

## Investment Policy Statements and Asset Allocation Issues

*In this chapter we will answer the following questions:*

What is asset allocation?

What are four basic risk management strategies?

How and why do investment goals change over a person's lifetime and circumstances?

What are the four steps in the portfolio management process?

Why is a policy statement important to the planning process?

What objectives and constraints should be detailed in a policy statement?

Why is investment education necessary?

What is the role of asset allocation in investment planning?

Why do asset allocation strategies differ across national boundaries?

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rom your study of previous chapters, you should be convinced that *risk drives expected return*. Therefore, the practice of investing funds and managing portfolios should focus primarily on managing risk rather than on managing returns.

In this chapter we examine some of the practical implications of risk management in the context of asset allocation. *Asset allocation* is the process of deciding how to distribute an investor's wealth among asset classes, sectors, and countries for investment purposes. An *asset class* is comprised of securities that have similar characteristics, attributes, and risk–return relationships. A broad asset class such as “bonds” can be divided into smaller asset classes, such as Treasury bonds, corporate bonds, and high-yield bonds. We know that, in the long run, the highest compounded returns will most likely accrue to those investors with larger exposures to risky assets. Although there are no shortcuts or guarantees to investment success, maintaining a reasonable and disciplined approach to investing will increase the likelihood of investment success over time.

The asset allocation decision is not an isolated choice; rather, it is a component of a portfolio management process. In this chapter we present an overview of the four-step portfolio management process. As we will see, the first step in the process is to develop an investment policy statement, or plan, that will guide all future decisions. Much of an asset allocation strategy depends on the investor's policy statement. The policy statement includes the investor's goals or objectives, constraints, and investment guidelines.

To help illustrate this process, most of our examples are in the context of an individual investor; however, the concepts we introduce here—investment objectives, constraints, benchmarks, and so on—apply to any investor, individual or institutional. We will review studies that show the importance of the asset allocation decision and discuss the need for investor education, an important issue for individuals as well as companies who offer retirement or other savings plans to their employees. We conclude by examining asset allocation

strategies across national borders to show the effect of market environment and culture on investing patterns in different countries.

## Managing Risk

Investors have four ways to manage the risks confronting their wealth. One is the *risk-avoidance* strategy, in which investors avoid any reasonable risk of nominal loss of wealth by investing in securities such as FDIC-insured bank CDs and Treasury bills. This is a poor strategy for investing an *entire* portfolio except in the most extreme scenarios. However, it is an acceptable strategy for *part* of the portfolio if cash for a house down payment, car purchase, college tuition bill, or the like will be needed soon.

A *risk-anticipation* strategy assumes risk will occur and tries to position part of the portfolio to protect against it. Such is the case of having a cash reserve for large unexpected bills. In addition to providing a safety cushion, a cash reserve reduces the likelihood of being forced to sell investments at inopportune times to cover unexpected expenses. Most experts recommend a cash reserve of about six months' worth of living expenses. Though called a "cash" reserve, the funds should not actually be in cash; rather, they should be in investments easily converted to cash with little chance of a loss in value—such as money market mutual funds or bank accounts. Purchasing insurance to protect real assets, oneself, or one's family is another component of a risk-anticipation strategy. In fact, certain types of insurance should be a component of any financial plan. Life insurance protects loved ones against financial hardship should death occur before financial goals are met. Experts suggest life insurance coverage should be seven to ten times an individual's annual salary if a family depends on the person for income.<sup>1</sup> Other types of insurance coverage provide protection against other uncertainties. Health insurance helps to pay medical bills. Disability insurance provides continuing income should one become unable to work. Automobile and home (or rental) insurance provide protection against accidents and damage to cars or residences.

A third risk management strategy is *risk transfer*, or "spreading the risk." Insurance plays a role here, too, in that a person can anticipate risk and try to minimize its potential impact by transferring the adverse consequences of risk to someone else. But an investment portfolio can gain from risk-transfer strategies as well. Risk can be transferred from investors who are not willing to bear it to investors who are. This is the role of derivative securities such as futures contracts and options contracts, which we will discuss more fully in Chapters 17 and 18. Just as a farmer can hedge by using futures contracts to lock in a price for his crop well before it is harvested, investors can use derivatives and hedging strategies to protect their portfolios against unfortunate financial scenarios.

*Risk reduction*, the fourth risk management strategy, includes several aspects of investing that we discuss in later chapters. For example, as we mentioned in Chapter 1, investors

<sup>1</sup>Individuals can choose among several basic life insurance contracts. *Term life insurance* provides only a death benefit; depending on the contract, the premium to purchase insurance may change every renewal period. Term insurance is the least expensive life insurance to purchase, although the premium will rise as you age to reflect the increased probability of death. *Universal* and *variable life policies*, although technically different from each other, are similar in that they each provide both a death benefit and a savings plan to the insured. The premium paid on such policies exceeds the cost to the insurance company of providing the death benefit alone; the excess premium is invested in a number of investment vehicles chosen by the insured. The policy's cash value grows over time, in part based on the size of the excess premium and in part on the performance of the underlying investment funds. Insurance companies may restrict the ability to withdraw funds from these policies before the policyholder reaches a certain age.

should diversify across several different types of assets and even countries. The risk of a diversified portfolio is typically less than that of a single risky asset—higher returns in some securities offset lower returns in others over time.<sup>2</sup> Investors reduce risk by doing security analysis (or by hiring professionals such as mutual fund managers to do so) to discover and purchase a diversified set of creditworthy bonds and stocks with apparent upward price potential.

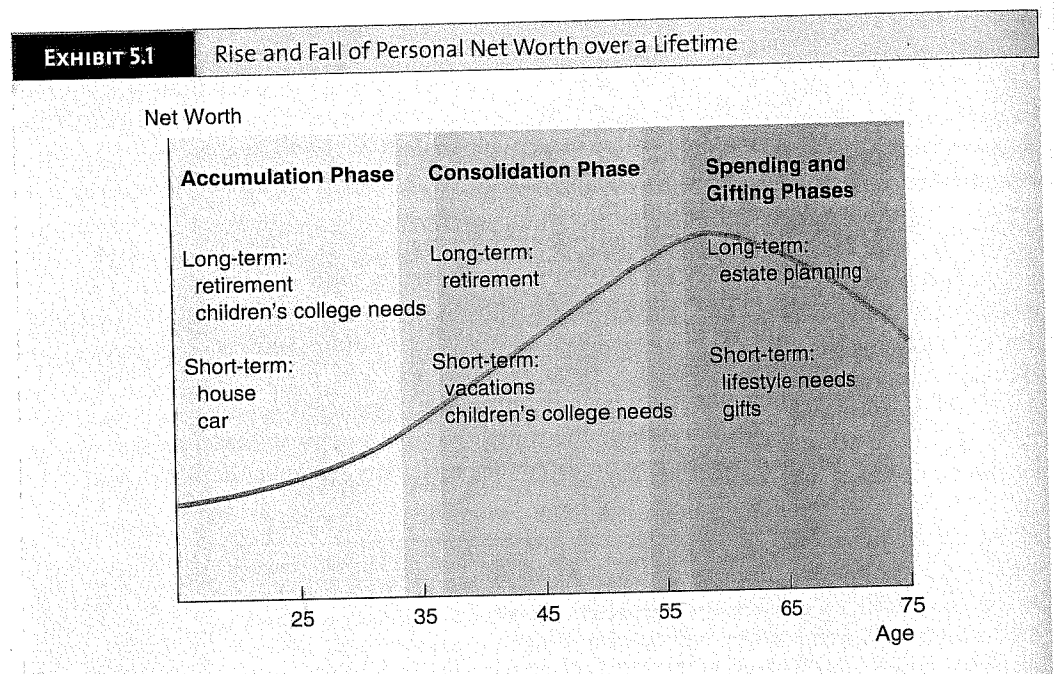
Whether an investor wants to avoid, anticipate, transfer, or reduce risks, each investor must continually determine and manage the risk exposure that is prudent for him or her. Investors' personal financial situations will change over time, as will their risk preferences.

## Individual Investor Life Cycle

Financial plans and investment needs are as different as each individual. Investment needs change over a person's life cycle. How individuals structure their financial plan should be related to their age, financial status, future plans, needs, and risk preferences.

### LIFE-CYCLE INVESTMENT STRATEGIES

Assuming basic insurance and cash reserve needs are met, individuals can start a serious investment program with their savings. Because of changes in their net worth and risk tolerance, individuals' investment strategies will change over their lifetime. Although each individual's needs and preferences are different, some general traits affect most investors over the life cycle. Let's look at the four life-cycle phases shown in Exhibit 5.1.



<sup>2</sup>We discuss portfolio diversification in more detail in Chapter 8.

**Accumulation Phase** Individuals in the early-to-middle years of their working careers are in the *accumulation phase*. As the name implies, they are attempting to accumulate assets to satisfy fairly immediate needs (for example, a down payment for a house) or longer-term goals (children's college education, retirement). Typically, their net worth is small, and debt from car purchases or their own college education may be heavy. As a result of a long investment time horizon and their earning ability, individuals in the accumulation phase are willing to make moderately high-risk investments in the hopes of making above-average nominal returns over time.

