Risk Management

In this appendix, we describe other types of risks that businesses face, and analyze some of the ways in which they typically manage them.

Coping with Risk

Businesses constantly face two basic types of **risk**—uncertainty about future events. **Speculative risks**, such as financial investments, involve the possibility of gain or loss. **Pure risks** involve only the possibility of loss or no loss. Designing and distributing a new product, for example, is a speculative risk—the product may fail, or it may succeed and earn high profits. In contrast, the chance of a warehouse fire is a pure risk.

For a company to survive and prosper, it must manage both types of risk in a cost-effective manner. We can define the process of **risk management** as conserving the firm's earning power and assets by reducing the threat of losses due to uncontrollable events. In every company, each manager must be alert for risks to the firm and their impact on profits.

The risk-management process usually involves five steps:

Step 1: Identify Risks and Potential Losses Managers analyze a firm's risks to identify potential losses.

Step 2: Measure the Frequency and Severity of Losses and Their Impact To measure the frequency and severity of losses, managers must consider both history and current activities. How often can the firm expect the loss to occur? What is the likely size of the loss in dollars?

Step 3: Evaluate Alternatives and Choose the Techniques That Will Best Handle the Losses Having identified and measured potential losses, managers are in a better position to decide how to handle them. They generally have four choices:

- A firm opts for **risk avoidance** by declining to enter or by ceasing to participate in a risky activity.
- When avoidance is not practical or desirable, firms can practice **risk control**—the use of loss-prevention techniques to minimize the frequency or severity of losses.
- When losses cannot be avoided or controlled, firms must cope with the consequences. When such losses are manageable and predictable, the firm may decide to cover them out of company funds. The firm is said to assume or retain the financial consequences of the loss; hence, the practice is known as **risk retention**.
- When the potential for large risks cannot be avoided or controlled, managers often opt for **risk transfer** to another firm—namely, an insurance company—to protect itself.

Step 4: Implement the Risk-Management Program The means of implementing risk-management decisions depend on both the technique chosen and the activity being managed.

- Risk avoidance for certain activities can be implemented by purchasing those activities from outside providers.
- Risk control might be implemented by training employees and designing new work methods and equipment for on-the-job safety.
- For situations in which risk retention is preferred, reserve funds can be set aside from revenues.
- When risk transfer is needed, implementation means selecting an insurance company and buying the appropriate policies.

Step 5: Monitor Results New types of risks emerge with changes in customers, facilities, employees, and products. Insurance regulations change, and new types of insurance become available. Consequently, managers must continuously monitor a company's risks, reevaluate the methods used for handling them, and revise them as necessary.

Insurance as Risk Management

To deal with some risks, both businesses and individuals may choose to purchase insurance. Insurance is purchased by paying **insurance premiums**—payments to an insurance company to buy a policy and keep it active. In return, the insurance company issues an **insurance policy**—a formal agreement to pay the policyholder a specified amount in the event of certain losses. In some cases, the insured party must also pay a **deductible**, an agreed-upon amount of the loss that the insured must absorb prior to reimbursement. Buyers find insurance appealing because they are protected against large, potentially devastating losses in return for a relatively small sum of money.

With insurance, individuals and businesses share risks by contributing to a fund from which those who suffer losses are paid. Insurance companies are willing to accept these risks because they make profits by taking in more premiums than they pay out to cover policyholders' losses. Although many policyholders are paying for protection against the same type of loss, by no means will all of them suffer such a loss.

Insurable versus Uninsurable Risks Like every business, insurance companies must avoid certain risks. Insurers divide potential sources of loss into *insurable risks* and *uninsurable risks.* They issue policies only for insurable risks. Although there are some exceptions, an insurable risk must meet the following four criteria:

1. *Predictability*: The insurer must be able to use statistical tools to forecast the likelihood of a loss. This forecast also helps insurers determine premiums charged to policyholders.
2. *Casualty*: A loss must result from an *accident*, not from an intentional act by the policyholder. To avoid paying in cases of fraud, insurers may refuse to cover losses when they cannot determine whether policyholders' actions contributed to them.
3. *Unconnectedness*: Potential losses must be random and must occur independently of other losses. No insurer can afford to write insurance when a large percentage of those who are exposed to a particular kind of loss are likely to suffer such a loss. By carefully choosing the risks that it will insure, an insurance company can reduce its chances of a large loss or insolvency.
4. *Verifiability*: Insured losses must be verifiable as to cause, time, place, and amount.

Special Forms of Insurance for Business Businesses have special insurable concerns—*liability*, *property*, *business interruption*, *key person insurance*, and *business continuation agreements*.

Liability Insurance Liability means responsibility for damages in case of accidental or deliberate harm to individuals or property. **Liability insurance** covers losses resulting from damage to people or property when the insured party is judged liable.

A business is liable for any injury to an employee when the injury arises from activities related to the occupation. When workers are permanently or temporarily disabled by job-related accidents or disease, employers are required by law to provide **workers' compensation coverage** for medical expenses, loss of wages, and rehabilitation services.

Property Insurance A firm purchases **property insurance** to cover injuries to itself resulting from physical damage to or loss of real estate or personal property. Property losses may result from fire, lightning, wind, hail, explosion, theft, vandalism, or other destructive forces.

Business Interruption Insurance In some cases, loss to property is minimal in comparison to loss of income. If a firm is forced to close down for an extended time, it will not be able to generate income. During this time, however, certain expenses—such as taxes, insurance premiums, and salaries for key personnel—may continue. To cover such losses, a firm may buy **business interruption insurance**.

Key Person Insurance Many businesses choose to protect themselves against loss of the talents and skills of key employees, as well as the recruitment costs to find a replacement and training expenses once a replacement is hired. **Key person insurance** is designed to offset both lost income and additional expenses.

Business Continuation Agreements Who takes control of a business when a partner or associate dies? Surviving partners are often faced with the possibility of having to accept an inexperienced heir as a management partner. This contingency can be handled in **business continuation agreements**, whereby owners make plans to buy the ownership interest of a deceased associate from his or her heirs. The value of the ownership interest is determined when the agreement is made. Special policies can also provide survivors with the funds needed to make the purchase.

