained in the investor’s lexicon ever since.

### **Animal Spirits**

*A large proportion of our positive activities depend on spontaneous optimism rather than on a mathematical expectation. Our decisions to do something positive are usually taken as a result of animal spirits—a spontaneous urge to action rather than inaction—and not as the outcome of a weighted average of quantitative benefits multiplied by quantitative probabilities. If the animal spirits are dimmed and the spontaneous optimism falters, leaving us to depend on nothing but a mathematical expectation, enterprise will fade and die.*

*Animal spirits* is another Keynes term that investors and traders still use every day.

## **PROFESSIONAL INVESTMENT POLICY STATEMENTS**

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We will wrap up this chapter by examining a professional investment policy statement (IPS) and synthesizing the viewpoints from this chapter into a sample IPS that summarizes the type of stocks we’ll be looking for and the type of portfolio we’ll construct using these stocks. An IPS makes clear statements about an investor’s or fund’s objectives, return expectations, risk tolerance, time horizon, and portfolio allocations. Highlights from the IPS from Morgan Stanley’s Focus Growth Strategy team are presented below. You will notice similarities with items mentioned in this chapter (including market efficiency), as well as considerations that we’ll emphasize in our stock selection process in upcoming chapters (such as favorable trends in return on invested capital, focusing on free cash flow instead of accounting earnings, taking a long-term perspective, and analyzing whether a company has a genuine competitive advantage that is sustainable).

### **Morgan Stanley Focus Growth Strategy Profile (2013, Edited)**

#### **Investment Philosophy<sup>2</sup>**

- Permitted market capitalization: within the market capitalization of the benchmark index
- Sector concentrations result from security selection; no specified minimum or maximum exposure
- Security weight: 1 to 5 percent of the portfolio
- Typical number of holdings: 20–30 securities
- Invest in high-quality established and emerging companies
- The investment team seeks companies with:
  - Inherent sustainable competitive advantages
  - Favorable return on invested capital trends
  - Long-term capital appreciation rather than short-term events

- Stock selection is informed by rigorous fundamental analysis
- Guiding principles combined with intellectual and process flexibility are critical to strong decision-making in pursuit of attractive investments

When assessing businesses, the team seeks to capitalize on market inefficiencies by investing in companies that it believes are underappreciated due to one or more of the following reasons:

- *Relative lack of coverage.* Companies transitioning from one market capitalization category to another—as well as recapitalizations or spin-offs—tend to be underfollowed, creating potential investment opportunities for the team.
- *Conventional valuation bias:* There is a tendency to view companies with low price-to-earnings (P/E) ratios as more attractive than those with higher ratios. However, the team believes that earnings-related measures can be limiting, as they do not incorporate the return on invested capital (ROIC) or free-cash-flow generation profile of a company. In addition, corporate earnings can often make comparisons both within industries and across sectors less meaningful.
- *Coverage bias.* Experts typically use traditional valuation rules of thumb to assess companies in their coverage areas—rules that the team believes may be less appropriate in analyzing companies with new or unique business models that are generating substantially different economic value.
- *Short-term bias.* The team believes that it can exploit inefficiencies stemming from the fact that market participants increasingly focus on short-term considerations (such as quarterly earnings) in their analysis rather than on long-term value creation.

### **Investment Process**

The team follows a disciplined investment process that entails the following steps:

- *Idea generation.* The team generates investment ideas through an ongoing set of activities conducted individually and collaboratively, including: (1) involvement in contact networks across industries and in the investment management business; (2) its reading network; (3) its focus on ROIC and free-cash-flow yield; (4) team discussions; (5) the identification of patterns; (6) conventional-valuation and coverage biases, among others; and (7) continual research on current company holdings.
- *Bottom-up analysis and valuation.* The team narrows its idea generation by seeking stocks that reside in the intersection between its views of a company's business quality, growth quality, and risk/reward characteristics (see diagram, Figure 1.11). Valuation focuses on free-cash-flow yield three to five years in the future.
- *Disruptive change research.* To complement its in-depth, bottom-up research, the team's disruptive change researcher investigates big ideas and emerging themes that typically may have far-reaching consequences, such as nanotech, infrastructure and the global water shortage.
- *Portfolio construction and implementation.* The team's portfolios are actively managed and built to maximize expected value. Company weightings are primarily determined by the quality of the idea and the team's conviction. Each



**FIGURE 1.11** The Investment Thesis: Business Quality, Growth Quality, and Risk/Reward Trade-off.  
*Source:* Morgan Stanley Investment Management (2013).

member of the investment team helps drive stock-picking, with at least two of the three most senior members typically involved in final construction decisions. The team reviews factor analysis on a monthly basis in order to ensure that the portfolio's risk is more idiosyncratic than systematic. The team anticipates holding between 20 and 30 securities.