Here we must emphasize the wisdom of investing early and regularly in one's life. Funds invested in early life-cycle phases, with returns compounding over time, will reap financial benefits during later phases. Exhibit 5.2 shows growth from an initial \$10,000 investment over twenty, thirty, and forty years at assumed annual returns of 7 and 8 percent. The middle-aged person who invests \$10,000 "when they can afford it" will only reap the benefits of compounding for twenty years or so before retirement. The younger person who saves will reap the much higher benefits of funds invested for thirty or forty years. Regularly investing \$2,000 a year reaps large benefits over time, as well. A person who has invested a total of \$90,000—an initial \$10,000 investment followed by \$2,000 annual investments over forty years—will have over half a million dollars accumulated from the 7 percent return. If the funds are invested more aggressively and earn the 8 percent return, the accumulation will be nearly three-quarters of a million dollars.

**Consolidation Phase** Individuals in the *consolidation phase* are typically past the midpoint of their careers, have paid off much or all of their outstanding debts, and perhaps have paid, or have the assets to pay, their children's college bills. Earnings exceed expenses, so the excess can be invested to provide for future retirement or estate-planning needs. The typical investment horizon is still long (twenty to thirty years), so moderate-to-higher risk investments remain attractive. Some will have concerns about capital preservation and will not want to take large risks that may put their current nest egg in jeopardy. The long-term benefits of compounding will be of some help, but, as we mentioned, the biggest benefits come when investing begins early in life.

**Spending Phase** The *spending phase* typically begins when individuals retire. Living expenses are covered by Social Security income and income from prior investments, including employer pension plans. Because their earning years have concluded (although

**EXHIBIT 5.2** Benefits of Investing Early

		Value of an Initial \$10,000 Investment	Value of Investing \$2,000 Annually	Value of the Initial Investment Plus the Annual Investment
Interest rate	7.0%			
Twenty years		\$38,696.84	\$81,990.98	\$120,687.83
Thirty years		\$76,122.55	\$188,921.57	\$265,044.12
Forty years		\$149,744.58	\$399,270.22	\$549,014.80
Interest rate	8.0%			
Twenty years		\$46,609.57	\$91,523.93	\$138,133.50
Thirty years		\$100,626.57	\$226,566.42	\$327,192.99
Forty years		\$217,245.21	\$518,113.04	\$735,358.25

some retirees take part-time positions or do consulting work), they seek greater protection of their capital. At the same time, they must balance their desire to preserve the nominal value of their savings with the need to protect themselves against a decline in its *real* value because of inflation. The average sixty-five-year-old person in the United States has a life expectancy of about twenty more years. Thus, although their overall portfolio may be less risky than in the consolidation phase, they still need to have some risky growth investments, such as common stocks, for inflation protection.

The transition into the spending phase requires a sometimes difficult change in mindset; throughout our working life we are trying to save; suddenly we can spend. We tend to think that if we spend less, say 4 percent of our accumulated funds annually instead of 5, 6, or 7 percent, our wealth will last far longer. But a bear market early in our retirement can greatly reduce our accumulated funds. Fortunately, there are planning tools that can give a realistic view of what can happen to our retirement funds should markets fall early in our retirement years; this insight can assist in budgeting and planning to minimize the chance of spending (or losing) all the saved retirement funds. Annuities, which transfer risk from the individual to the annuity firm (most likely an insurance company), are another possibility. With an annuity, the recipient receives a guaranteed, lifelong stream of income. Options can allow for the annuity to continue until both a husband and wife die.<sup>3</sup>

**Giftng Phase** The *giftng phase* is similar to, and may be concurrent with, the spending phase. In this stage, individuals believe they have sufficient income and assets to cover their expenses while maintaining a reserve for uncertainties. Excess assets can provide financial assistance to relatives or friends, establish charitable trusts, or fund trusts that provide an estate-planning tool to minimize estate taxes.

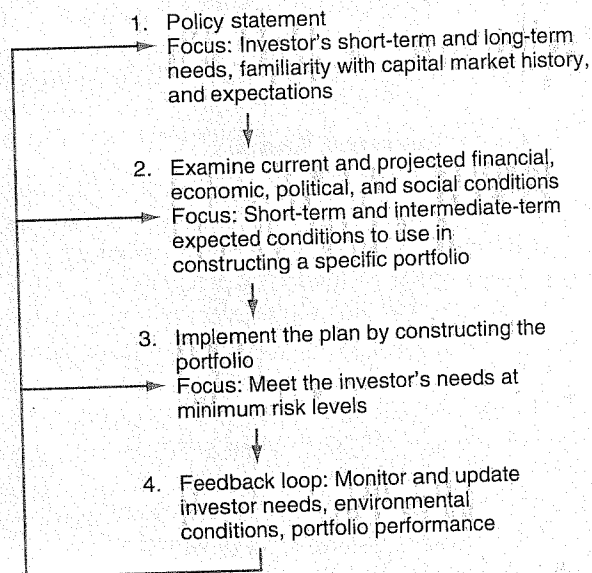
## The Portfolio Management Process

Good portfolio management considers the life-cycle phases just discussed and is a continual process. Once the funds are initially invested according to the plan, the portfolio must be monitored and updated according to the investor's changing needs.

The first step, as seen in Exhibit 5.3, is for the investor to construct a *policy statement*, either alone or with the assistance of an investment adviser. The policy statement is a road map; in it investors specify the types of risks they are willing to take and their investment goals and constraints. All investment decisions are based on the policy statement to ensure they are appropriate for the investor. We will examine the process of constructing a policy statement later in this chapter. Because investor needs change over time, the policy statement must be periodically reviewed and updated.

The process of investing seeks to peer into the future and determine strategies that offer the best possibility of meeting the policy statement guidelines. Thus, the second step is for the investor (or advisor) to study current financial and economic conditions to forecast future trends. The investor's needs (as reflected in the policy statement) and the financial market expectations will jointly determine investment strategy. Economies are dynamic; they are affected by numerous industry struggles, politics, changing demographics, and social attitudes. Thus, the portfolio will require constant monitoring, rebalancing, and updating to reflect such changes in financial market expectations. (We take a closer look at the process of evaluating and forecasting economic trends in Chapter 13.)

<sup>3</sup>See, e.g., Christopher Farrell, "A Better Way to Size Up Your Nest Egg," *BusinessWeek* (January 22, 2001): 100-101; Jonathan Clements, "Retirement Models That Let Reality Bite," *The Wall Street Journal*, February 20, 2001, page C1.

**EXHIBIT 5.3****The Portfolio Management Process**

The third step is to construct the portfolio. With the investor's policy statement and financial market forecasts as inputs, the investor (or advisor) determines how to allocate available funds across different countries, asset classes, and securities. This involves constructing a portfolio that will minimize the investor's risks while meeting the needs specified in the policy statement. Knowledge of financial theory will assist portfolio construction, as we will discuss in Part 3. Some of the practical aspects of selecting specific investments are discussed in Parts 4 and 5.

The fourth step is the continual monitoring of the investor's needs, along with capital market conditions. When necessary, the investor (or advisor) will update the policy statement and modify the investment strategy accordingly. In addition, periodic rebalancing of the portfolio should occur if the asset allocation strays too much from its target level.<sup>4</sup> A major component of the monitoring process is to evaluate a portfolio's performance and compare results to the expectations and the requirements listed in the policy statement. We discuss the evaluation of portfolio performance in Chapter 21.

## The Need for a Policy Statement

As we have noted, a policy statement is a road map that guides the investment process. This road map is an invaluable planning tool that will help the investor understand his or her own needs better as well as assist an advisor or portfolio manager in managing a client's

<sup>4</sup>This can happen, for example, if high returns in the stock market result in faster growth in the equity portion of the portfolio relative to bonds. If stocks represent a higher percentage allocation in the overall portfolio than originally desired, some stocks should be sold and the proceeds reinvested in other assets. The possible consequences of being over-exposed in an asset class must be balanced with the tax implications from realizing capital gains.

funds. While it does not guarantee investment success, a policy statement will provide discipline for the investment process and reduce the possibility of making hasty, inappropriate decisions. There are two important reasons for constructing a policy statement: First, it helps the investor decide on realistic investment goals. Second, it creates a standard by which to judge the performance of the portfolio manager.

### REALISTIC INVESTOR GOALS

When asked what their investment goal is, people often say, “to make a lot of money.” Such a goal has two drawbacks: First, it may not be achievable within the investor’s risk preferences; and second, it is too open-ended to provide guidance for asset selection and time horizons. Thus, an important purpose of a policy statement is to help investors understand their own needs, objectives, and investment constraints. In the process of developing a policy statement, investors learn about financial markets, investment risks, and that a strong positive relationship exists between risk and return. For example, naïve investors will typically focus on a single statistic, such as a 12 percent average annual rate of return on stocks, and expect the market to match that statistic every year. Such thinking ignores the element of risk. The more educated investor will see that it is not unusual for asset prices to decline by 10 percent or even 20 percent or more (as the tech collapse and the Nasdaq returns of 2000–2002 proved) over several months.

As investors become educated about financial markets and risks, they are able to articulate realistic needs and goals that can be communicated in the policy statement. This information will help prevent future aggravation and dissatisfaction on the part of the investor.

