

Chapter 14: Personal Finances

14.OD Common Questions

14.1 Where Does Your Money Go?

14.2 Financial Planning

14.3 Time is Money

14.4 The Financial Planning Process

14.5 A House is Not a Piggy Bank: A Few Lessons From the Subprime Crisis

14.6 Investing for the Future

Learning Objectives

14.1.1 Offer advice to someone who is burdened with debt.

14.1.2 Offer advice to someone whose monthly bills are too high.

14.2.1 Define *personal finances* and *financial planning*.

14.2.2 Explain the *financial planning life cycle*.

14.2.3 Discuss the advantages of a college education in meeting short- and long-term financial goals.

14.2.4 Describe the steps you'd take to get a job offer and evaluate alternative job offers, taking benefits into account.

14.2.5 Understand the ways to finance a college education.

14.3.1 Explain *compound interest* and *the time value of money*.

14.3.2 Discuss the value of getting an early start on your plans for saving.

14.4.1 Identify the three stages of the *personal-finances planning process*.

14.4.2 Explain how to draw up a personal *net-worth statement*, a personal *cash-flow statement*, and a personal *budget*.

14.5.1 Discuss the trend in the U.S. savings rate.

14.5.2 Define a *subprime loan* and explain the difference between a *fixed-rate mortgage* and an *adjustable-rate mortgage*.

14.5.3 Discuss what can go wrong with a subprime loan at an adjustable rate. Discuss what can go wrong with hundreds of thousands of subprime loans at adjustable rates.

14.5.4 Define *risk* and explain some of the risks entailed by personal financial transactions.

14.6.1 Describe how the factors: safety and risk; income; growth; liquidity; diversification, and time, impact your investment decisions.

14.6.2 Gain an understanding of your risk tolerance and develop the ability to select appropriate investment vehicles.

Opening Discussion: Common Questions

Do you wonder where your money goes? Do you have trouble controlling your spending? Have you run up the balances on your credit cards or gotten behind in your payments and hurt your credit rating? Do you worry about how you'll pay off your student loans? Would you like to buy a new car or even a home someday and you're not sure where the money will come from? If you do have extra money, do you know how to invest it? Do you know how to find the right job for you, land an offer, and evaluate the company's benefits? If these questions seem familiar to you, you could benefit from help in managing your personal finances. This chapter will provide that help.

14.1



Carefully managing your personal finances makes it possible for you to buy a new car, go on a vacation, or afford your dream home.

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Where Does Your Money Go?

Let's say that you're single and twenty-eight. You have a good education and a good job—you're pulling down \$60K working with a local accounting firm. You have \$6,000 in a retirement savings account, and you carry three credit cards. You plan to buy a house (maybe a condo) in two or three years, and you want to take your dream trip to the world's hottest surfing spots within five years (or, at the most, ten). Your only big worry is the fact that you're \$70,000 in debt, mostly from student loans, your car loan, and credit card debt. In fact, even though you've been gainfully employed for a total of six years now, you haven't been able to make a dent in that \$70,000. You can afford the necessities of life and then some, but you've occasionally wondered if you're ever going to have enough income to put something toward that debt (USA TODAY's, 2011).

Now let's suppose that while browsing through a magazine in the doctor's office, you run across a short personal-finances self-help quiz. There are two sets of three statements each, and you're asked to check off each statement with which you *agree*:

Part 1

- If I didn't have a credit card in my pocket, I'd probably buy a lot less stuff.
- My credit card balance usually goes up at the holidays.
- If I really want something that I can't afford, I put it on my credit card or sign up for a payment plan.

Part 2

- I can barely afford my apartment.
- Whenever something goes wrong (car repairs, doctors' bills), I have to use my credit card.
- I almost never spend money on stuff I don't need, but I always seem to owe a balance on my credit card bill.

At the bottom of the page, you're asked whether you agreed with *any* of the statements in Part 1 and *any* of the statements in Part 2. It turns out that you answered yes in both cases and are thereby informed that you're probably jeopardizing your entire financial future.

Unfortunately, personal-finances experts tend to support the author of the quiz: if you agreed with any statement in Part 1, you have a problem with splurging; if you agreed with any statement in Part 2, your monthly bills are too high for your income.