- *Culture.* The team's culture is shaped by four core values that are cultivated and reinforced in many ways: intellectual curiosity and flexibility, perspective, self-awareness, and partnership.

### A Sample Investment Policy

After reading through the highlights of the Morgan Stanley IPS, you should be ready to draft one for your portfolio or student investment fund. Following is a draft of a basic IPS (adapted from Krinsky and Hall (2012) and Putnam Investments (2013)):

*Description of the Client.* The University Foundation (or other entity).

*Purpose of the IPS.* To establish a clear understanding between the investor and the adviser regarding the Student Investment Fund's (SIF) objectives for return, risk management, security suitability, and portfolio review.

*Duties of the Parties.* The adviser shall design and implement an appropriate portfolio, monitor the performance of the portfolio, periodically review the investment strategy and investment policy statement, and prepare and make available all related reports. The University Foundation will promptly notify the adviser of changes in risk tolerance or other issues pertaining to security suitability.

*Objectives: Return.* The SIF aims to outperform the S&P 500 on a risk-adjusted basis over the long term. We favor large-capitalization stocks with sustainable competitive advantages that earn a high return on invested capital and pay above-average dividends.

*Objectives: Risk.* The SIF targets a level of risk (defined as portfolio beta) equal to or less than the S&P 500.

*Constraints: Sector Weightings.* None. Sector concentrations result from a combination of macroeconomic analysis and favorable investment opportunities identified by stock-specific fundamental analysis; no specified minimum or maximum exposure to any particular sector.

*Constraints: Liquidity.* None. The SIF's goal is to be fully invested in equities at all times.

*Constraints: Time Horizon.* The SIF assumes an infinite time horizon. The investment thesis for all securities must specify if the security is a short-term (1–2 years) or long-term (3–5 years) component of the SIF portfolio. Short-term positions are limited to 50 percent of the portfolio's holdings.

*Constraints: Taxes.* The University Foundation is a tax-free not-for-profit.

*Constraints: Legal and Regulatory.* The SIF strives to maintain compliance with the Uniform Prudent Investor Act (UPIA) to the best of its ability, subject to the constraints it faces in terms of enrollment and the current class's ability to perform a comprehensive portfolio review.

*Unique Circumstances.* No leverage, short selling, derivative securities or non-equity securities. The SIF invests in equities and cash. Equities may be U.S. or international, provided the security trades on a major U.S. exchange (American depositary receipts, or ADRs, are acceptable securities for the SIF).

*Asset Allocation Targets and Ranges.* U.S./global equities approaching 100 percent, with a small cash balance until proceeds from security sales or dividends can be prudently reinvested.

*Guidelines for Portfolio Adjustments and Rebalancing.* The SIF's goal is to review the entire portfolio annually. A full allocation to a new position is approximately 5 percent of the total value of the portfolio. Positions approaching 10 percent of the total value of the portfolio must be reviewed for possible rebalancing in the current or next semester.

*Sell Discipline.* We will reduce or sell a position if valuation levels significantly exceed industry or sector averages, a previous investment thesis is invalidated by subsequent events, our confidence in management's integrity and ability to execute is compromised, or new ideas offer better risk/reward profiles than an existing holding. If a stock experiences a sudden decline and our research signals a deterioration of our original investment thesis, we will sell the position.

*Schedule for Portfolio and IPS Review.* Annually, or as permitted by course enrollment and the capacity of the current class to perform a complete portfolio review.

## SUMMARY

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- Active equity investors seek to outperform a market index benchmark by identifying individual stocks to buy and sell.
- Passive investors buy and hold stock portfolios for the long term or choose other investment vehicles that minimize costs, including research costs, trading costs, administrative costs, performance fees, and taxes on realized gains.
- The fundamental analysis process featured in this book is termed *top-down* because it begins with an analysis of the overall economy. Gauging the stage of the business cycle in which the economy is operating helps an analyst identify sectors of the stock market to over- and underweight in pursuit of market-beating returns.
- Passive investors outperform active investors in the aggregate.
- Research suggests that two main factors contribute to the outperformance of passive investors: lower costs of trading and committing fewer cognitive errors.
- Active investors need a theory, or model, of how rapidly and accurately new information affects stock prices.
- The three main theories of information and prices are the efficient markets hypothesis, behavioral finance, and the adaptive markets hypothesis.
- An investment policy statement makes clear statements about an investor's or fund's objectives, return expectations, risk tolerance, time horizon, and portfolio allocations that inform the decisions of stock analysts and portfolio managers.