### STANDARD FOR EVALUATING PORTFOLIO PERFORMANCE

The policy statement also assists in judging the performance of the portfolio manager. For example, if an investor has stated a low tolerance for risky investments, the portfolio manager should not be fired when the portfolio of lower-risk investments does not perform as well as the risky S&P 500 stock index. Many times the policy statement will specify a *benchmark portfolio*, or comparison standard, aligned with the client’s risk preferences and investment needs. The portfolio manager’s investment performance is then compared to this benchmark portfolio.

Because it sets an objective performance standard, the policy statement acts as a starting point for periodic portfolio review and client communication with managers. Questions concerning portfolio performance or the manager’s faithfulness to the policy can be addressed in the context of the written policy guidelines. It can and should be grounds for dismissal if a portfolio manager makes unilateral deviations from policy, even if those deviations result in higher portfolio returns.

The policy statement also protects the investor in case a current portfolio manager leaves and is replaced by someone else. A clearly written policy statement prevents costly delays during this transition and allows the new manager to “hit the ground running,” creating a seamless transition from one money manager to another.<sup>5</sup>

Thus a clearly written policy statement acts as an objective performance measure, a guard against ethical lapses, and an aid in any transition between money managers.

<sup>5</sup>Investment policy statements are not only for individual financial plans; any investment fund, from a pension fund to endowment fund, should have a policy statement. Despite this “best practice” need, 36 percent of 401(k) plan sponsors do not have a policy statement. This was, however, an improvement over the 52 percent of the plans that lacked investment policy statements in 1998. Meg Glinska, “A Matter of Policy,” *CFO* (August 2000): 99–106; Jill Elswick, *Employee Benefit News* (July 2003).

## Input to the Policy Statement

Before an investor and advisor can construct a policy statement, they need to have an open and frank exchange of information, ideas, fears, and goals. To build a framework for this information-gathering process, the client and advisor need to discuss the client's investment objectives and constraints. We illustrate this framework by discussing the investment objectives and constraints that may confront "typical" twenty-five-year-old and sixty-five-year-old investors.

### INVESTMENT OBJECTIVES

The investor's *objectives* are his or her investment goals expressed in terms of *both* risk and returns. Expressing goals only in terms of returns can lead to inappropriate and even unethical investment practices by the portfolio manager, such as the use of high-risk investment strategies or account "churning," which involves moving quickly in and out of commission-generating investments in an attempt to buy low and sell high.

A client must become informed of investment risks associated with a goal, including the possibility of loss. Since we know that risk drives expected returns, *a careful analysis of the client's risk tolerance should precede any discussion of return objectives*. Investment firms may survey clients directly to gauge their risk tolerance. Sometimes investment periodicals and Web sites contain tests such as Exhibit 5.4, which individuals can take to determine their own risk tolerance. An advisor will then use the results of such evaluations to categorize a client's risk tolerance and suggest, as a first step, asset allocations such as those in Exhibit 5.5.

Risk tolerance is more than a function of an individual's psychological makeup; it is also affected by factors such as an individual's family situation (for example, marital status and the number and ages of children), age, current net worth, and future income expectations. All else being equal, individuals with higher incomes have a greater propensity to take risk because their incomes can help cover any shortfall. Likewise, individuals with larger net worths can afford to place some assets in risky investments while the remaining assets provide a cushion against losses.

A person's return objective may be stated in terms of an absolute return (e.g., "seek an annual average return of 8 percent") or relative percentage return (e.g., "exceed the inflation rate by an average of 3 percent annually"). It may also be stated in terms of a general goal, such as capital preservation, current income, capital appreciation, or total return.

As we learned in Chapter 1, *capital preservation* means the investor wants to maintain the purchasing power of the investment and minimize the risk of loss. In other words, the desired return needs to be no less than the inflation rate. Generally, this is a strategy for strongly risk-averse investors or for funds that will soon be needed, say, for next year's tuition payment or a down payment on a house.

*Capital appreciation* is an appropriate objective for an investor who wants the portfolio to grow in real terms to meet future needs. Under this strategy, growth mainly occurs through capital gains, that is, buying assets at a low price and selling them later at a higher price. This is an aggressive strategy for investors willing to take on risk to meet their objective. Generally, longer-term investors seeking to build a retirement or college education fund may have this goal.

When *current income* is the return objective, an investor wants the portfolio to concentrate on generating income rather than capital gains. Retirees may favor this objective for part of their portfolio to help generate spendable funds.

The objective for the *total return* strategy is similar to that of capital appreciation; namely, the investor wants the portfolio to grow over time to meet a future need. Whereas



**EXHIBIT 5.4****How Much Risk Is Right for You?**

You've heard the expression "no pain, no gain"? In the investment world, the comparable phrase would be "no risk, no reward."

How you feel about risking your money will drive many of your investment decisions. The risk-comfort scale extends from very conservative (you don't want to risk losing a penny regardless of how little your money earns) to very aggressive (you're willing to risk much of your money for the possibility that it will grow tremendously). As you might guess, most investors' tolerance for risk falls somewhere in between.

If you're unsure of what your level of risk tolerance is, this quiz should help.

1. You win \$300 in an office football pool. You:
  - a) spend it on groceries b) purchase lottery tickets
  - c) put it in a money market account d) buy some stock.
2. Two weeks after buying 100 shares of a \$20 stock, the price jumps to over \$30. You decide to: a) buy more stock; it's obviously a winner b) sell it and take your profits c) sell half to recoup some costs and hold the rest d) sit tight and wait for it to advance even more.
3. On days when the stock market jumps way up, you:
  - a) wish you had invested more b) call your financial advisor and ask for recommendations c) feel glad you're not in the market because it fluctuates too much d) pay little attention.
4. You're planning a vacation trip and can either lock in a fixed room-and-meals rate of \$150 per day or book stand-by and pay anywhere from \$100 to \$300 per day. You: a) take the fixed-rate deal b) talk to people who have been there about the availability of last-minute accommodations c) book stand-by and also arrange vacation insurance because you're leery of the tour operator d) take your chances with stand-by.
5. The owner of your apartment building is converting the units to condominiums. You can buy your unit for \$75,000 or an option on it for \$15,000. (Units have recently sold for close to \$100,000, and prices seem to be going up.) For financing, you'll have to borrow the down payment and pay mortgage and condo fees higher than your present rent. You:
  - a) buy your unit b) buy your unit and look for another to buy c) sell the option and arrange to rent the unit yourself d) sell the option and move out because you think the conversion will attract couples with small children.
6. You have been working three years for a rapidly growing company. As an executive, you are offered the option of buying up to 2% of company stock—2,000 shares at \$10 a share. Although the company is privately owned (its stock does not trade on the open market), its majority owner has made handsome profits selling three other businesses and intends to sell this one eventually. You:
  - a) purchase all the shares you can and tell the owner you would invest more if allowed
  - b) purchase all the shares c) purchase half the shares d) purchase a small amount of shares.
7. You go to a casino for the first time. You choose to play: a) quarter slot machines b) \$5 minimum-bet roulette c) dollar slot machines d) \$25 minimum-bet blackjack.
8. You want to take someone out for a special dinner in a city that's new to you. How do you pick a place?
  - a) read restaurant reviews in the local newspaper
  - b) ask co-workers if they know of a suitable place
  - c) call the only other person you know in this city, who eats out a lot but only recently moved there
  - d) visit the city sometime before your dinner to check out the restaurants yourself.
9. The expression that best describes your lifestyle is:
  - a) no guts, no glory b) just do it! c) look before you leap d) all good things come to those who wait.
10. Your attitude toward money is best described as:
  - a) a dollar saved is a dollar earned b) you've got to spend money to make money c) cash and carry only
  - d) whenever possible, use other people's money.

**SCORING SYSTEM:** Score your answers this way: 1) a-1, b-4, c-2, d-3 2) a-4, b-1, c-3, d-2 3) a-3, b-4, c-2, d-1 4) a-2, b-3 c-1, d-4 5) a-3, b-4, c-2, d-1 6) a-4, b-3, c-2, d-1 7) a-1, b-3, c-2, d-4 8) a-2, b-3, c-4, d-1 9) a-4, b-3, c-2, d-1 10) a-2, b-3, c-1, d-4.

**What your total score indicates:**

- 10-17: You're not willing to take chances with your money, even though it means you can't make big gains.
- 18-24: You're semi-conservative, willing to take a small chance with enough information.
- 25-32: You're semi-aggressive, willing to take chances if you think the odds of earning more are in your favor.
- 33-40: You're aggressive, looking for every opportunity to make your money grow, even though in some cases the odds may be quite long. You view money as a tool to make more money.