Risk uncertainty about future events

Speculative Risk risk involving the possibility of gain or loss

Pure Risk risk involving only the possibility of loss or no loss

Risk Management process of conserving the firm's earning power and assets by reducing the threat of losses due to uncontrollable events

Risk Avoidance practice of avoiding risk by declining or ceasing to participate in an activity

Risk Control practice of minimizing the frequency or severity of losses from risky activities

Risk Retention practice of covering a firm's losses with its own funds

Risk Transfer practice of transferring a firm's risk to another firm

Insurance Premium fee paid to an insurance company by a policyholder for insurance coverage

Insurance Policy formal agreement to pay the policyholder a specified amount in the event of certain losses

Deductible amount of the loss that the insured must absorb prior to reimbursement

Liability Insurance insurance covering losses resulting from damage to people or property when the insured party is judged liable

Workers' Compensation Coverage coverage provided by a firm to employees for medical expenses, loss of wages, and rehabilitation costs resulting from job-related injuries or disease

Property Insurance insurance covering losses resulting from physical damage to or loss of the insured's real estate or personal property

Business Interruption Insurance insurance covering income lost during times when a company is unable to conduct business

Key Person Insurance special form of business insurance designed to offset expenses entailed by the loss of key employees

Business Continuation Agreement special form of business insurance whereby owners arrange to buy the interests of deceased associates from their heirs

The Legal Context of Business

In this appendix, we describe the basic tenets of U.S. law and show how these principles work through the court system. We'll also survey a few major areas of business-related law.

The U.S. Legal and Judicial Systems

Laws are the codified rules of behavior enforced by a society. In the United States, laws fall into three broad categories according to their origins: *common*, *statutory*, and *regulatory*.

Types of Law

Law in the United States originated primarily with English common law. U.S. law includes the U.S. Constitution, state constitutions, federal and state statutes, municipal ordinances, administrative agency rules and regulations, executive orders, and court decisions.

Common Law Court decisions follow *precedents*, or the decisions of earlier cases. Following precedent lends stability to the law by basing judicial decisions on cases anchored in similar facts. This principle is the keystone of **common law**—the body of decisions handed down by courts ruling on individual cases.

Statutory Law Laws created by constitutions or by federal, state, or local legislative acts constitute **statutory law**. Under the U.S. Constitution, federal statutes take precedence over state and local statutes.

Regulatory Law Statutory law and common law have long histories. Relatively new is **regulatory (or administrative) law**—law made by the authority of administrative agencies.

Although Congress retains control over the scope of agency action, regulations have the force of statutory law once passed. Government regulatory agencies act as a secondary judicial system, determining whether regulations have been violated and then imposing penalties. Much agency activity consists of setting standards for safety or quality and monitoring the compliance of businesses.

Congress has created many new agencies in response to pressure to address social issues. In some cases, agencies were established in response to public concern about corporate behavior. The activities of these agencies have sometimes forced U.S. firms to consider the public interest almost as routinely as they consider their own financial performance.

Keeping an Eye on Business Today a host of agencies regulate U.S. business practices, including:

- Equal Employment Opportunity Commission (EEOC)
- Environmental Protection Agency (EPA)
- Food and Drug Administration (FDA)
- Federal Trade Commission (FTC)
- Occupational Safety and Health Administration (OSHA)

Trends in Deregulation and Regulation Although government regulation has benefited U.S. business in many ways, it is not without its drawbacks. Businesspeople complain—with some justification—that government regulations require too much costly paperwork. Many people in both business and government support broader **deregulation**—the elimination of rules that restrict business activity. Deregulation, they argue, is a primary incentive to innovation; deregulated industries are forced to innovate in order to survive in fiercely competitive industries. Those firms that are already conditioned to compete by being more creative will outperform firms that have been protected by regulatory climates in their home countries.

However, it appears likely that there will be a trend back toward more regulation in the United States, at least for the near future. For one thing, the Democratic party tends to support a larger role for government. Given that the Democrats control both the White House and Congress, more regulation is likely. In addition, many critics blame the financial crisis and economic recession of 2008–2010 on the uncontrolled actions of major U.S. banks and have been calling for more regulation to help prevent a future recurrence of the same mistakes.

The U.S. Judicial System

Much of the responsibility for law enforcement falls to the courts. Litigation is a significant part of contemporary life, and we have given our courts a voice in a wide range of issues, some touching personal concerns, some ruling on matters of public policy that affect all our lives.

The Court System There are three levels in the U.S. judicial system—*federal*, *state*, and *local*. Federal courts hear cases on questions of constitutional law, disputes relating to maritime laws, and violations of federal statutes. They also rule on regulatory actions and on such issues as bankruptcy, postal law, and copyright or patent violation. Both the federal and most state systems embody a three-tiered system of *trial*, *appellate*, and *supreme courts*.

Trial Courts At the lowest level of the federal court system are the **trial courts**, the general courts that hear cases not specifically assigned to another court. Every state has at least one federal trial court, called a *district court*.

Trial courts also include special courts and administrative agencies. Special courts hear specific types of cases, such as cases involving tax evasion, fraud, international disputes, or claims against the U.S. government. Within their areas of jurisdiction, administrative agencies also make judgments much like those of courts.

Courts in each state deal with the same issues as their federal counterparts. However, they may rule only in areas governed by state law. For example, a state special court would hear a case involving state income tax laws. Local courts in each state system also hear cases on municipal ordinances, local traffic violations, and similar issues.

Appellate Courts A losing party may disagree with a trial court ruling. If that party can show grounds for review, the case may go before a federal or state **appellate court**. These courts consider questions of law, such as possible errors of legal interpretation made by lower courts. They do not examine questions of fact.

Supreme Courts Cases still not resolved at the appellate level can be appealed to the appropriate state supreme courts or to the U.S. Supreme Court. If it believes that an appeal is warranted or that the outcome will set an important precedent, the U.S. Supreme Court also hears cases appealed from state supreme courts.

Business Law

Most legal issues confronted by businesses fall into one of six basic areas: *contract*, *tort*, *property*, *agency*, *commercial*, or *bankruptcy law*. These areas cover a wide range of business activity.

Contract Law

A **contract** is any agreement between two or more parties that is enforceable in court. As such, it must meet six conditions. If all these conditions are met, one party can seek legal recourse from another if the other party breaches, or violates, the terms of the agreement.

1 *Agreement.* Agreement is the serious, definite, and communicated offer and acceptance of the same terms.

2 *Consent.* A contract is not enforceable if any of the parties has been affected by an honest mistake, fraud, or pressure.

3 *Capacity.* To give real consent, both parties must demonstrate legal **capacity** (competence). A person under legal age (usually 18 or 21) cannot enter into a binding contract.

4 *Consideration.* An agreement is binding only if it exchanges **considerations**—items of value. Note that items of value do not necessarily entail money. Contracts need not be rational, nor must they provide the best possible bargain for both sides. They need only include legally sufficient consideration. The terms are met if both parties receive what the contract details.

5 *Legality.* A contract must be for a lawful purpose and must comply with federal, state, and local laws and regulations.