Building a Good Credit Rating

So, you have a financial problem: according to the quick test you took, you're a splurger and your bills are too high for your income. How does this put you at risk? If you get in over your head and can't make your loan or rent payments on time, you risk hurting your credit—your ability to borrow in the future.

Let's talk about your credit. How do potential lenders decide whether you're a good or bad credit risk? If you're a poor credit risk, how does this affect your ability to borrow, or the rate of interest you have to pay, or both? Here's the story. Whenever you use credit, those you borrow from (retailers, credit card companies, banks) provide information on your debt and payment habits to three national credit bureaus: Equifax, Experian, and TransUnion. The credit bureaus use the information to compile a numerical credit score, generally called a FICO score; it ranges from 300 to 900, with the majority of people falling in the 600–700 range. (Here's a bit of trivia to bring up at a dull party: FICO stands for Fair Isaac Company—the company that developed the score.) In compiling the score, the credit bureaus consider five criteria: payment history—do you pay your bills on time? (the most important), total amount owed, length of your credit history, amount of new credit you have, and types of credit you use. The credit bureaus share their score and other information about your credit history with their subscribers.

So what does this do for you? It depends. If you paid your bills on time, carried only a reasonable amount of debt, didn't max out your credit cards, had a history of borrowing, hadn't applied for a bunch of new loans, and borrowed from a mix of lenders, you'd be in good shape. Your FICO score would be high and lenders would like you. Because of your high credit score, they'd give you the loans you asked for at reasonable interest rates. But if your FICO score is low (perhaps you weren't so good at paying your bills on time), lenders won't like you and won't lend you money (or would lend it to you at high interest rates). A low FICO score can raise the amount you have to pay for auto insurance and cell phone plans and can even affect your chances of renting an apartment or landing a particular job. So it's very, very, very (the last "very" is for emphasis) important that you do everything possible to earn a high credit score. If you don't know your score, here is what you should do: go to <https://www.quizzle.com/> and request a free copy of your credit report.

As a young person, though, how do you build a credit history that will give you a high FICO score? Your means for doing this changed in 2009 with the passage of the Credit CARD Act, federal legislation designed to stop credit card issuers from treating its customers unfairly (Irby, 2011). Based on feedback from several financial experts, Emily Starbuck Gerson and Jeremy Simon of CreditCards.com compiled the following list of ways students can build good credit (Gerson & Simon, 2011).

1. *Become an authorized user on your parents' account.* According to the rules set by the Credit CARD Act, if you are under age twenty-one and do not have independent income, you can get a credit card in your own name **only** if you have a cosigner (who is over twenty-one and does have an income). This is a time when a parent can come in handy. Your parent could add you to his or her credit card account as an authorized user. Of course, this means your parent will know what you're spending your money on (which

could make for some interesting conversations). But, on the plus side, by piggybacking on your parent's card you are building good credit (assuming, of course, that your parent pays the bill on time).

2. *Obtain your own credit card.* If you can show the credit card company that you have sufficient income to pay your credit card bill, you might be able to get your own card. It isn't as easy to get a card as it was before the passage of the Credit CARD Act, and you won't get a lot of goodies for signing up (as was true before), but you stand a chance.
3. *Get the right card for you.* If you meet the qualifications to get a credit card on your own, look for the best card for you. Although it sounds enticing to get a credit card that gives you frequent flyer miles for every dollar you spend, the added cost for this type of card, including higher interest charges and annual fees, might not be worth it. Look for a card with a low interest rate and no annual fee. As another option, you might consider applying for a retail credit card, such as a Target or Macy's card.
4. *Use the credit card for occasional, small purchases.* If you do get a credit card or a retail card, limit your charges to things you can afford. But don't go in the other direction and put the card in a drawer and never use it. Your goal is to build a good credit history by showing the credit reporting agencies that you can handle credit and pay your bill on time. To accomplish this, you need to use the card.
5. *Avoid big-ticket buys, except in case of emergency.* Don't run up the balance on your credit card by charging high-cost, discretionary items, such as a trip to Europe during summer break, which will take a long time to pay off. Leave some of your credit line accessible in case you run into an emergency, such as a major car repair.
6. *Pay off your balance each month.* If you cannot pay off the balance on your credit card each month, this is likely a signal that you're living beyond your means. Quit using the card until you bring the balance down to zero. When you're first building credit, it's important to pay off the balance on your card at the end of each month. Not only will this improve your credit history, but it will save you a lot in interest charges.
7. *Pay all your other bills on time.* Don't be fooled into thinking that the only information collected by the credit agencies is credit card related. They also collect information on other payments including phone plans, Internet service, rental payments, traffic fines, and even library overdue fees.
8. *Don't cosign for your friends.* If you are twenty-one and have an income, a nonworking, under-age-twenty-one friend might beg you to cosign his credit card application. Don't do it! As a cosigner, the credit card company can make you pay your friend's balance (plus interest and fees) if he fails to meet his obligation. And this can blemish your own credit history and lower your credit rating.
9. *Do not apply for several credit cards at one time.* Just because you can get several credit cards, this doesn't mean that you should. When you're establishing credit, applying for several cards over a short period of time can lower your credit rating. Stick with one card.
10. *Use student loans for education expenses only, and pay on time.* For many, student loans are necessary. But avoid using student loans for noneducational purposes. All this does is run up your debt. When your loans become due, consolidate them if appropriate and don't miss a payment.