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**EXHIBIT 5.5**

**Initial Risk and Investment Goal Categories and Asset Allocations Suggested by Investment Firms**

**FIDELITY INVESTMENTS SUGGESTED ASSET ALLOCATIONS:**

	Cash/ Short-Term	Bonds	Domestic Equities	Foreign Equities
Short-term	100%	0%	0%	0%
Conservative	30	50	20	0
Balanced	10	40	45	5
Growth	5	25	60	10
Aggressive growth	0	15	70	15
Most aggressive	0	0	80	20

**VANGUARD INVESTMENTS SUGGESTED ASSET ALLOCATIONS:**

	Cash/Short-Term	Bonds	Stocks
Income-oriented	0%	100%	0%
	0	80%	20%
	0	70%	30%
Balanced	0%	60%	40%
	0	50%	50%
	0	40%	60%
Growth	0%	30%	70%
	0	20%	80%
	0	0%	100%

**T. ROWE PRICE MATRIX**

**Nonretirement Goals Matrix**

		Your Time Horizon		
		3-5 years	6-10 years	11+ years
Your Risk Tolerance	Higher	<b>Strategy 2</b> 20% cash 40% bonds 40% stocks	<b>Strategy 3</b> 10% cash 30% bonds 60% stocks	<b>Strategy 5</b> 100% stocks
	Moderate	<b>Strategy 1</b> 30% cash 50% bonds 20% stocks	<b>Strategy 2</b> 20% cash 40% bonds 40% stocks	<b>Strategy 4</b> 20% bonds 80% stocks
	Lower	<b>All Cash</b> 100% cash	<b>Strategy 1</b> 30% cash 50% bonds 20% stocks	<b>Strategy 3</b> 10% cash 30% bonds 60% stocks

Source: Web sites accessed July 2004: <http://personal.fidelity.com/planning/investment/?refhp=pr>, <http://flagship4.vanguard.com/web/planret/AdvicePTCreatePlanStepIIIChooseYourAssetAlloc.html#>, <http://www.troweprice.com/common/indexHtml3/0,0,htmlid=913,00.html?rfpgid=7934&rfpgid=7934>.

the capital appreciation strategy seeks to do this primarily through capital gains, the total return strategy seeks to increase portfolio value by both capital gains and reinvesting current income. Because the total return strategy has both income and capital gains components, its risk exposure lies between that of the current income and capital appreciation strategies.

**Investment Objective: Twenty-Five-Year-Old** What is an appropriate investment objective for a typical twenty-five-year-old investor? Let's assume he holds a steady job, is a valued employee, has adequate insurance coverage, and has enough money in the bank to provide a cash reserve. Let's also assume that his current long-term, high-priority investment goal is to build a retirement fund. Depending on his risk preferences, he can select a strategy carrying moderate to high amounts of risk because the income stream from his job will grow over time. For his retirement fund goal, a total return or capital appreciation objective would be most appropriate. Here's a possible objective statement:

Invest funds in a variety of moderate- to high-risk investments. The average risk of the equity portfolio should exceed that of a broad stock market index such as the NYSE stock index. Equity exposure should range from 80 percent to 100 percent of the total portfolio with at least 10 percent of the funds in foreign investments. Remaining funds may be invested in intermediate- and long-term notes and bonds.

**Investment Objective: Sixty-Five-Year-Old** Now let's consider a typical sixty-five-year-old investor who has adequate insurance coverage, a cash reserve, and is retiring this year. This individual will want less risk exposure than the twenty-five-year-old investor because her income stream from employment will soon be ending; she will not be able to recover any investment losses by saving more out of her paycheck. Depending on her income from Social Security and her pension, she may need some current income from her retirement portfolio to meet living expenses. Given that she can be expected to live about another fifteen to twenty years, she will need protection against inflation. A risk-averse investor will choose a combination of the current income and capital preservation strategies; a more risk-tolerant investor will choose a combination of current income and total return in an attempt to have principal growth outpace inflation. Here's an example of such an objective statement:

Invest in stock and bond investments to meet income needs (from bond income and stock dividends) and to provide for real growth (from equities). Fixed-income securities should comprise 60–70 percent of the total portfolio; of this, 10–20 percent should be invested in short-term securities for extra liquidity and safety. The remaining 30–40 percent of the portfolio should be invested in high-quality stocks whose risk is approximate to those of the S&P 500 index.

More detailed analyses for our twenty-five- and our sixty-five-year-old investors would make more specific assumptions about the risk tolerance of each, as well as clearly enumerate their investment goals, return objectives, the funds they each have to invest at present, additional expected investment contributions, and expected cash flows each portfolio would need to generate to meet each investor's living expenses.

### INVESTMENT CONSTRAINTS

In addition to the investment objective that sets limits on risk and return, certain other constraints affect the investment plan. These investment constraints include liquidity needs, an investment time horizon, tax factors, legal and regulatory constraints, and unique needs and preferences.

**Liquidity Needs** An asset is *liquid* if it can be quickly converted to cash at a price close to fair market value. Generally, assets are more liquid if many traders are interested in a fairly

standardized product. Treasury bills are a highly liquid security; real estate and venture capital are not.

Investors may have liquidity needs that the investment plan must take into consideration. Although an investor may have a primary long-term goal, several near-term goals may require available funds. For example, wealthy individuals with sizable tax obligations need adequate liquidity to pay their taxes without upsetting their investment plan. Families saving for retirement may need funds for shorter-term purposes such as buying a car or making college tuition payments.

Our typical twenty-five-year-old investor probably has little need for liquidity as he focuses on his long-term retirement fund goal. This constraint may change, however, should he face a period of unemployment or should near-term goals, such as honeymoon expenses or a house down payment, enter the picture. In contrast, our soon-to-be-retired sixty-five-year-old investor has a greater need for liquidity than the younger investor. She will want some of her portfolio in liquid securities to meet unexpected expenses or bills.

**Time Horizon** Time horizon as an investment constraint briefly entered our earlier discussion of near-term and long-term goals. A close (but not perfect) relationship exists between an investor's time horizon, liquidity needs, and ability to handle risk. Investors with long investment horizons generally require less liquidity and can tolerate greater portfolio risk: less liquidity because the funds are not usually needed for many years; greater risk tolerance because any shortfalls or losses can be overcome by returns earned in subsequent years. Investors with shorter time horizons generally favor less risky investments because losses are harder to overcome during a short time frame.

Because of life expectancies, our twenty-five-year-old investor has a longer investment time horizon than our sixty-five-year-old investor. But, as discussed earlier, this does not mean the sixty-five-year-old should place all her money in short-term CDs; she needs the inflation protection that long-term investments such as common stock can provide. Still, because of the time horizon constraint, the twenty-five-year-old will probably have a greater proportion of his portfolio in equities—including stocks in small firms and international firms—than the sixty-five-year-old.

**Tax Concerns** Investment planning is complicated by the tax code; taxes complicate the situation even more if international investments are part of the portfolio. Taxable income from interest, dividends, or rents is taxable at the investor's marginal tax rate. The marginal tax rate is the proportion of the next one dollar in income paid as taxes. Exhibit 5.6 shows the marginal tax rates for different levels of taxable income. As of 2003, the top federal marginal tax rate was 35 percent.

Capital gains or losses arise from asset price changes. They are taxed differently than income. Income is taxed when it is received; capital gains or losses are taxed only when an asset is sold and the gain or loss, relative to its initial cost or *basis*, is realized. *Unrealized capital gains* (or *losses*) reflect the price change in currently held assets that have *not* been sold; the tax liability on unrealized capital gains can be deferred indefinitely. If appreciated assets are passed on to an heir upon the investor's death, the basis of the assets is considered to be their value on the date of the holder's death. The heirs can then sell the assets and pay lower capital gains taxes if they wish. *Realized capital gains* occur when an appreciated asset has been sold; taxes are due on the realized capital gains only. As of 2003, the maximum tax rate on stock dividends and long-term capital gains is 15 percent.

Some find the difference between average and marginal income tax rates confusing. The *marginal tax rate* is the part of each additional dollar in income that is paid as tax. Thus, a married person, filing jointly, with an income of \$50,000 will have a marginal tax rate of 15

**EXHIBIT 5.6** Individual Marginal Tax Rates, 2003For updates, go to the IRS Web site, <http://www.irs.gov>.

	IF TAXABLE INCOME		THE TAX IS		
	Is Over	But Not Over	This Amount	Plus This %	Of the Excess Over
Single	\$0	\$7,000	\$0.00	10%	\$0.00
	\$7,000	\$28,400	\$700.00	15%	\$7,000
	\$28,400	\$68,800	\$3,910.00	25%	\$28,400
	\$68,800	\$143,500	\$14,010.00	28%	\$68,800
	\$143,500	\$311,950	\$34,926.00	33%	\$143,500
	\$311,950	—	\$90,514.50	35%	\$311,950
Married Filing Jointly	\$0	\$14,000	\$0.00	10%	\$0.00
	\$14,000	\$56,800	\$1,400.00	15%	\$14,000
	\$56,800	\$114,650	\$7,820.00	25%	\$56,800
	\$114,650	\$174,700	\$22,282.50	28%	\$114,650
	\$174,700	\$311,950	\$39,096.50	33%	\$174,700
	\$311,950	—	\$84,389.00	35%	\$311,950

percent. The 15 percent marginal tax rate should be used to determine after-tax returns on investments.

The *average tax rate* is simply a person's total tax payment divided by their total income. It represents the average tax paid on each dollar the person earned. From Exhibit 5.6, a married person, filing jointly, will pay \$6,800 in tax on a \$50,000 income [ $\$1,400 + 0.15(\$50,000 - \$14,000)$ ]. This average tax rate is  $\$6,800/\$50,000$  or 13.6 percent. Note that the average tax rate is a weighted average of the person's marginal tax rates paid on each dollar of income. The first \$14,000 of income has a 10 percent marginal tax rate; the next \$36,000 has a 15 percent marginal tax rate:

$$\frac{\$14,000}{\$50,000} \times 0.10 + \frac{\$36,000}{\$50,000} \times 0.15 = 0.136, \text{ or the average tax rate of 13.6 percent}$$

**Investing in Securities**  
For more explanation and an animated example of tax-efficient investing, go to: <http://reillyxtra.swlearning.com>.