6 *Proper form.* A contract may be written, oral, or implied from conduct. It must be written, however, if it involves the sale of land or goods worth more than $500. It must be written if the agreement requires more than a year to fulfill. All changes to written contracts must also be in writing.

Breach of Contract Contract law offers a variety of remedies designed to protect the reasonable expectations of the parties and, in some cases, to compensate them for actions taken to enforce the agreement. As the injured party to a breached contract, any of the following actions might occur:

- You might cancel the contract and refuse to live up to your part of the bargain.
- You might sue for damages up to the amount that you lost as a result of the breach.
- If money cannot repay the damage you suffered, you might demand specific performance, or require the other party to fulfill the original contract.

Tort Law

Tort law applies to most business relationships *not governed by contracts*. A **tort** is a *civil*—that is, noncriminal—injury to people, property, or reputation for which compensation must be paid. Trespass, fraud, defamation, invasion of privacy, and even assault can be torts, as can interference with contractual relations and wrongful use of trade secrets. There are three classifications of torts: *intentional*, *negligence*, and *product liability*.

Laws codified rules of behavior enforced by a society

Common Law body of decisions handed down by courts ruling on individual cases

Statutory Law law created by constitution(s) or by federal, state, or local legislative acts

Regulatory (Administrative) Law law made by the authority of administrative agencies

Deregulation elimination of rules that restrict business activity

Trial Court general court that hears cases not specifically assigned to another court

Appellate Court court that reviews case records of trials whose findings have been appealed

Contract agreement between two or more parties enforceable in court

Capacity competence required of individuals entering into a binding contract

Consideration item of value exchanged between parties to create a valid contract

Tort civil injury to people, property, or reputation for which compensation must be paid

Intentional Torts **Intentional torts** result from the deliberate actions of another person or organization. To remedy torts, courts will usually impose **compensatory damages**—payments intended to redress an injury actually suffered. They may also impose **punitive damages**—fines that exceed actual losses suffered by plaintiffs and are intended to punish defendants.

Negligence Torts Most suits involve charges of **negligence**—conduct that falls below legal standards for protecting others against unreasonable risk.

Product Liability Torts In cases of **product liability**, a company may be held responsible for injuries caused by its products.

Strict Product Liability Since the early 1960s, businesses have faced a number of legal actions based on the relatively new principle of **strict product liability**—the principle that liability can result not from a producer's negligence but from a defect in the product itself. An injured party need only show the following:

1. The product was defective.
2. The defect was the cause of injury.
3. The defect caused the product to be unreasonably dangerous.

Because plaintiffs need not demonstrate negligence or fault, these suits have a good chance of success.

Property Law

Property is anything of value to which a person or business has sole right of ownership. Legally speaking, the right of ownership is itself property.

Within this broad general definition, we can divide property into four categories:

1. **Tangible real property** is land and anything attached to it.
2. **Tangible personal property** is any movable item that can be owned, bought, sold, or leased.
3. **Intangible personal property** cannot be seen but exists by virtue of written documentation.
4. **Intellectual property** is created through a person's creative activities.

Protection of Intellectual Rights The U.S. Constitution grants protection to intellectual property by means of copyrights, trademarks, and patents. Copyrights and patents apply to the tangible expressions of an idea, not to the ideas themselves.

Copyrights **Copyrights** give creators exclusive ownership rights to their intellectual property. Copyrights extend to creators for their entire lives and to their estates for 70 years thereafter.

Trademarks Because the development of products is expensive, companies must prevent other firms from using their brand names. Often, they must act to keep competitors from seducing consumers with similar or substitute products. A producer can apply to the U.S. government for a **trademark**—the exclusive legal right to use a brand name.

Trademarks are granted for 20 years and may be renewed indefinitely if a firm continues to protect its brand name. If a firm allows the brand name to lapse into common usage, it may lose protection. Common usage takes effect when a company fails to use the ® symbol to indicate that its brand name is a registered trademark. It also takes effect if a company seeks no action against those who fail to acknowledge its trademark.

Patents **Patents** provide legal monopolies for the use and licensing of manufactured items, manufacturing processes, substances, and designs for objects. A patentable invention must be *novel*, *useful*, and *nonobvious*. Patents are valid for 20 years, with the term running from the date on which the application was *filed*, not the date on which the patent itself was *issued*.

Restrictions on Property Rights Property rights are not always absolute. For example, rights may be compromised under the following circumstances:

- Utility companies typically have rights called *easements,* such as the right to run wire over private property or to lay cable or pipe under it.
- Under the principle of **eminent domain**, the government may, upon paying owners fair prices, claim private land to expand roads or erect public buildings.

Agency Law

The transfer of property often involves agents. An **agent** is a person who acts for and in the name of another party, called the **principal**. Courts have ruled that both a firm's employees and its outside contractors may be regarded as its agents.

Authority of Agents Agents have the authority to bind principals to agreements. They receive that authority, however, from the principals themselves; they cannot create their own authority. An agent's authority to bind a principal can be **express**, **implied**, or **apparent**.

Responsibilities of Principals Principals have several responsibilities to their agents. They owe agents reasonable compensation, must reimburse them for related business expenses, and should inform them of risks associated with their business activities. Principals are liable for actions performed by agents *within the scope of their employment.* If agents make untrue claims about products or services, the principal is liable for making amends. Employers are similarly responsible for the actions of employees. Firms are often liable in tort suits because the courts treat employees as agents. Businesses are also increasingly being held accountable for *criminal* acts by employees. Court findings have argued that firms are expected to be aware of workers' negative propensities, to check their employees' backgrounds, and to train and supervise employees properly.

Commercial Law

Managers must be well acquainted with the most general laws affecting commerce. Specifically, they need to be familiar with the provisions of the **Uniform Commercial Code (UCC)**, which describes the rights of buyers and sellers in transactions. One key area of coverage by the UCC, contracts, was discussed earlier. Another key area is warranties.

A **warranty** is a seller's promise to stand by its products or services if a problem occurs after the sale. Warranties may be express or implied. The seller specifically states the terms of an **express warranty**, while an **implied warranty** is dictated by law. Implied warranties embody the principle that a product should (1) fulfill the promises made by advertisements and (2) serve the purpose for which it was manufactured and sold. It is important to note, however, that warranties, unlike most contracts, are easily limited, waived, or disclaimed. Consequently, they are the source of tort action more often, as dissatisfied customers seek redress from producers.

Bankruptcy Law

Both organizations and individuals can seek debt relief by filing for bankruptcy—the court-granted permission not to pay some or all incurred debts. Many individuals and businesses file for bankruptcy each year, and their numbers continue to increase. Three main factors account for the increase in bankruptcy filings:

1 The increased availability of credit

2 The "fresh-start" provisions in current bankruptcy laws

3 The growing acceptance of bankruptcy as a financial tactic

In some cases, creditors force an individual or firm into **involuntary bankruptcy** and press the courts to award them payment of at least part of what they are owed. Far more often, however, a person or business chooses to file for court protection against creditors. In general, individuals and firms whose debts exceed total assets by at least $1,000 may file for **voluntary bankruptcy**.