What if you've already damaged your credit score—what can you do to raise it? Do what you should have done in the first place: pay your bills on time, pay more than the minimum balance due on your credit cards and charge cards, keep your card balances low, and pay your debts off as quickly as possible. Also, scan your credit report for any errors. If you find any, work with the credit bureau to get them corrected.

Understand the Cost of Borrowing

Because your financial problem was brought on, in part, because you have too much debt, you should stop borrowing. But, what if your car keeps breaking down and you're afraid of getting stuck on the road some night? So, you're thinking of replacing it with a used car that costs \$10,000. Before you make a final decision to incur the debt, you should understand its costs. The rate of interest matters a lot. Let's compare three loans at varying interest rates: 6, 10, and 14 percent. We'll look at the monthly payment, as well as the total interest paid over the life of the loan.

\$10,000 Loan for 4 Years at Various Interest Rates

Interest Rate	6%	10%	14%
Monthly Payment	\$235	\$254	\$273
Total Interest Paid	\$1,272	\$2,172	\$3,114

If your borrowing interest rate is 14 percent, rather than 6 percent, you'll end up paying an additional \$1,842 in interest over the life of the loan. Your borrowing cost at 14 percent is more than twice as much as it is at 6 percent. The conclusion: search for the best interest rates and add the cost of interest to the cost of whatever you're buying before deciding whether you want it and can afford it. If you have to borrow the money for the car at the 14 percent interest rate, then the true cost of the car isn't \$10,000, but rather \$13,114.

Now, let's explore the complex world of credit cards. First extremely important piece of information: not all credit cards are equal. Second extremely important piece of information: watch out for credit card fees! Credit cards are a way of life for most of us. But they can be very costly. Before picking a credit card, do your homework. A little research can save you a good deal of money. There are a number of costs you need to consider:

- *Finance charge.* The interest rate charged to you often depends on your credit history; those with good credit get the best rates. Some cards offer low "introductory" rates—but watch out; these rates generally go up after six months.
- *Annual fee.* Many credit cards charge an annual fee: a yearly charge for using the card. You can avoid annual fees by shopping around (though there can be trade-offs: you might end up paying a higher interest rate to avoid an annual fee).
- *Over-limit fee.* This fee is charged whenever you exceed your credit line.
- *Late payment fee.* Pretty self-explanatory, but also annoying. Late payment fees are common for students; a study found students account for 6 percent of all overdraft fees (Brackey, 2001). One way to decrease the chance of paying late is to call the credit card company and ask them to set your payment due date for a time that works well for you. For example, if you get paid at the end of the month, ask for a payment date around the 10th of the month. Then you can pay your bill when you get paid and avoid a late fee.
- *Cash advance fee.* While it's tempting to get cash from your credit card, it's pretty expensive. You'll end up paying a fee (around 3 percent of the advance), and the interest rate charged on the amount borrowed can be fairly high.