Another tax factor is that some sources of investment income are exempt from federal and state taxes. For example, interest on federal securities, such as Treasury bills, notes, and bonds, is exempt from state taxes. Interest on municipal bonds (bonds issued by a state or other local governing body) is exempt from federal taxes. Further, if investors purchase municipal bonds issued by a local governing body of the state in which they live, the interest is exempt from both state and federal income tax. Thus, high-income individuals have an incentive to purchase municipal bonds to reduce their tax liabilities.

The after-tax return on taxable investment income is

$$\text{After-Tax Income Return} = \text{Pre-Tax Income Return} \times (1 - \text{Marginal Tax Rate})$$

Thus, the after-tax return on a taxable bond investment should be compared to that of municipals before deciding which a tax-paying investor should purchase.<sup>6</sup> Alternatively, we

<sup>6</sup>Realized capital gains on municipal securities are taxed, as are all other capital gains; similarly for capital losses. Only the income from municipals is exempt from federal income tax.

could compute a municipal's equivalent taxable yield, which is what a taxable bond investment would have to offer to produce the same after-tax return as the municipal. It is given by

$$\text{Equivalent Taxable Yield} = \frac{\text{Municipal Yield}}{(1 - \text{Marginal Tax Rate})}$$

To illustrate, if an investor is in the 28 percent marginal tax bracket, a taxable investment yield of 8 percent has an after-tax yield of 8 percent  $\times$  (1 - 0.28) or 5.76 percent; an equivalent-risk municipal security offering a yield greater than 5.76 percent offers the investor greater after-tax returns. On the other hand, a municipal bond yielding 6 percent has an equivalent taxable yield of 6 percent / (1 - 0.28) = 8.33 percent; to earn more money after taxes, an equivalent-risk taxable investment has to offer a return greater than 8.33 percent.

There are other means of reducing investment tax liabilities. Contributions to an IRA (individual retirement account) may qualify as a tax deduction if certain income limits are met. Even without that deduction, taxes on any investment returns of an IRA, including any income, are deferred until the funds are withdrawn from the account. Any funds withdrawn from an IRA are taxable as current income, regardless of whether growth in the IRA occurs as a result of capital gains, income, or both. For this reason, to minimize taxes advisors recommend investing in stocks in taxable accounts and bonds in tax-deferred accounts such as IRAs. When funds are withdrawn from a tax-deferred account such as a regular IRA, assets are taxed (at most) at a 35 percent income tax rate (Exhibit 5.6)—even if the source of the stock return is primarily capital gains. In a taxable account, capital gains are taxed at the maximum 15 percent capital gains rate.<sup>7</sup>

The benefits of deferring taxes can dramatically compound over time, as we saw in Chapter 1. For example, \$1000 invested in an IRA at a tax-deferred rate of 8 percent grows to \$10,062.66 over thirty years; in a taxable account (assuming a 28 percent marginal (federal + state) tax rate), the funds would grow to only \$5,365.91. After thirty years, the value of the tax-deferred investment has grown to nearly twice as large as the taxable investment.

With various stipulations, as of 2005 tax-deductible contributions of up to \$4,000 (to be raised to \$5,000 by 2008) can be made to a traditional IRA. A Roth IRA contribution is *not* tax deductible and contribution limits mirror those of the traditional IRA. The returns in a Roth IRA will grow on a tax-deferred basis and can be withdrawn, tax-free, if the funds are invested for at least five years and are withdrawn after the investor reaches age 59½.<sup>8</sup>

For money you intend to invest in some type of IRA, the advantage of the Roth IRA's tax-free withdrawals will outweigh the tax-deduction benefit from the regular IRA—unless you expect your tax rate when the funds are withdrawn to be substantially less than when you initially invest the funds. Let's illustrate this with a hypothetical example.

Suppose you are considering investing \$2,000 in either a regular or Roth IRA. Let's assume for simplicity that your combined federal and state marginal tax rate is 28 percent and that, over your twenty-year time horizon, your \$2,000 investment will grow to \$20,000, tax-deferred in either account; this represents an average annual return of 12.2 percent.

In a Roth IRA, no tax is deducted when the \$2,000 is invested; in a regular IRA, the \$2,000 investment is tax-deductible and will lower your tax bill by \$560 (0.28  $\times$  \$2,000).

<sup>7</sup>For a more complete analysis, see Terry Sylvester Charron, "Tax-Efficient Investing for Tax-Deferred and Taxable Accounts," *Journal of Private Portfolio Management* 2, no. 2 (Fall 1999): 31-37.

<sup>8</sup>Earlier tax-free withdrawals are possible if the funds are to be used for educational purposes or first-time home purchases.

## EXHIBIT 5.7

## Comparing the Regular versus Roth IRA Returns

	Regular IRA	Roth IRA
Invested funds:	\$2,000 + \$560 tax savings on the tax-deductible IRA investment	\$2,000 (no tax deduction)
Time horizon:	20 years	20 years
Rate of return assumption:	12.2 percent tax-deferred on the IRA investment; 8.8 percent on invested tax savings (represents the after-tax return on 12.2 percent)	12.2 percent tax-deferred on the IRA investment
Funds available after 20 years (taxes ignored)	\$20,000 (pre-tax) from IRA investment; \$3,025 (after-tax) from invested tax savings	\$20,000 from IRA investment
Funds available after 20 years, 15 percent marginal tax rate at retirement	\$20,000 less tax ( $0.15 \times \$20,000$ ) plus \$3,025 from invested tax savings equals \$20,025	\$20,000
Funds available after 20 years, 28 percent marginal tax rate at retirement	\$20,000 less tax ( $0.28 \times \$20,000$ ) plus \$3,025 from invested tax savings equals \$17,425	\$20,000
Funds available after 20 years, 40 percent marginal tax rate at retirement	\$20,000 less tax ( $0.40 \times \$20,000$ ) plus \$3,025 from invested tax savings equals \$15,025	\$20,000

Thus, in a Roth IRA, only \$2,000 is assumed to be invested; for a regular IRA, both the \$2,000 and the \$560 tax savings are assumed to be invested. We will assume the \$560 is invested at an after-tax rate of  $12.2\% \times (1 - 0.28) = 8.8$  percent. After twenty years, this amount will grow to \$3,025. The calculations in Exhibit 5.7 show that at the end of the twenty-year time horizon the Roth IRA will give you more after-tax dollars unless you believe your tax bracket will be lower then *and you invest the regular IRA tax savings*.

Another tax-deferred investment is the cash value of life insurance contracts; these accumulate tax-free until the funds are withdrawn. Also, employers may offer 401(k) or 403(b) plans, which allow the employee to reduce taxable income by making tax-deferred investments. Many times employee contributions are matched by employer donations (up to a specified limit), thus allowing the employees to double their investment with little risk.

At times investors face a tradeoff between taxes and diversification needs. If entrepreneurs concentrate much of their wealth in equity holdings of their firm, or if employees purchase substantial amounts of their employer's stock through payroll deduction plans during their working life, their portfolios may contain a large amount of unrealized capital gains. In addition, the risk position of such a portfolio may be quite high because it is concentrated in a single company. The decision to sell some of the company stock in order to diversify the portfolio's risk by reinvesting the proceeds in other assets must be balanced against the resulting tax liability.

Our typical twenty-five-year-old investor probably is in a fairly low tax bracket, so detailed tax planning and tax-exempt income, such as that available from municipals, will not be major concerns. Nonetheless, he should still invest as much as possible into such tax-deferred plans as IRAs or 401(k)s for the retirement portion of his portfolio. If other funds are available for investment, they should be allocated based on his shorter- and longer-term investment goals.

Our sixty-five-year-old investor may face a different situation. If she had been in a high tax bracket prior to retiring—and therefore has sought tax-exempt income and tax-deferred investments—her situation may change shortly after retirement. After her retirement, without large regular paychecks, the need for tax-deferred investments or tax-exempt income becomes less. Taxable income may then offer higher after-tax yields than tax-exempt municipals if her tax bracket is lower. If her employer's stock is a large component of her retirement account, she must make careful decisions regarding the need to diversify versus the cost of realizing large capital gains (in her lower tax bracket).

**Legal and Regulatory Factors** Both the investment process and the financial markets are highly regulated and subject to numerous laws. At times, these legal and regulatory factors constrain the investment strategies of individuals and institutions.

For example, funds removed from a regular IRA, Roth IRA, or 401(k) plan before age 59½ are taxable and subject to an additional 10 percent withdrawal penalty. You may also be familiar with the tag line in many bank CD advertisements—"substantial interest penalty upon early withdrawal." Regulations and rules such as these may make such investments unattractive for investors with substantial liquidity needs in their portfolios.