Business Bankruptcy

One of three plans resolves a business bankruptcy:

1 Under a *liquidation plan*, the business ceases to exist. Its assets are sold and the proceeds are used to pay creditors.

2 Under a *repayment plan*, the bankrupt company simply works out a new payment schedule to meet its obligations. The time frame is usually extended, and payments are collected and distributed by a court-appointed trustee.

3 *Reorganization* is the most complex form of business bankruptcy. The company must explain the sources of its financial difficulties and propose a new plan for remaining in business. Reorganization may include a new slate of managers and a new financial strategy. A judge may also reduce the firm's debts to ensure its survival.

Legislation passed since 1994 restricts how long a company can protect itself in bankruptcy while continuing to do business. Critics have charged that many firms

Intentional Tort tort resulting from the deliberate actions of a party

Compensatory Damages monetary payments intended to redress injury actually suffered because of a tort

Punitive Damages fines imposed over and above any actual losses suffered by a plaintiff

Negligence conduct that falls below legal standards for protecting others against unreasonable risk

Product Liability tort in which a company is responsible for injuries caused by its products

Strict Product Liability principle that liability can result not from a producer's negligence but from a defect in the product itself

Property anything of value to which a person or business has sole right of ownership

Tangible Real Property land and anything attached to it

Tangible Personal Property any movable item that can be owned, bought, sold, or leased

Intangible Personal Property property that cannot be seen but that exists by virtue of written documentation

Intellectual Property property created through a person's creative activities

Copyright exclusive ownership right belonging to the creator of a book, article, design, illustration, photo, film, or musical work

Trademark exclusive legal right to use a brand name or symbol

Patent exclusive legal right to use and license a manufactured item or substance, manufacturing process, or object design

Eminent Domain principle that the government may claim private land for public use by buying it at a fair price

Agent individual or organization acting for and in the name of another party

Principal individual or organization authorizing an agent to act on its behalf

Express Authority agent's authority, derived from written agreement, to bind a principal to a certain course of action

Implied Authority agent's authority, derived from business custom, to bind a principal to a certain course of action

Apparent Authority agent's authority, based on the principal's compliance, to bind a principal to a certain course of action

Uniform Commercial Code (UCC) body of standardized laws governing the rights of buyers and sellers in transactions

Warranty seller's promise to stand by its products or services if a problem occurs after the sale

Express Warranty warranty whose terms are specifically stated by the seller

Implied Warranty warranty, dictated by law, based on the principle that products should fulfill advertised promises and serve the purposes for which they are manufactured and sold

Involuntary Bankruptcy bankruptcy proceedings initiated by the creditors of an indebted individual or organization

Voluntary Bankruptcy bankruptcy proceedings initiated by an indebted individual or organization

International Law general set of cooperative agreements and guidelines established by countries to govern the actions of individuals, businesses, and nations have succeeded in operating for many months under bankruptcy protection. During that time, they were able to cut costs and prices, not only competing with an unfair advantage, but also dragging down overall industry profits. The new laws place time limits on various steps in the filing process. The intended effect is to speed the process and prevent assets from being lost to legal fees.

MyBizLab

Gain hands-on experience through an interactive, real-world scenario. This chapter's simulation entitled Business Law is located at **www.mybizlab.com.**

The International Framework of Business Law

Laws vary from country to country, and many businesses today have international markets, suppliers, and competitors. Managers need a basic understanding of the international framework of business law that affects the ways in which they can do business. Issues, such as pollution across borders, are matters of **international law**—the very general set of cooperative agreements and guidelines established by countries to govern the actions of individuals, businesses, and nations themselves.

International law has several sources. One source is custom and tradition. Among countries that have been trading with one another for centuries, many customs and traditions governing exchanges have gradually evolved into practice. Although some trading practices still follow ancient unwritten agreements, there has been a clear trend in more recent times to approach international trade within a more formal legal framework. Key features of that framework include a variety of formal trade agreements.

Another important source of international law is the formal trade treaties that nations negotiate with one another. Governing entities such as the WTO and the EU, for instance, also provide legal frameworks within which participating nations agree to abide.

Managing Your Personal Finances

Dealing with personal finances is a lifelong job involving a crucial choice between two options:

1. Committing to the rational management of your personal finances by controlling them, helping them grow, and therefore enjoying greater personal satisfaction and financial stability.
2. Letting the financial chips fall where they may and hoping for the best (which seldom happens) and therefore inviting frustration, disappointment, and financial distress.

Personal finance management requires consideration of cash management, financial planning and control, investment alternatives, and risk. Let's start by looking at one key factor in success: the personal financial plan. We'll then discuss the steps in the planning process and show how you can make better decisions to manage your personal finances.

Building Your Financial Plan

Financial planning is the process of looking at your current financial condition, identifying your goals, and anticipating steps toward meeting those goals. Because your goals and finances will change as you get older, your plan should always allow for revision. Figure AIII.1 summarizes a step-by-step approach to personal financial planning.

Assessing Your Current Financial Condition

The first step in developing a personal financial plan is assessing your current financial position. Your **personal net worth** is the value of all your assets minus all your