## QUESTIONS

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1. Explain the main differences between active and passive investing, including time horizons and costs structures.
2. Explain the main differences between absolute return and relative return investing.
3. Define the terms alpha and beta in the context of an investment portfolio.
4. According to finance theory, what is the expected difference in stock returns and volatility for high- and low-beta stocks and stock portfolios?
5. Explain the importance of each step of the four-step fundamental analysis process featured in this book. What does it mean to say the process is “top-down”?
6. Define the terms *sector over- and underweights* and *active portfolio weights*.
7. Describe the stock price behavior of Bristol-Myers and Johnson & Johnson during the spring 2012 U.S. stock market correction.
8. Describe the stock price behavior of Wal-Mart and Citigroup before, during, and after the spring 2012 U.S. stock market correction.
9. Over the long term, do active money managers tend to outperform or underperform their benchmark indexes?
10. What are the two major findings of the Barras, Scaillet, and Wermers (2010) paper reviewed by Mark Hulbert?
11. Describe the paradox of active fundamental analysis.
12. Describe the importance of a “catalyst” in the context of fundamental analysis.
13. What is the main idea behind the concept of market efficiency?

14. What is the most practical reason for understanding market efficiency?
15. Describe the behavior of securities prices in an efficient market. According to believers in the efficient markets hypothesis (EMH), what keeps securities prices efficient?
16. What does it mean to say market efficiency has three “levels”?
17. Was IBM’s stock price reaction to their October 2012 earnings announcement efficient? Explain your reasoning.
18. Was Amazon’s stock price reaction to their April 2012 earnings announcement efficient? Explain your reasoning.
19. Do you think analysts’ efforts around the April 2012 Amazon announcement were consistent with the EMH? Explain your reasoning.
20. Identify at least three financial market anomalies that are inconsistent with the EMH.
21. What does the EMH say (and not say) about investors outperforming the market averages?
22. Identify and explain at least three of the cognitive biases recognized by behavioral finance. If investors routinely suffer from these (and other) biases, is it reasonable to think that securities prices reflect information as accurately as the EMH asserts? Explain.
23. Describe the adaptive markets hypothesis (AMH), and compare the predictions of this theory of information and investor behavior with the predictions of the EMH and behavioral finance.
24. Describe the major finding of John Bogle’s paper “An Index Fund Fundamental-ist Goes Back to the Drawing Board.”
25. Explain which “levels” of investing Charles Ellis recommends in his papers “Levels of the Game” and “The Winner’s Game.”
26. Why does Ellis believe that limiting investor activity to the investment levels described in question 25 maximizes investor returns over the long run? Can you relate Ellis’s recommendations to behavioral finance?
27. Describe the major finding of the Dorn, Dorn, and Sengmueller (2008) study.
28. Describe Keynes’s view of how people form their expectations regarding future events. What type of cognitive error identified by behavioral finance corresponds to Keynes’s observations?
29. Why was Keynes concerned about the way modernization of the stock market in the 1920s allowed for a greater disconnection between ownership (stockholders) and management?
30. How does Keynes relate the way people form their expectations regarding the future with the idea of stock and asset bubbles?
31. Describe Keynes’s observations regarding investors’ expectations and volatility.
32. Does Keynes believe that stock valuations are mainly the result of diligent fundamental analysis? Explain.
33. What important lessons can we learn from Keynes’s beauty contest analogy?
34. Describe the importance of Keynes’s observations regarding animal spirits.
35. What type of stocks are emphasized in Morgan Stanley’s Global Equity Growth investment policy statement (IPS)?
36. What type of research environment does Morgan Stanley’s investment policy statement try to create for its analysts, so that superior investment ideas can be identified?

37. Activities: (a) Identify key similarities and differences between the summary of the Morgan Stanley IPS and the sample IPS included in the chapter. (b) Review your fund's IPS and make comparisons with the Morgan Stanley IPS and the sample IPS provided in the chapter.