Regulations can also constrain the investment choices available to someone in a fiduciary role. A *fiduciary*, or trustee, supervises an investment portfolio of a third party, such as a trust account or discretionary account.<sup>9</sup> The fiduciary must make investment decisions in accordance with the owner's wishes; a properly written policy statement assists this process. In addition, trustees of a trust account must meet the prudent-man standard, which means that they must invest and manage the funds as a prudent person would manage his or her own affairs. Notably, the prudent-man standard is based on the composition of the entire portfolio, not each individual asset.<sup>10</sup>

All investors must respect certain laws, such as insider trading prohibitions against the purchase and sale of securities on the basis of important information that is not publicly known. Typically, the people possessing such private, or insider, information are the firm's managers, who have a fiduciary duty to their shareholders. Security transactions based on access to insider information violates the fiduciary trust the shareholders have placed with management because the managers seek personal financial gain from their privileged position as agents for the shareholders.

For our typical twenty-five-year-old investor, legal and regulatory matters will be of little concern, with the possible exception of insider trading laws and the penalties associated with early withdrawal of funds from tax-deferred retirement accounts. Should he seek a financial advisor to assist him in constructing a financial plan, that advisor would have to obey the regulations pertinent to a client-advisor relationship. Similar concerns confront our sixty-five-year-old investor. In addition, as a retiree if she wants to do estate planning and set up trust accounts, she should seek legal and tax advice to ensure her plans are properly implemented.

**Unique Needs and Preferences** This category covers the individual and sometimes idiosyncratic concerns of each investor. Some investors may want to exclude certain investments from their portfolio solely on the basis of personal preference or for social consciousness

<sup>9</sup>A discretionary account is one in which the fiduciary, many times a financial planner or stock broker, has the authority to purchase and sell assets in the owner's portfolio without first receiving the owner's approval.

<sup>10</sup>As we will discuss in Chapter 8, it is sometimes wise to hold assets that are individually risky in the context of a well-diversified portfolio, even if the investor is strongly risk averse.



reasons. For example, they may request that no firms that manufacture or sell tobacco, alcohol, pornography, or environmentally harmful products be included in their portfolio. Some mutual funds screen according to this type of social responsibility criterion.

Another example of a personal constraint is the time and expertise a person has for managing his or her portfolio. Busy executives may prefer to relax during nonworking hours and let a trusted advisor manage their investments. Retirees, on the other hand, may have the time but believe they lack the expertise to choose and monitor investments, so they also may seek professional advice.

In addition, a business owner with a large portion of her wealth—and emotion—tied up in her firm's stock may be reluctant to sell even when it may be financially prudent to do so and then reinvest the proceeds for diversification purposes. Further, if the stock holdings are in a private company, it may be difficult to find a buyer unless shares are sold at a discount from their fair market value. Because each investor is unique, the implications of this final constraint differ for each person; there is no "typical" twenty-five-year-old or sixty-five-year-old investor. Each individual will have to decide—and then communicate specific goals in a well-constructed policy statement.

## Constructing the Policy Statement

As we have seen, the policy statement allows the investor to communicate his or her objectives (risk and return) and constraints (liquidity, time horizon, tax, legal and regulatory, and unique needs and preferences). This communication gives the advisor a better chance of implementing an investment strategy that will satisfy the investor. Even if an advisor is not used, each investor needs to take this first important step of the investment process and develop a financial plan to guide the investment strategy. To do without a plan or to plan poorly is to place the success of the financial plan in jeopardy.

### GENERAL GUIDELINES

Constructing a policy statement is the investor's responsibility, but investment advisors often assist in the process. The following lists of recommendations for both the investor and the advisor provide guidelines for good policy statement construction.

In the process of constructing a policy statement, investors should think about the following set of questions and be able to explain their answers:

1. What are the real risks of an adverse financial outcome, especially in the short run?
2. What probable emotional reactions will I have to an adverse financial outcome?
3. How knowledgeable am I about investments and markets?
4. What other capital or income sources do I have? How important is this particular portfolio to my overall financial position?
5. What, if any, legal restrictions may affect my investment needs?
6. What, if any, unanticipated consequences of interim fluctuations in portfolio value might affect my investment policy?

Adapted from Charles D. Ellis, *Investment Policy: How to Win the Loser's Game*, Homewood IL: Dow Jones-Irwin, 1985, pp. 25–26. Reprinted by permission of The McGraw-Hill Companies.

In assisting an investor in the policy statement process, an advisor should ensure that the policy statement satisfactorily answers the following questions:

1. Is the policy carefully designed to meet the specific needs and objectives of this particular investor? (Cookie-cutter or one-size-fits-all policy statements are generally inappropriate.)
2. Is the policy written so clearly and explicitly that a competent stranger could manage the portfolio in conformance with the client's needs? In case of a manager transition, could the new manager use this policy to handle the portfolio in accordance with the client's needs?
3. Would the client have been able to remain committed to the policies during the capital market experiences of the past sixty to seventy years? That is, does the client fully understand investment risks and the need for a disciplined approach to the investment process?
4. Would the portfolio manager have been able to maintain fidelity to the policy over the same period? (Discipline is a two-way street; we do not want the portfolio manager to change strategies because of a disappointing market.)
5. Would the policy, if implemented, achieve the client's objectives? (Bottom line: would the policy have worked to meet the client's needs?)

Adapted from Charles D. Ellis, *Investment Policy: How to Win the Loser's Game*, Homewood, IL: Dow Jones-Irwin, 1985, p. 62. Reprinted by permission of The McGraw-Hill Companies.

#### FURTHER CONSIDERATIONS

When constructing their policy statements, participants in employer-sponsored retirement plans need to realize that through such plans 30–40 percent of their retirement funds may be invested in their employer's stock. Having so much money invested in one asset violates diversification principles and could be costly. To put this in context, most mutual funds are limited by law to having no more than 5 percent of their assets in any one company's stock; a firm's pension plan can invest no more than 10 percent of their funds in its own stock. Thus, individuals are unfortunately doing what government regulations prevent many institutional investors from doing.<sup>11</sup> In addition, some studies point out that the average stock allocation in retirement plans is lower than it should be to allow for growth of principal over time.

Another consideration is the issue of stock trading. A number of studies have shown that many individual investors trade stocks too often (driving up commissions), sell stocks with gains too early (prior to further price increases), and hold onto losers too long (as the price continues to fall).<sup>12</sup> These results are especially true for men and online traders.<sup>13</sup>

Investors, in general, seem to neglect that important first step to achieve financial success: they do not plan for the future. Studies of retirement plans show that Americans are not saving enough to finance their retirement years and they are not planning sufficiently

<sup>11</sup>Ellen R. Schultz, "Workers Put Too Much in Their Employer's Stock," *The Wall Street Journal*, September 13, 1996, pp. C1, C25.

<sup>12</sup>Brad Barber and Terrance Odean, "Trading Is Hazardous to Your Wealth: The Common Stock Investment Performance of Individual Investors," *Journal of Finance* 55, no. 2 (April 2000): 773–806; Terrance Odean, "Do Investors Trade Too Much?" *American Economic Review* 89 (December 1999): 1279–1298; Brad Barber and Terrance Odean, "The Courage of Misguided Convictions: The Trading Behavior of Individual Investors," *Financial Analysts Journal* 55, no. 6 (November/December 1999): 41–55; Terrance Odean, "Are Investors Reluctant to Realize Their Losses?" *Journal of Finance* 53, no. 5 (October 1998): 1775–1798.

<sup>13</sup>Brad Barber and Terrance Odean, "Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment," *Quarterly Journal of Economics* 116, no. 1 (February 2001): 261–292; Brad Barber and Terrance Odean, "Online Investors: Do the Slow Die First?" University of California at Davis working paper.

for what will happen to their savings after they retire. Around 25 percent of workers have saved less than \$50,000 for their retirement and 60 percent of workers surveyed confessed they were "behind schedule" in planning and saving for retirement.<sup>14</sup>

## The Importance of Asset Allocation

A major reason for investors to develop policy statements is to determine an overall investment strategy. The policy statement should provide guidelines as to which asset classes to include and the relative proportions of funds to invest in each class. How the investor divides funds into different asset classes is the process of *asset allocation*. Asset allocation is usually expressed in ranges. This allows the investment manager some freedom, based on his or her reading of capital market trends, to invest toward the upper or lower end of the ranges. For example, suppose a policy statement requires that common stocks be 60 to 80 percent of the value of the portfolio and that bonds should be 20 to 40 percent. Should a manager be particularly bullish about stocks, he will increase the allocation of stocks toward the 80 percent upper end of the equity range and decrease bonds toward the 20 percent lower end of the bond range. Should he be more optimistic about bonds, that manager may shift the allocation closer to 40 percent of the funds invested in bonds with the remainder in stocks.

In general, four decisions are made when constructing an investment strategy:

1. What asset classes to consider for investment (e.g., stocks, bonds, and T-bills);
2. What normal or policy weights to assign to each eligible asset class, that is, what target asset allocation should be invested in each asset class (e.g., 60 percent stocks, 30 percent bonds, 10 percent T-bills);
3. The allowable allocation ranges based on policy weights (e.g., 50–70 percent stocks, 25–35 percent bonds, 5–15 percent T-bills);
4. What specific securities to purchase for the portfolio.

The asset allocation decision comprises the first two points. How important is this decision to an investor? In a word, *very*. Several studies have examined the effect of the normal policy weights on investment performance, using data from both pension funds and mutual funds, from periods of time extending from the early 1970s to the late 1990s.<sup>15</sup> The studies all found similar results: About 90 percent of a fund's returns over time can be explained by its target asset allocation policy. Exhibit 5.8 shows the relationship between returns on the target or policy portfolio allocation and actual returns on a sample mutual fund.