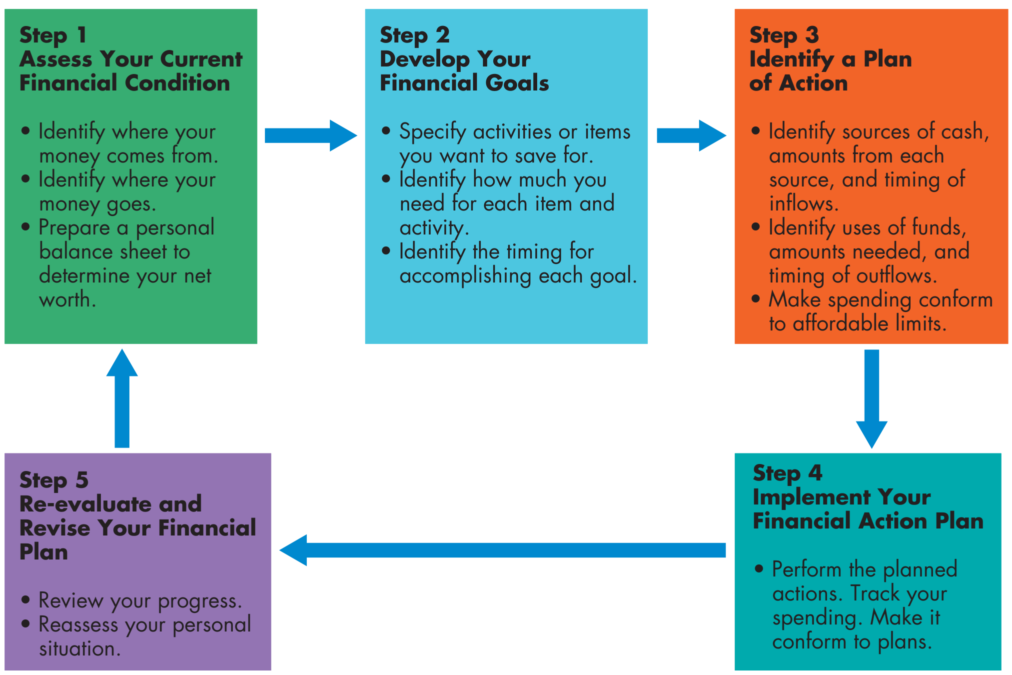

Figure AIII.1 Developing a Personal Financial Plan

Financial Planning process of looking at one's current financial condition, identifying one's goals, and anticipating requirements for meeting those goals

Personal Net Worth value of one's total assets minus one's total liabilities (debts)

Assets: What You Own		Example Numbers	Your Numbers
LIQUID ASSETS:			
1. Cash	$	300	______
2. Savings	+	3,700	______
3. Checking	+	1,200	______
INVESTMENTS:			
4. IRAs	+	12,400	______
5. Securities	+	500	______
6. Retirement Plan	+	—	______
7. Real Estate (other than primary residence)	+	—	______
HOUSEHOLD:			
8. Cars (market value)	+	18,000	______
9. House (market value)	+	—	______
10. Furniture	+	3,400	______
11. Personal Property	+	6,600	______
12. Other assets		—	______
13. Total Assets (add lines 1-12)	**=**	**$46,100**	______
Liabilities (Dept): What You Owe			
CURRENT LIABILITIES:			
14. Credit-card balance	$	1,300	______
15. Unpaid bills due	+	1,800	______
16. Alimony and child support	+	—	______
LONG-TERM LIABILITIES:			
17. Home mortgage	+	—	______
18. Home equity loan	+	—	______
19. Car loan	+	4,100	______
20. Student loan	+	3,600	______
21. Other liabilities	+	2,400	______
22. Total Liabilities (add lines 14-21)	**=**	**$13,200**	______
Net Worth			
23. Total Assets (line 13)		$46,100	______
24. Less: Total Debt (line 22)	–	13,200	______
25. Results: Net Worth	**=**	**$32,900**	______

Figure AIII.2 Worksheet for Calculating Net Worth

liabilities (debts) *at the present time.* The worksheet in Figure AIII.2 provides some sample calculations for developing your own personal "balance sheet." Because assets and liabilities change over time, updating your balance sheet not only allows you to monitor changes, but also provides more accurate information for realistic budgeting and planning.

Develop Your Financial Goals

Step 2 involves setting three different types of future goals: *immediate* (within one year), *intermediate* (within five years), and *long-term* (more than five years). The worksheet in Figure AIII.3 will help you establish these goals. By thinking about your finances in three different time frames, you'll be better able to set measurable goals and completion times, or to set priorities for rationing your resources if, at some point, you're not able to pursue all your goals.

Because step 3 (identifying a plan of action) and step 4 (implementing your plan) will affect your assets and liabilities, your balance sheet will change over time. As a result, step 5 (reevaluating and revising your plan) needs periodic updating.

Name the Goal	Financial Requirement (amount) for This Goal	Time Frame for Accomplishing Goal	Importance (1= highest, 5 = lowest)
Immediate Goals:			
Live in a better apartment	______	______	______
Establish an emergency cash fund	______	______	______
Pay off credit-card debt	______	______	______
Other	______	______	______
Intermediate Goals:			
Obtain adequate life, disability,	______	______	______
liability, property insurance	______	______	______
Save for wedding	______	______	______
Save to buy new car	______	______	______
Establish regular savings program	______	______	______
(5% of gross income)	______	______	______
Save for college for self	______	______	______
Pay off major outstanding debt	______	______	______
Make major purchase	______	______	______
Save for home remodeling	______	______	______
Save for down payment on a home	______	______	______
Other	______	______	______
Long-Term Goals:			
Pay off home mortgage	______	______	______
Save for college for children	______	______	______
Save for vacation home	______	______	______
Increase personal net worth to $___ in ___ years.	______	______	______
Achieve retirement nest egg of $ __ in ___ years.	______	______	______
Accumulate fund for travel in retirement	______	______	______
Save for long-term care needs	______	______	______
Other	______	______	______

Figure AIII.3 Worksheet for Setting Financial Goals

Making Better Use of the Time Value of Money

As discussed in Chapter 16, the value of time with any investment stems from the principle of compound growth—the compounding of interest received over several time periods. With each additional time period, interest receipts accumulate and earn even more interest, thus, multiplying the earning capacity of the investment. Whenever you make everyday purchases, you're giving up interest that you could have earned with the same money if you'd invested it instead. From a financial standpoint, "idle" or uninvested money, which could be put to work earning more money, is a wasted resource.

Planning for the Golden Years

The sooner you start saving, the greater your financial power will be—you will have taken advantage of the time value of money for a longer period of time. Consider coworkers Ellen and Barbara, who are both planning to retire in 25 years, as can be seen in Figure AIII.4.

Over that period, each can expect a 10 percent annual return on investment (the U.S. stock market averaged more than 10 percent for the 75 years before the 2008-2010 recession). Their savings strategies, however, are different: Barbara begins saving immediately, while Ellen