An alternative to a credit card is a debit card, which pulls money out of your checking account whenever you use the card to buy something or get cash from an ATM. These cards don't create a loan when used. So, are they better than credit cards? It depends—each has its advantages

and disadvantages. A big advantage of a credit card is that it helps you build credit. A disadvantage is that you can get in over your head in debt and possibly miss payments (thereby incurring a late payment fee). Debit cards help control spending. Theoretically, you can't spend more than you have in your checking account. But be careful—if you don't keep track of your checking account balance, it's easy to overdraft your account when using your debit card. Prior to July 2010, most banks just accepted purchases or ATM withdrawals even if a customer didn't have enough money in his or her account to cover the transaction. The banks didn't do this to be nice, and they didn't ask customers if they wanted this done—they just overdrafted the customer's account and charged the customer a hefty overdraft fee of around \$35 through what they call an "overdraft protection program" (Chu, 2007). Overdraft fees can be quite expensive, particularly if you used the card to purchase a hamburger and soda at a fast-food restaurant.

The Federal Reserve changed the debit card rules in 2010, and now banks must get your permission before they enroll you in an overdraft protection program (Board of Governors of the Federal Reserve System, 2011). If you opt in (agree), things work as before: You can spend or take out more money through an ATM machine than you have in your account, and the bank lets you do this. But it charges you a fee of about \$30 plus additional fees of \$5 per day if you don't cover the overdraft in five days. If you don't opt in, the bank will not let you overdraft your account. The downside is that you could get embarrassed at the cash register when your purchase is rejected or at a restaurant when trying to pay for a meal. Obviously, you want to avoid being charged an overdraft fee or being embarrassed when paying for a purchase. Here are some things you can do to decrease the likelihood that either would happen (Prater, 2010):

- Ask your bank to e-mail or text you when your account balance is low.
- Have your bank link your debit card account to a savings account. If more money is needed to cover a purchase, the bank will transfer the needed funds from your savings to your checking account.
- Use the online banking feature offered by most banks to check your checking account activity.

A Few More Words about Debt

What should you do now to turn things around—to start getting out of debt? According to many experts, you need to take two steps:

1. Cut up your credit cards and start living on a cash-only basis.
2. Do whatever you can to bring down your monthly bills.

Step 1 in this abbreviated two-step personal-finance "plan" is probably the easier of the two, but taking even this step can be hard enough. In fact, a lot of people would find it painful to give up their credit cards, and there's a perfectly logical reason for their reluctance: the

Figure 14.1



Living on a cash-only basis is the first step in getting debt under control.
frankieleon – won't hurt you no more – CC BY 2.0.

degree of pain that one would suffer from destroying one's credit cards probably stands in direct proportion to one's reliance on them.

As of May 2011, total credit card debt in the United States is about \$780 billion, out of \$2.5 trillion in total consumer debt. Closer to home, one recent report puts *average credit card debt per U.S. household* at \$16,000 (up 100 percent since 2000). The 600 million credit cards held by U.S. consumers carry an average interest rate on these cards of 15 percent (CreditCards.com, 2011). Why are these numbers important? Primarily because, *on average*, too many consumers have debt that they simply can't handle. "Credit card debt," says one expert on the problem, "is clobbering millions of Americans like a wrecking ball," (Wyden, 2008) and if you're like most of us, you'd probably like to know whether your personal-finances habits are setting you up to become one of the clobbered.

If, for example, you're worried that your credit card debt may be overextended, the American Bankers Association suggests that you ask yourself a few questions (Lipton, 2008):

- Do I pay only the minimum month after month?
- Do I run out of cash all the time?
- Am I late on critical payments like my rent or my mortgage?
- Am I taking longer and longer to pay off my balance(s)?
- Do I borrow from one credit card to pay another?

If such habits as these have helped you dig yourself into a hole that's steadily getting deeper and steeper, experts recommend that you take three steps as quickly as possible (Lipton, 2008):

1. *Get to know the enemy.* You may not want to know, but you should collect all your financial statements and figure out exactly how much credit card debt you've piled up.
2. *Don't compound the problem with late fees.* List each card, along with interest rates, monthly minimums, and due dates. Bear in mind that paying late fees is the same thing as tossing what money you have left out the window.
3. *Now cut up your credit cards (or at least stop using them).* Pay cash for everyday expenses, and remember: swiping a piece of plastic is one thing (a little too easy), while giving up your hard-earned cash is another (a little harder).

And, if you find you're unable to pay your debts, don't hide from the problem, as it will not go away. Call your lenders and explain the situation. They should be willing to work with you in setting up a payment plan. If you need additional help, contact a nonprofit credit assistance group such as the National Foundation for Credit Counseling (<http://www.nfcc.org>).