## ANSWERS TO SELECTED QUESTIONS

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1. Passive investors buy and hold investments for the long term, choosing vehicles that minimize costs and imitate the performance of indexes like the S&P 500. Active investors seek to beat the indexes, and almost always incur higher costs than passive investors, including research costs, trading costs, administrative costs, performance fees, and taxes on gains.
5. Economic analysis determines the current stage of the business and financial cycles. Sectors to over- and underweight are then determined, depending on the current stage of the business and financial cycles. The active weights of individual stocks within each sector depend upon how well they model up on a fundamental basis. Performance attribution analysis identifies why a portfolio under- or outperformed its benchmark.

A "top-down" process begins by analyzing the overall economy, with an emphasis on gauging the stage of the business cycle in which the economy is operating. This activity helps the analyst identify sectors of the stock market in which to deploy new capital, and sectors from which capital should be withdrawn and redeployed.
9. The vast majority of active money managers underperform their benchmarks.
13. Market efficiency is concerned with the extent to which the prices of financial securities promptly and accurately reflect all relevant information.
17. IBM's stock price reaction was swift. The stock declined 4.92 percent on October 17, and another 2.83 percent on October 18. Over those two days, the S&P 500 rose 0.17 percent, so IBM's large price decline was clearly due to the company-specific news release, and not broader information pertaining to the entire market. IBM's reaction is also considered efficient due to the way the stock price behaves after the announcement. Notice that after the two-day price adjustment, IBM's price begins following the market trend once again. There is no significant price "drift" either above or below the market trend. For the following two trading months, IBM loses another 1.5 percent and the market loses 2.9 percent. IBM's reaction to the earnings news therefore appears to be confined to the two-day period following the announcement, consistent with the predictions of the EMH.
21. The EMH does *not* say that no investor will outperform the market. It simply says that investing is so competitive that it is extremely difficult for an investor to consistently outperform.
25. Level 1, the Asset Mix, which involves determining the optimal proportion of equities, bonds, currencies, commodities, real estate and cash, and Level 2, the Equity Mix, which involves establishing a normal policy of growth vs. value stocks, large-cap versus small-cap, domestic versus international, etc.



29. Keynes felt that if the prices of companies' stock were being set by investors and traders, stock values would eventually reflect many irrelevant concerns and ideas, and not the close knowledge of the people actually running the businesses.
33. The analogy is one of the most profound ever made regarding investments. There are two key points. The first concerns the way prices are set in markets. According to Keynes, intrinsic value matters little in markets. Traders are mainly concerned with how the rest of the market is likely to value an asset. Asset prices reflect perceived values (and remember, this is the result of extrapolating "today" into the future, again and again). Second, Keynes's multilevel analogy reveals the subtle thinking that permeates market gamesmanship.

## REFERENCES

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- Barber, Brad, and Terry Odean. 2001. "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment." *Quarterly Journal of Economics* 116: 261–92.
- Barras, Laurent, Olivier Scaillet, and Russ Wermers. 2010. "False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas." *Journal of Finance* 65, February 179–216.
- Bogle, John. 2002. "An Index Fund Fundamentalist Goes Back to the Drawing Board." *Journal of Portfolio Management*, Spring 31–38.
- Carhart, M. 1997. "On Persistence in Mutual Fund Performance." *Journal of Finance* 52: 57–82.
- Dorn, Anne, Daniel Dorn, and Paul Sengmueller. 2008. "Why Do People Trade?" *Journal of Applied Finance*, Fall/Winter: 37–50.
- Eavis, Peter. April 27, 2012. "Analyzing the Unusual Items in Amazon's Earnings." Dealbook, *New York Times Online*, <http://dealbook.nytimes.com/2012/04/27/analyzing-the-unusual-items-in-amazons-earnings/>. Accessed January 28, 2013.
- Ellis, Charles D. "Levels of the Game." *Journal of Portfolio Management*, Winter: 12–15.
- Ellis, Charles D. "The Winner's Game." *Journal of Portfolio Management*, Spring: 27–24.
- Elton, Edwin, Martin Gruber, Sanjiv Das, and Matthew Hlavka. 1993. "Efficiency with Costly Information: A Reinterpretation of Evidence from Managed Portfolios." *Review of Financial Studies* 6(1): 1–22.
- Farmer, D. 2002. "Market Force, Ecology and Evolution." *Industrial and Corporate Change* 11: 895–953.
- Farmer, Dooyne, and Andrew Lo. 1999. "Frontiers of Finance: Evolution and Efficient Markets." *Proceedings of the National Academy of Sciences* 96: 9991–92.
- Fung, H., X. Xu, and J. Yau. 2004. "Do Hedge Fund Managers Display Skill?" *Journal of Investing* 6 (4): 22–31.
- Hulbert, Mark. 2008. "The Prescient Are Few." *New York Times*, July 13, [www.nytimes.com/2008/07/13/business/13stra.html](http://www.nytimes.com/2008/07/13/business/13stra.html). Accessed March 2013.
- Keynes, John Maynard. 2010. *The General Theory of Employment, Interest and Money*. Whitefish, MT: Kessinger Publishing, LLC (originally published in 1936).
- Krinsky, Simon, and Kathryn Hall. 2012, March. "A Roadmap for the Roadmap: Creating an Investment Policy Statement for Endowments and Foundations." San Francisco, CA: Hall Capital Partners, LLC.
- Lo, A. 2008. "Where Do Alphas Come From?" Working paper, MIT Sloan School of Management and AlphaSimplex Group (October).
- Lo, A., and D. Repin. 2002. "The Psychophysiology of Real-Time Financial Risk Processing." *Journal of Cognitive Neuroscience* 14: 323–39.