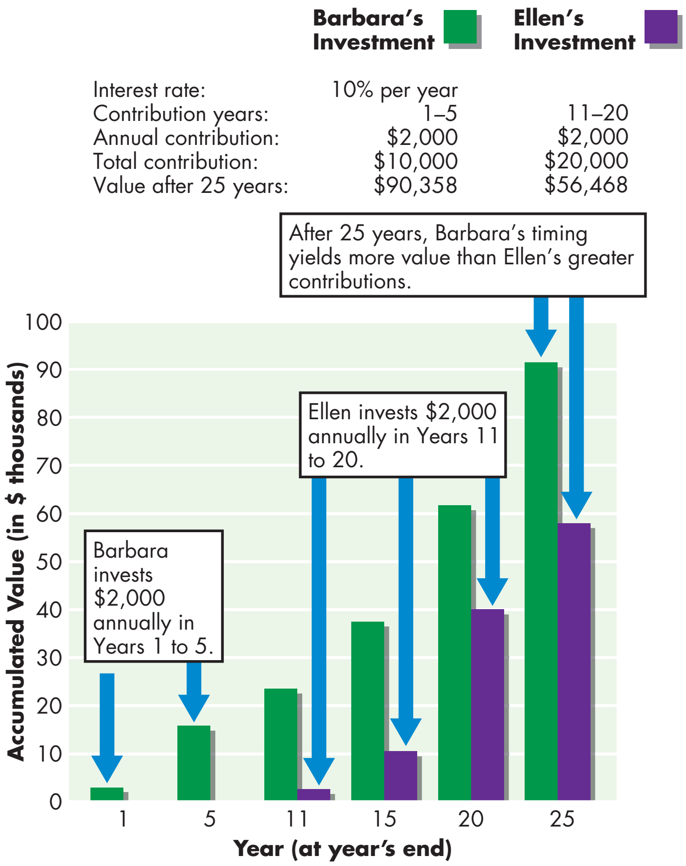

Figure AIII.4 Compounding Money over Time

plans to start later but invest larger sums. Barbara will invest $2,000 annually for each of the next 5 years (years 1 through 5), for a total investment of $10,000. Ellen, meanwhile, wants to live a little larger by spending rather than saving for the next 10 years. Then, for years 11 through 20, she'll start saving $2,000 annually, for a total investment of $20,000. They will both allow annual returns to accumulate until they retire in year 25. Ellen expects to have a larger retirement fund than Barbara because she has contributed twice as much, but she is in for a surprise. Barbara's retirement wealth will be much larger—$90,364 versus Ellen's $56,468—even though she invested only half as much. Barbara's advantage lies in the length of her savings program. Her money is invested longer—over a period of 21 to 25 years—with interest compounding over that range of time. Ellen's earnings are compounded over a shorter period—6 to 15 years. Granted, Ellen may have had more fun in years 1 to 10, but Barbara's retirement prospects look brighter.

Time Value as a Financial-Planning Tool

A good financial plan takes into account future needs, the sources of funds for meeting those needs, and the time needed to develop those funds. When you begin your financial plan, you can use various time-based tables to take into account the time value of money. Figure AIII.5 shows how much a $1.00 investment will grow over different lengths of time and at different interest rates.

A timetable like this can determine the factor at which your money will multiply over a given period of time and at a given interest rate. It can also help you determine how long and at what interest rate you will need to invest to meet your financial goals. For example, if you wanted to double your money in less than 10 years, you would have to find an interest rate of return of at least 8%. The catch is that to obtain a high interest rate, you will have to make riskier investments, such as buying stocks. Because higher interest rates carry greater risks, it is unwise to "put all your eggs in one basket." A sound financial plan will include more conservative investments, such as a bank savings account, to mitigate the risks of more speculative investments.

Conserving Money by Controlling It

A major pitfall in any financial plan is the temptation to spend too much, especially when credit is so easy to get. Because many credit-card issuers target college students and recent graduates with tempting offers appealing to the desire for financial independence, it is important that you arm yourself with a solid understanding of the financial costs entailed by credit cards. The same lessons apply equally to other loans—home mortgages, cars, and student financial aid.

n	1%	2%	4%	6%	8%	10%
1	1.010	1.020	1.040	1.060	1.080	1.100
2	1.020	1.040	1.082	1.124	1.166	1.210
3	1.030	1.061	1.125	1.191	1.260	1.331
4	1.041	1.082	1.170	1.262	1.360	1.464
5	1.051	1.104	1.217	1.338	1.469	1.611
6	1.062	1.126	1.265	1.419	1.587	1.772
7	1.072	1.149	1.316	1.504	1.714	1.949
8	1.083	1.172	1.369	1.594	1.851	2.144
9	1.094	1.195	1.423	1.689	1.999	2.358
10	1.105	1.219	1.480	1.791	2.159	2.594
15	1.161	1.346	1.801	2.397	3.172	4.177
20	1.220	1.486	2.191	3.207	4.661	6.727
25	1.282	1.641	2.666	4.292	6.848	10.834
30	1.348	1.811	3.243	5.743	10.062	17.449

Note: n = Number of time periods % = Various interest rates

Figure AIII.5 Timetable for Growing $1.00

Balance = $5,000	MPD 3%		MPD 5%		MPD 10%	
APR	Months	Costs	Months	Costs	Months	Costs
6%	144	$5,965.56	92	$5,544.58	50	$5,260.74
9%	158	$6,607.24	96	$5,864.56	51	$5,401.63
12%	175	$7,407.50	102	$6,224.26	53	$5,550.32
18%	226	$9,798.89	115	$7,096.70	55	$5,873.86
21%	266	$11,704.63	123	$7,632.92	57	$6,050.28

Note: MPD = Minimum Payment Due APR = Annual Percentage Rate

Figure AIII.6 Paying Off Credit-Card Debt

Credit Cards: Keys to Satisfaction or Financial Handcuffs?

Although some credit cards don't charge annual fees, all of them charge interest on unpaid (outstanding) balances. Figure AIII.6 reprints part of a page from Bankrate.com's credit-card calculator at www.bankrate.com/brm/calc/MinPayment.asp. Using the table as a guide, suppose you owe $5,000 for credit-card purchases, and your card company requires a minimum monthly payment (minimum payment due [MPD]) of 5 percent of the unpaid balance. The interest rate is 18 percent APR (annual percentage rate) on the outstanding balance.

If you pay only the monthly minimum, it will take you 115 months—over 9 1/2 years—to pay off your credit-card debt. During this time you will pay $2,096.70 in interest, almost half again the principal balance! Repayment takes so long because you are making only the MPD, which decreases with each monthly payment.

Save Your Money: Lower Interest Rates and Faster Payments

Figure AIII.6 confirms two principles for saving money that you can apply when borrowing from any source, not just credit cards: Look for lower interest rates and make faster repayments.

Seeking Lower Interest Rates Look again at Figure AIII.6 and compare the cost of borrowing $5,000 at 18 percent with the cost of borrowing it at 9 percent. If you assume the same 5 percent minimum monthly payment, a 9 percent APR will save you $1232.14 in interest during the repayment period—a nearly 59 percent savings.

Making Faster Payments Because money has a time value, lenders charge borrowers according to the length of time for which they borrow it. In general, longer lending periods increase the cost, while shorter periods are cheaper. Using Figure AIII.6, compare the costs of the 5 percent MPD with the faster 10 percent MPD. The faster schedule cuts the repayment period from 115 to 55 months and, at 18 percent APR, reduces interest costs by $1,222.84.