Why You Owe It to Yourself to Manage Your Debts

Now, it's time to tackle step 2 of our recommended personal-finances miniplan: do whatever you can to bring down your monthly bills. As we said, many people may find this step easier than step 1—cutting up your credit cards and starting to live on a cash-only basis.

If you want to take a gradual approach to step 2, one financial planner suggests that you perform the following "exercises" for one week:¹

¹ Financial planner Elissa Buie helped to develop *USA TODAY's Financial Diet*.

- Keep a written record of everything you spend and total it at week's end.
- Keep all your ATM receipts and count up the fees.
- Take \$100 out of the bank and don't spend a penny more.
- Avoid gourmet coffee shops.

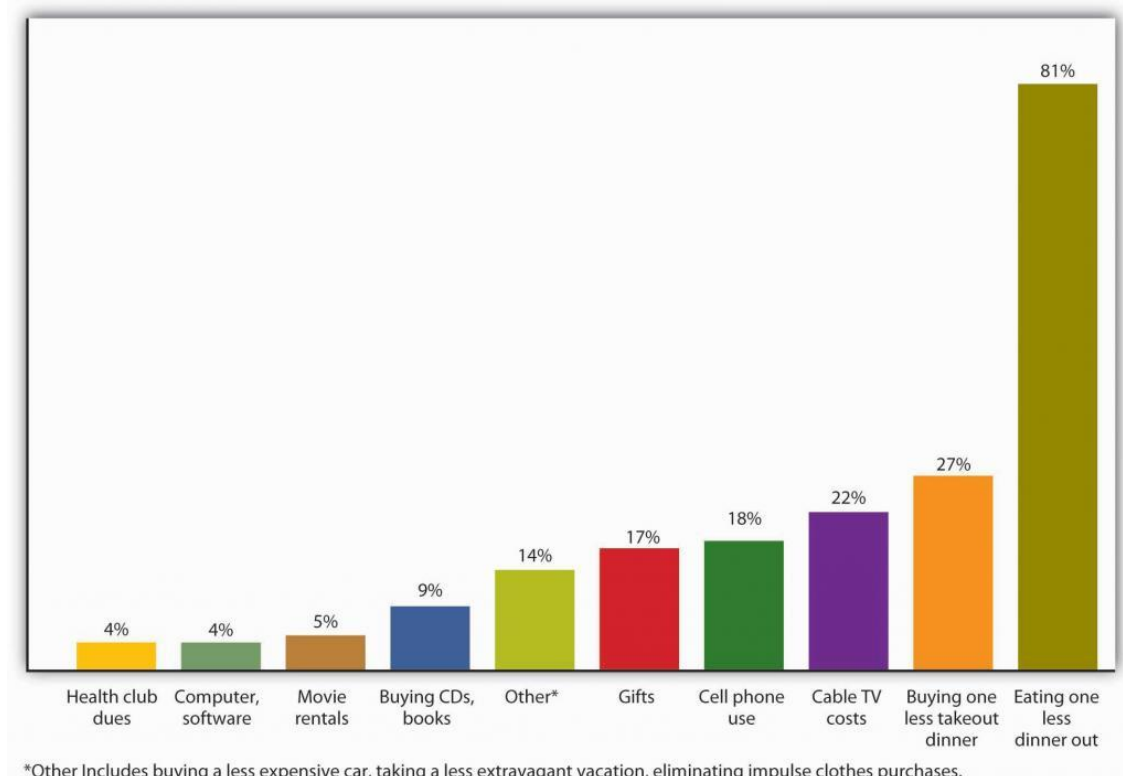
Among other things, you'll probably be surprised at how much of your money can become somebody else's money on a week-by-week basis. If, for example, you spend \$3 every day for one cup of coffee at a coffee shop, you're laying out nearly \$1,100 a year. If you use your ATM card at a bank other than your own, you'll probably be charged a fee that can be as high as \$3. The average person pays more than \$60 a year in ATM fees, and if you withdraw cash from an ATM twice a week, you could be racking up \$300 in annual fees. As for your ATM receipts, they'll tell you whether, on top of the fee that you're charged by that other bank's ATM, your *own* bank is *also* tacking on a surcharge (Sun Trust Banks, 2008; SavingAdvice.com, 2006; Loeb, 2011; Rosenberger, 2008).