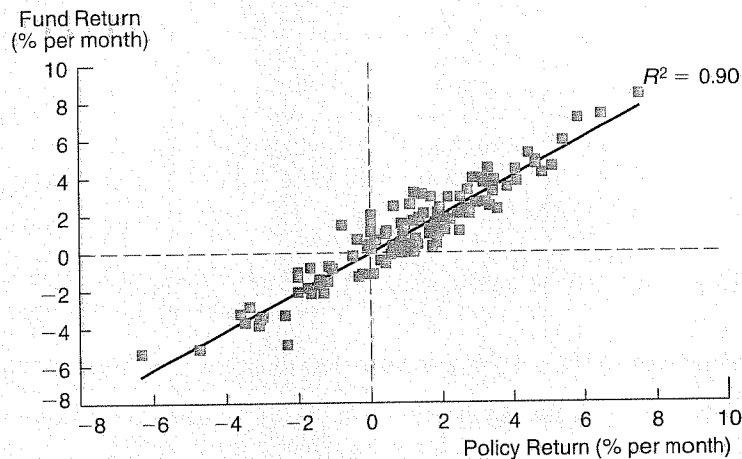
Rather than looking at just one fund and how the target asset allocation determines its returns, some studies have looked at how much the asset allocation policy affects returns on a variety of funds with different target weights. For example, Ibbotson and Kaplan found

<sup>14</sup>Glenn Ruffenach, "Fewer Americans Save for Their Retirement," *The Wall Street Journal*, May 10, 2001, p. A2; Jonathan Clements, "Curb Your Spending, Boost Your Saving and Watch Retirement Nest Egg Grow," *The Wall Street Journal*, September 2, 1997, p. C1; Jonathan Clements, "Squeezing the Right Amount from a Retirement Stash," *The Wall Street Journal*, February 25, 1997, p. C1; Jonathan Clements, "Retirement Honing: How Much Should You Have Saved for a Comfortable Life?" *The Wall Street Journal*, January 28, 1997, p. C1.

<sup>15</sup>Findings discussed in this section are based on Roger G. Ibbotson and Paul D. Kaplan, "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?" *Financial Analysts Journal* 56, no. 1 (January/February 2000): 26–33; Gary P. Brinson, Brian D. Singer, and Gilbert L. Beebower, "Determinants of Portfolio Performance II: An Update," *Financial Analysts Journal* 47, no. 3 (May–June 1991): 40–48; Gary P. Brinson, L. Randolph Hood, and Gilbert L. Beebower, "Determinants of Portfolio Performance," *Financial Analysts Journal* 42, no. 4 (July–August 1986): 39–48.

**EXHIBIT 5.8**

Time-Series Regression of Monthly Fund Return versus Fund Policy Return:  
One Mutual Fund, April 1988–March 1998



Source: Copyright © 2000, Association for Investment Management and Research. Reproduced and republished from "Does Asset Allocation Policy Explain 40, 90, or 100 Percent of Performance?" by Roger G. Ibbotson and Paul D. Kaplan in *Financial Analysts Journal* 56, no. 1 (January–February 2000): 28, with permission from CFA Institute. All Rights Reserved.

that across a sample of funds about 40 percent of the difference in fund returns is explained by their differences in asset allocation policy. And what does asset allocation tell us about the *level* of a particular fund's returns? The Brinson et. al and Ibbotson and Kaplan studies answered that question as well. They divided the policy return (what the fund return would have been had it been invested in indexes at the policy weights) by the actual fund return (which includes the effects of varying from the policy weights and security selection). A hypothetical fund passively invested at the target weights would have a ratio value of 1.0 or 100 percent. A hypothetical fund managed by someone with skill in market timing (for moving in and out of asset classes) and security selection would have a ratio less than 1.0 (or less than 100 percent); that is, the manager's skill would result in an actual fund return greater than the policy return. The studies showed the opposite: the policy-return-actual-return ratio averaged over 1.0, showing that asset allocation explains slightly more than 100 percent of the level of a fund's returns. Because of market efficiency, fund managers practicing market timing and security selection have, on average, difficulty surpassing passively invested index returns after taking into account the expenses and fees of investing.

Thus, asset allocation is a very important decision. Across all funds, the asset allocation decision explains an average of 40 percent of the variation in fund returns. For a single fund, asset allocation explains 90 percent of the fund's variation in returns over time and slightly more than 100 percent of the average fund's level of return. The desire to "get rich quick" by trading in the stock market may lead to a few success stories, but for most investors implementing a prudent asset allocation strategy and investing over time is a more likely means of investment success. A well-constructed policy statement can go a long way toward ensuring that an appropriate asset allocation decision is implemented.

#### RETURNS AND RISKS OF DIFFERENT ASSET CLASSES AND THE CASE FOR STOCKS

All investors with a long time horizon, even those who are very conservative and risk averse, should consider placing some of their portfolio in high-risk assets such as common

**EXHIBIT 5.9****Higher Returns Offered by Equities Over Long Time Periods**  
Time Frame: 1934–2003

Length of Holding Period (calendar years)	Percentage of Periods That Stock Returns Trailed T-Bill Returns*
1	35.7%
5	18.2
10	11.5
20	0.0
30	0.0

\*Price change plus reinvested income

Source: Author calculations.

stocks. As we saw earlier, Exhibit 2.1 illustrated returns (unadjusted for costs and taxes) for several asset classes over time. The higher returns available from equities do come at the cost of higher risk. At times, Treasury bills will outperform equities. Because they are equities, common stocks sometimes lose significant value. These are times when undisciplined and uneducated investors sell their stocks at a loss and vow never to invest in equities again. In contrast, during such times disciplined investors stick to their investment plan and position their portfolio for the next bull market.<sup>16</sup> By holding on to their stocks and perhaps purchasing more at depressed prices, the equity portion of the portfolio will experience a substantial increase in the future. This is precisely why investors need a policy statement and why the investor and manager must understand the capital markets and have a disciplined approach to investing.

The asset allocation decision determines to a great extent both the returns and the volatility of the portfolio. Exhibit 2.1 indicated that stocks are riskier than bonds or T-bills. Exhibit 5.9, which examines the longer-term performance of a stock market index (the S&P 500) and T-bills, shows that stocks have sometimes earned returns lower than those of T-bills for extended periods of time. But over longer periods (twenty years or more) stocks have outperformed T-bills. Thus, sticking with an investment policy and riding out the difficult times can result in attractive long-term rates of return.<sup>17</sup>

One popular way to measure risk is to examine the variability of returns over time by computing a standard deviation or variance of annual rates of return for an asset class. This measure, as reported in Exhibit 2.1, indicates that stocks are risky and T-bills are not. Another intriguing measure of risk is the probability of *not* meeting a given investment return objective. From this perspective, if the investor has a long time horizon, the risk of equities is small and that of T-bills is large because their differences in expected returns leads to a greater possibility of stocks helping an investor meet an objective. T-bill income does not vary much since it depends on the overall level of interest rates. Income from common stock, on the other hand, may start out low but can rise as firms' earnings rise over time and they increase their dividends over time. And when we consider the growth

<sup>16</sup>Newton's law of gravity seems to work two ways in financial markets. What goes up may come down; it also appears that over time what goes down may come back up. Contrarian investors and some "value" investors use this concept to try to outperform the indexes over time.

<sup>17</sup>The added benefits of diversification may reduce overall portfolio risk without harming potential return.

in principal that stocks offer, we see that long-term “conservative,” income-oriented T-bill investors are in fact exposed to substantial amounts of risk.

### REAL INVESTMENT RETURNS AFTER TAXES AND COSTS

Depending on the measures used and the length of the time horizon, common stocks have been earning an average return between 11 percent and 13 percent over time in the United States. For the sake of illustration, let's call it a long-run average of 12 percent. But investors do not actually earn this return because of taxes on income and capital gains and because inflation erodes the real purchasing power of the invested funds.

For example, if the “typical” investor has, over time, an average tax rate of 25 percent, the annual average after-tax (nominal) return becomes 9 percent [12 percent  $\times$  (1 - 0.25)]. Inflation over time has averaged between 3 percent and 4 percent; using 3.5 percent, we calculate the real after-tax return on stocks to be

$$\begin{aligned}\text{Real Return} &= (1 + \text{Nominal Return}) / (1 + \text{Inflation Rate}) - 1 \\ &= (1.09) / (1.035) - 1 = 0.0531 \text{ or about } 5.3 \text{ percent}\end{aligned}$$

Any management fees and expenses for the investment account will lower this return even more.

The bond returns we saw in Exhibit 2.1 occurred over a time when interest rates were generally falling (thus leading to higher bond prices and bond returns). Over a longer period of time, an average return to bonds will be closer to 6 percent. With an average tax bracket of 25 percent, this pre-tax return becomes an after-tax return of 4.5 percent. Once inflation is considered, the real after-tax return on bonds becomes closer to 1.0 percent. Nominal rates on CDs and T-bills become close to zero—or even negative—once the effect of taxes and inflation is considered.