Combining both faster repayment and the lower interest rate cuts your total interest cost to $450.30—a savings of $1,695.07 over the amount you'd pay if you made slower repayments at the higher rate.

Declining Asset Value: A Borrower's Regret

Financially speaking, nothing's more disappointing than buying an expensive item and then discovering that it's not worth what you paid. For example, if you buy a $5,000 used car with a credit card at 18 percent APR and make only the MPD, as in the example above, you'll end up spending a total of $7,407.50 over 9 1/2 years. By that time, however, the car you bought will be worth less than $1,000. Some of this loss in asset value can be avoided through realistic planning and spending—by knowing and staying within your financial means.

Financial Commitments of Home Ownership

Deciding whether to rent or buy a home involves a variety of considerations, including life stage, family needs, career, financial situation, and preferred lifestyle. If you decide to buy, you have to ask yourself what you can afford, and that requires asking yourself questions about your personal financial condition and your capacity for borrowing. Figure AIII.7 summarizes the key considerations in deciding whether to rent or buy.

How Much House Can You Afford?

Buying a home is the biggest investment in most people's lives. Unfortunately, many make the mistake of buying a house that they can't afford, resulting in unnecessary stress and even devastating financial loss. This happened on a massive scale in the housing downfall that began in 2007 and continues today. The seeds for destruction

Renting	Buying
• No down payment to get started	• Must make payments for mortgage, property taxes, and insurance
• Flexibility to leave	• Equity builds up over time
• No obligation for upkeep or improvements	• More privacy
• No groundskeeping	• Value of property may increase
• Easy cash-flow planning (a single monthly payment)	• Lower income taxes: mortgage-interest and property tax payments reduce taxable income
• May provide access to recreation and social facilities	• Financial gains from selling house can be exempt from taxes
• Rental conditions may be changed by owner	• Greater control over use of property and improvements
• Timing for repairs controlled by owner	• The home can become a source of cash by refinancing with another mortgage loan or a home-equity loan

Figure AIII.7 To Buy or Not to Buy

sprouted during the years 2000–2007 when millions of optimistic home buyers borrowed beyond their means by getting larger loans than they could afford. With the rising demand for home ownership, housing prices became inflated and borrowers responded by seeking unrealistically larger loans. They expected market prices would continue to rise indefinitely, thereby providing a profitable investment. Borrowers were aided by lenders using loose credit standards, unlike the time-proven standards presented below, leading to unrealistic repayment requirements. By 2007 the housing market was oversold and the U.S. economy entered a severe recession. With rising unemployment, borrowers were unable to meet monthly payments, especially when interest rates (and thus payments) on loans increased; housing vacancies increased and property values plummeted. Borrowers lost their homes and the equity they had built up in them. Economists predict that the collapsing housing market will continue into 2014.

In addition to loan payments, the typical demands of ownership—time and other resources for maintaining and improving a home—tend to cut into the money left over for recreation, eating out, taking vacations, and so on. You can reduce the financial pressure by calculating in advance a realistic price range—one that not only lets you buy a house but also lets you live a reasonably pleasant life once you're in it.

Most people need a loan to buy a house, apartment, or condominium. A **mortgage loan** is secured by the property—the home—being purchased. Because the size of a loan depends on the cost of the property, both borrowers and lenders want to know whether the buyer can afford the house he or she wants. To determine how much you can afford, one time-tested (though somewhat conservative) rule recommends keeping the price below 2 1/2 times your annual income. If your income is $48,000, look for a house priced below $120,000.

Any such calculation, however, will give you just a rough estimate of what you can afford. You should also consider how much money you have for a down payment and how much you can borrow. Lending institutions want to determine a buyer's borrowing capacity—the borrower's ability to meet the *recurring costs* of buying and owning.

PITI Every month, the homeowner must pay **p**rincipal (pay back some of the borrowed money), along with **i**nterest, **t**axes, and homeowner's **i**nsurance—PITI, for short. As Figure AIII.8 shows, the size of principal and interest payments depends on (1) the mortgage

	Length of Loan				
Interest Rate (%)	3 Years	5 Years	10 Years	20 Years	30 Years
5.0	$299.71	$188.71	$106.07	$66.00	$53.68
6.0	304.22	193.33	111.02	71.64	59.96
6.5	306.49	195.66	113.55	74.56	63.21
7.0	308.77	198.01	116.11	77.53	66.53
8.0	313.36	202.76	121.33	83.65	73.38
9.0	318.00	207.58	126.68	89.98	80.47
10.0	322.67	212.47	132.16	96.51	87.76
11.0	327.39	217.42	137.76	103.22	95.24
12.0	332.14	222.44	143.48	110.11	102.86

Figure AIII.8 Monthly Payments on a $10,000 Loan

ASSUMPTIONS:

30-year mortgage
Closing costs (fees for property, survey, credit report, title search, title insurance, attorney, interest advance, loan origination) = $5,000
Funds available for closing costs and down payment = $25,000
Interest rate on mortgage = $6\frac{1}{2}$% per year
Estimated real estate taxes = $200 per month
Estimated homeowner's insurance = $20 month

Example Numbers		Your Numbers
1. Monthly income, gross (before taxes or deductions)........	$4,000	______
2. Apply PITI ratio (0.28 x amount on line 1) to determine borrower's payment capacity: 0.28 x $4,000 = ...	$1,120	______
3. Determine mortgage payment (principal and interest) by subtracting taxes and insurance from PITI (line 2)..	–$ 220	______
4. Result: Maximum mortgage payment (principal and interest)..................................	**$900**	______
5. Using Table Figure AIII.11, find the monthly mortgage payment on a $10,000 loan at $6\frac{1}{2}$% interest for 30 years...	$63.21	______
6. Since each $10,000 loan requires a $63.21 monthly payment, how many $10,000 loans can the borrower afford with the $900 payment capacity? The answer is determined as follows: $900.00/$63.21 = 14.2382 loans of $10,000 each		______
7. Result: Maximum allowable mortgage loan [calculated as follows: 14.2382 loans (from line 6 above) x $10,000 per loan] = ...	**$142,382**	______
8. Result: Maximum house price borrower can afford using PITI (amount of house that can be bought with available funds):		
From loan..........................	$142,382	______
From down payment...........	$ 25,000	______
Less closing cost................	–$ 5,000	______
....	**$162,382**	______

Figure AIII.9 Worksheet for PITI Calculations

amount, (2) the length of the mortgage loan, and (3) the interest rate.