- Lo, Andrew. 2002. "Bubble, Rubble, Finance in Trouble?" *Journal of Psychology and Financial Markets* 3: 76–86.
- Lo, Andrew. 2004. "The Adaptive Markets Hypothesis: Market Efficiency from an Evolutionary Perspective." *Journal of Portfolio Management* 30: 15–29.
- Lo, Andrew. 2005. "Reconciling Efficient Markets with Behavioral Finance: The Adaptive Markets Hypothesis." *Journal of Investment Consulting* 7: 21–44.
- Lowe, Janet. 1997. *Warren Buffett Speaks: Wit and Wisdom from the World's Greatest Investor*. New York: John Wiley & Sons.
- Ludwig, Olly. 2012. "Passive Reigns as of First Half of 2012." Index Universe. Available online at [www.indexuniverse.com/sections/features/14686-spiva-passive-reigns-as-of-first-half-2012.html](http://www.indexuniverse.com/sections/features/14686-spiva-passive-reigns-as-of-first-half-2012.html). Accessed January 28, 2013.
- Malkiel, Burton, and Atanu Saha. 2005. "Hedge Funds: Risk and Return." *Financial Analysts Journal* 61(6): 80–88.
- Minor, Dylan. 2001. "Beware of Index Fund Fundamentalists." *Journal of Portfolio Management*, Summer: 45–50.
- Morgan Stanley. 2013. *Focus Growth Strategy Profile*. New York: Morgan Stanley Investment Management.
- Nofinsger, John. 2010. *The Psychology of Investing*. Upper Saddle River, NJ: Prentice Hall.
- O'Hara, N. 2009. "They're Supposed to Be Better Than This." *Institutional Investor*, February 19. Available online at [www.institutionalinvestor.com/Article/2113414/Theyre-Supposed-to-Be-Better-Than-This.html](http://www.institutionalinvestor.com/Article/2113414/Theyre-Supposed-to-Be-Better-Than-This.html). Accessed January 28, 2013.
- Pojarliev, M., and R. M. Levich. 2008. "Do Professional Currency Managers Beat the Benchmark?" *Financial Analysts Journal* 64(5): 18–32.
- Putnam Investments. 2013. "Investment Policy Statement and Sample Checklist." Putnam Investments, available online at <https://content.putnam.com/literature/pdf/ID093.pdf>. Accessed January 28, 2013.
- Schumpeter, J. 1975. *Capitalism, Socialism and Democracy*. New York: Harper (originally published in 1942).
- Standard & Poor's. 2008. Standard & Poor's Indices Versus Active Funds (SPIVA) Scorecard, Mid-Year 2008, November 12, [www.standardandpoors.com](http://www.standardandpoors.com). Accessed March 2013.
- Statman, Meir. 2010. *What Investors Really Want*. New York: McGraw-Hill.
- Tilson, W. 2005, November. "Applying Behavioral Finance to Value Investing." Monograph. Denver, CO: T2 Partners LLC.
- Wilson, E. 1975. *Sociobiology: The New Synthesis*. Cambridge, MA: Belknap Press of Harvard University Press.

## NOTES

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1. If we were conducting a formal academic study, we would have also adjusted IBM's stock returns around the announcement for risk by taking IBM's risk (measured as beta) into account.
2. Excerpted with permission of Morgan Stanley Investment Management, © 2013.