The income return on municipal bonds is tax-exempt, of course, and their yields are lower than taxable corporates and treasuries because of this. So the after-tax return on municipals should be approximately the same as the after-tax return on other bonds. After inflation is factored in, the real return on municipals will likely be in the 1–2 percent range.

As we learned in Chapter 3, TIPS (Treasury-Inflation Protected Securities) offer investors protection from inflation. But the income (including the added yield to compensate for the past year's inflation) is taxable at ordinary income tax rates. And taxes must be paid on all income, even the increased income to compensate for inflation. Thus a TIP paying 5 percent on a nominal basis has an after-tax return of 5 percent  $\times$  (1 - 0.25) = 3.75 percent; on a real basis, this return is less than 1 percent.

The results of this simple analysis imply that, for taxable investments, the only way to maintain purchasing power over time when investing in financial assets is to invest in common stocks. An asset allocation decision for a taxable portfolio that does not include a substantial commitment to common stocks may make it difficult for the portfolio to maintain real value over time.<sup>18</sup>

### ASSET ALLOCATION SUMMARY

A carefully constructed policy statement determines the types of assets that should be included in a portfolio. The asset allocation decision, not the selection of specific stocks and

<sup>18</sup>Of course other equity-oriented investments, such as venture capital or real estate, may also provide inflation protection after adjusting for portfolio costs and taxes.

bonds, determines most of a portfolio's returns over time. Although seemingly risky, investors seeking capital appreciation, income, or even capital preservation over long time periods will do well to include an equity allocation in their portfolio. As reviewed in this section, a strategy's risk may depend on the investor's goals and time horizon. For long time horizons, investing in "safe" T-bills may be riskier than investing in common stocks due to reinvestment risks and the risk of not meeting long-term investment return goals.

## Asset Allocation and Cultural Differences

Thus far our analysis has focused on U.S. investors. Non-U.S. investors approach their asset allocation decisions in much the same manner but the actual allocation decisions differ from those of U.S. investors because they face different social, economic, political, and tax environments. For example, Exhibit 5.10 shows the equity allocations of pension funds, a type of institutional investor, in several countries.

National differences can explain much of the divergent portfolio strategies. Of these four nations, the average age of the population is the highest in Germany and Japan and lowest in Ireland, Hong Kong, the United States, and the United Kingdom, which helps explain the greater use of equities in the latter countries. Government privatization programs during the 1980s in the United Kingdom encouraged equity ownership among individual and institutional investors. Since 1960, the cost of living in the United Kingdom has increased at a rate more than 4.5 times that of Germany; this inflationary bias in the U.K. economy favors equities in U.K. asset allocations. Exhibit 5.11 shows the positive relationship between the inflation level and pension fund equity allocation in various countries, indicating that the economic environment as well as demographics affect asset allocation in a country.

The need to invest in equities for portfolio growth is less in Germany, where workers receive generous state pensions. In addition, Germans tend to show a cultural aversion to the stock market; many are risk-averse and even consider stock investing a form of gambling.

**EXHIBIT 5.10**

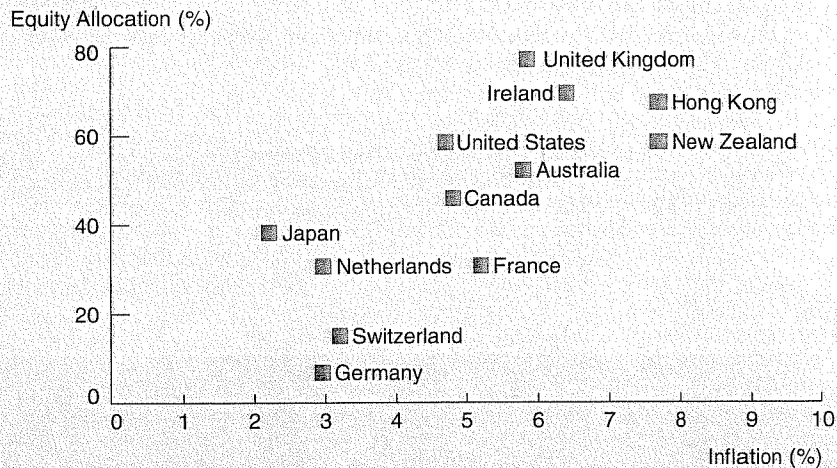
Equity Allocations in Pension Fund Portfolios

Country	Percentage in Equities
Hong Kong	79
United Kingdom	78
Ireland	68
United States	58
Japan	37
Germany	8

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**EXHIBIT 5.11**

Asset Allocation and Inflation for Different Countries; Equity Allocation as of December 1997; Average Inflation Measured over 1980–1997



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Although this attitude is showing signs of change, the German stock market is rather illiquid, with only a handful of stocks accounting for 50 percent of total stock trading volume.<sup>19</sup> Legislation in 2002 that encourages 401(k)-like plans in Germany may encourage citizens to invest more in equities, but in mid-2001, less than 10 percent of Germans over the age of fourteen owned stocks either directly or indirectly (e.g., in mutual funds).<sup>20</sup> As of May 2004, only 14 percent of households in all of western Europe owned stock and only 10 percent owned equity mutual funds.<sup>21</sup>

Legal and regulatory factors play a role in asset allocations across these countries. Until 2002, German regulations prevented pension firms from investing more than 30 percent of their assets in European Union equities. Since 2002, the regulated percentage has risen to 45 percent.<sup>22</sup> Other OECD (Organization for Economic Cooperation and Development) countries place regulatory restrictions on institutional investors as well. For example, pension funds in Austria must have at least 50 percent of their assets in bank deposits or schilling-denominated bonds. Belgium limits pension funds to a minimum 15 percent investment in government bonds. Finland places a 5 percent limit on investments outside its

<sup>19</sup>Peter Gumbel, "The Hard Sell: Getting Germans to Invest in Stocks," *The Wall Street Journal*, August 4, 1995, p. A2.

<sup>20</sup>Christopher Rhoads, "Germany Is Poised for a Pension Overhaul," *The Wall Street Journal*, May 10, 2001, p. A13.

<sup>21</sup>Sara Calian and Silvia Ascarelli, "Europeans Lose Love for Stocks," *The Wall Street Journal*, May 12, 2004, page C1, C2.

<sup>22</sup>Beatrix Payne, "Higher German Limits on Investment Seen as Boon for Equities," *Pension and Investments* (February 4, 2002): 14.



borders by pension funds, and French pension funds must invest a minimum of 34 percent in public debt instruments.<sup>23</sup>

Overall, asset allocation policy and strategy are determined mainly within the context of an individual investor's objectives and constraints. To explain differences in investment behavior across countries, however, we must look at each country's political and economic environment.

<sup>23</sup>Daniel Witschi, "European Pension Funds: Turning More Aggressive?" in *Asset Allocation in a Changing World*, edited by Terence E. Burns, (Charlottesville, VA: Association for Investment Management and Research, 1998): 72-84; Joel Chaffetz, "OECD Eyes Pension Rules," *Pensions and Investments* (December 23, 1996): 2, 34.



## Investments Online

Many inputs go into an investment policy statement as an investor maps out his or her objectives and constraints. Some inputs and helpful information are available in the following Web sites. Many of the sites mentioned in Chapter 1 also contain important information and insights about asset allocation decisions.

**<http://www.ssa.gov>** Information on a person's expected retirement funds from Social Security can be obtained by using the Social Security Administration's Web site.

**<http://www.ibbotson.com>** Ibbotson is the source of much data and analysis that is helpful in the investor-education and asset allocation process. Many professional financial planners make use of Ibbotson's data and education resources.

**<http://www.mfea.com/InvestmentStrategies/Calculators/default.asp>** This page contains links to calculators on Web sites of mutual fund families.

Sites with information and sample Monte Carlo simulations for spending plans in retirement include:

**<http://www.financialengines.com>**, **<http://www.troweprice.com>** (after getting to the individual investor page, click on investment planning and tools, investment planning, and select the investment strategy planner);

**<http://www3.troweprice.com/ric/RIC/>** (for a retirement income calculator); and **<http://www.decisioneering.com>**.

Many professional organizations have Web sites for use by their members, those interested in seeking professional finance designations, and those interested in seeking advice from a professional financial advisor. These sites include:

**<http://www.cfainstitute.org>** CFA Institute awards the CFA (Chartered Financial Analyst) designation. This site provides information about the CFA designation, CFA Institute publications, investor education, and various Internet resources.

**<http://www.amercoll.edu>** This is the Web site for The American College, which is the training arm of the insurance industry. The American College offers the CLU and ChFC designations, which are typically earned by insurance professionals.

**<http://www.cfp.net>** The home page of Certified Financial Planner Board of Standards contains links to find a CFP™ manager and other information about the financial planning profession.

**<http://www.napfa.org>** This is the home page for the National Association of Personal Financial Advisors, the trade group for fee-only financial planners. Fee-only planners do not sell products on commission, or, should they recommend a commission-generating product, they pass the commission on to the investor. This site features press releases, finding a fee-only planner in your area, a list of financial resources on the Web, and position openings in the financial planning field.

**<http://www.fpanet.org>** The Financial Planning Association's Web site offers features and topics of interest to financial planners including information on earning the CFP designation and receiving the *Journal of Financial Planning*.

**<http://www.asec.org>** The home page of the American Savings Education Council.