In evaluating loan applications, lenders use PITI calculations to estimate the buyer's ability to meet monthly payments. To determine how much someone is likely to lend you, calculate 28 percent of your gross monthly income (that is, before taxes and other deductions). If your PITI costs don't exceed that figure, your loan application probably will receive favorable consideration. With a monthly gross income of $4,000, for example, your PITI costs shouldn't exceed $1,120 (28 percent of $4,000). Additional calculations show a house price of $162,382 is the most this borrower can afford. Figure AIII.9 gives a sample calculation, and you should be able to make step-by-step computations by plugging your own numbers into the worksheet.

Other Debt In evaluating financial capacity, lenders also look at any additional outstanding debt, such as loans and credit-card bills. They will generally accept indebtedness (including PITI) up to 36 percent of gross income. Because PITI itself can be up to 28 percent, you

Mortgage Loan loan secured by property (the home) being purchased might be allowed as little as 8 percent in other long-term debt. With your $4,000 monthly gross income, your total debt should be less than $1,440 ($1,120 for PITI and $320 for other debt). If your total debt exceeds $1,440, you may have to settle for a smaller loan than the one you calculated with the PITI method. Web sites such as http://mortgages.interest.com provide mortgage calculators for testing interest rates, lengths of loans, and other personal financial information.

Cashing Out from Tax Avoidance (Legally)

Personal expenditures always require cash outflows; some also reduce your tax bill and save you some cash. Individual retirement accounts (IRAs) and some education savings accounts have this effect. (Before you commit any money to these instruments or activities, check with an expert on tax regulations; they change from time to time.)

The IRA Tax Break

With a **traditional individual retirement account (IRA)**, you can make an annual tax-deductible savings deposit of up to $5,000, depending on your income level. IRAs are long-term investments, intended to provide income after age 59 1/2. For distant future savings, an IRA boasts immediate cash advantages over a typical savings account because it reduces your current taxable income by the amount of your contribution.

Here's how it works: You're a qualified employee with a federal income tax rate of 20 percent in year 2009. If you contribute $4,000 to an IRA, you avoid $800 in income taxes (0.20 × $4,000 = $800). Your untaxed contributions and their accumulated earnings will be taxed later when you withdraw money from your IRA. The tax break is based on the assumption that, after you retire, you're likely to have less total income and will have to pay less tax on the money withdrawn as income from your IRA.

IRA Risks

If you underestimate your future cash requirements and have to withdraw money before you reach 59 1/2, you'll probably get hit with a 10 percent penalty. You can, however, make penalty-free withdrawals under certain circumstances: buying a first home, paying college expenses, and paying large medical bills.

The unpredictability of future income tax rates also poses a financial risk. If tax rates increase substantially, future IRA withdrawals may be taxed at higher rates, which may offset your original tax savings.

Roth IRA versus Traditional IRA

The **Roth IRA** is the reverse of the traditional IRA in that contributions are not tax deductible, withdrawals on initial contribution are not penalized, and withdrawals on accumulated earnings after the age of 59 1/2 are not taxed.

Figure AIII.10 shows the significant advantage of this last feature. Accumulated earnings typically far outweigh the initial contribution, so although you pay an extra $1,285 in front-end taxes, you get $40,732 in additional cash at retirement—and even more if income-tax rates have increased.

IRAs and Education

Depending on your income level, you can contribute up to $2,000 annually to a Coverdell Education Savings Account (also known as an *Education IRA*) for each child under age 18. As with the Roth IRA, your initial contribution is not tax deductible, your earnings are tax-free, and you pay no tax on withdrawals to pay for qualified education expenses. However, the Education IRA requires that you use the money by the time your child reaches age 30. Funds that you withdraw but don't use for stipulated education expense are subject to taxation plus a 10 percent penalty.

Assumptions: Initial contribution and earnings average 10 percent growth annually. Initial contribution and earnings remain invested for 40 years. Income tax rate is 30 percent.	**Traditional IRA**	**Roth IRA**
Initial cash contribution to IRA	$3,000	$3,000
Income tax paid initially: $4,285 income x 30% tax rate = $1,285 tax	0	1,285
Total initial cash outlay	**$3,000**	**$4,285**
Accumulated earnings (40 years)	$132,774	$132,774
Initial contribution	+ 3,000	+ 3,000
Total available for distribution after 40 years	= $135,774	= $135,774
Income tax at time of distribution	– $40,732	0
After-tax distribution (cash)	**= $95,042**	**= $135,774**

Figure AIII.10 Cash Flows: Roth IRA versus Traditional IRA

Protecting Your Net Worth

With careful attention, thoughtful saving and spending, and skillful financial planning (and a little luck), you can build up your net worth over time. Every financial plan should also consider steps for preserving it. One approach involves the risk–return relationship discussed in Chapter 16. Do you prefer to protect your current assets, or are you willing to risk them in return for greater growth? At various life stages and levels of wealth, you should adjust your asset portfolio to conform to your risk and return preferences: conservative, moderate, or aggressive.

Why Buy Life Insurance? You can think of life insurance as a tool for financial preservation. As explained in Appendix I, a life insurance policy is a promise to pay beneficiaries after the death of the insured party who paid the insurance company premiums during his or her lifetime.

Gain hands-on experience through an interactive, real-world scenario. This chapter's simulation entitled Personal Finance is located at **www.mybizlab.com.**

What Does Life Insurance Do? Upon the death of the policyholder, life insurance replaces income on which someone else is dependent. The amount of insurance you need depends on how many other people rely on your income. For example, while insurance makes sense for a married parent who is a family's sole source of income, a single college student with no financial dependents needs little or no insurance.

How Much Should I Buy? The more insurance you buy, the more it's going to cost you. To estimate the amount of coverage you need, begin by adding up all your annual expenses—rent, food, clothing, transportation, schooling, debts to be paid—that you pay for the dependents who'd survive you. Then multiply the total by the number of years that you want the insurance to cover them. Typically, this sum will amount to several times—even 10 to 20 times—your current annual income.

Why Consider Term Insurance? *Term insurance* pays a predetermined benefit when death occurs during the stipulated policy term. If the insured outlives the term, the policy loses its value and simply ceases. Term-life premiums are significantly lower than premiums for whole-life insurance.

Unlike term life, *whole-life insurance*—also known as *cash-value insurance*—remains in force as long as premiums are paid. In addition to paying a death benefit, whole life accumulates cash value over time—a form of savings. Paid-in money can be withdrawn; however, whole-life savings earn less interest than most alternative forms of investment.

How Much Does It Cost? The cost of insurance depends on how much you buy, your life expectancy, and other statistical risk factors. To get the best match between your policy and your personal situation, you should evaluate the terms and conditions of a variety of policies. You can get convenient comparisons on Web sites such as www.intelliquote.com.

Traditional Individual Retirement Account (IRA) provision allowing individual tax-deferred retirement savings

Roth Ira provision allowing individual retirement savings with tax-free accumulated earnings