If this little exercise proves enlightening—or if, on the other hand, it apparently fails to highlight any potential pitfalls in your spending habits—you might devote the next week to another exercise:

- Put all your credit cards in a drawer and get by on cash.
- Take your lunch to work.
- Buy nothing but groceries and gasoline.
- Use coupons whenever you go to the grocery store (but don't buy anything just because you happen to have a coupon).

The obvious question that you need to ask yourself at the end of week 2 is, “how much did I save?” An equally interesting question, however, is, “what can I do without?” One survey asked five thousand financial planners to name the two expenses that most consumers should find easiest to cut back on. Figure 14.2 “Reducible Expenses” shows the results.

Figure 14.2 Reducible Expenses
What You Can Do Without



You may or may not be among the American consumers who buy thirty-five million cans of Bud Light each and every day, or 150,000 pounds of Starbucks coffee, or 2.4 million Burger King hamburgers, or 628 Toyota Camrys. Yours may not be one of the 70 percent of U.S. households with an unopened consumer-electronics product lying around (Arrington, 2008). And you may or may not be ready to make some major adjustments in your personal-spending habits, but if, at age twenty-eight, you have a good education and a good job, a \$60,000 income, and a \$70,000 debt—by no means an implausible scenario—there’s a very good reason why you should think hard about controlling your modest share of that \$2.5 trillion in U.S. consumer debt: your level of indebtedness will be a key factor in your ability—or inability—to reach your longer-term financial goals, such as home ownership, a dream trip, and, perhaps most important, a reasonably comfortable retirement.

The great English writer Samuel Johnson once warned, “Do not accustom yourself to consider debt only as an inconvenience; you will find it a calamity.” In Johnson’s day, you could be locked up for failing to pay your debts; there were even so-called debtors’ prisons for the purpose, and we may suppose that the prospect of doing time for owing money was one of the things that Johnson had in mind when he spoke of debt as a potential “calamity.” We don’t expect that you’ll ever go to prison on account of indebtedness, and we won’t suggest that, say, having to retire to a condo in the city instead of a tropical island is a “calamity.” We’ll simply say that you’re more likely to meet your lifetime financial goals—whatever they are—if you plan for them. What you need to know about planning for and reaching those goals is the subject of this chapter.

Key Takeaways

- Before buying something on credit, ask yourself whether you really need the goods or services, can afford them, and are willing to pay interest on the purchase.
- Whenever you use credit, those you borrow from provide information on your debt and payment habits to three national credit bureaus.
- The credit bureaus use the information to compile a numerical credit score, called a FICO score, which they share with subscribers.
- The credit bureaus consider five criteria in compiling the score: payment history, total amount owed, length of your credit history, amount of new credit you have, and types of credit you use.
- As a young person, you should do the following to build a good credit history that will give you a high FICO score.
 - Become an authorized user on your parents' account.
 - Obtain your own credit card
 - Get the right card for you.
 - Use the credit card for occasional, small purchases
 - Avoid big-ticket buys, except in case of emergency.
 - Pay off your balance each month.
 - Pay all your other bills on time.
 - Don't cosign for your friends.
 - Do not apply for several credit cards at *one time*.
 - Use student loans for education expenses only, and pay on time.
- To raise your credit score, you should pay your bills on time, pay more than the minimum balance due, keep your card balances low, and pay your debts off as quickly as possible. Also, scan your credit report for any errors and get any errors fixed.
- If you can't pay your debt, explain your situation to your lenders and see a credit assistance counselor.
- Before you incur a debt, you should understand its costs. The interest rate charged by the lender makes a big difference in the overall cost of the loan.
- The costs associated with credit cards include finance charges, annual fees, over-limit fees, late payment fees, and cash advance fees.
- The Federal Reserve changed the debit card rules in 2010 and now banks must get your permission before they enroll you in an overdraft protection program.
- If you have a problem with splurging, cut up your credit cards and start living on a cash-only basis.
- If your monthly bills are too high for your income, do whatever you can to bring down those bills.

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14.2 Financial Planning

Before we go any further, we need to nail down a couple of key concepts. First, just what, exactly, do we mean by personal finances? *Finance* itself concerns the flow of money from one place to another, and your personal finances concern your money and what you plan to do with it as it flows in and out of your possession. Essentially, then, personal finance is the application of

financial principles to the monetary decisions that you make either for your individual benefit or for that of your family.

Second, as we suggested in Section 14 “Where Does Your Money Go?”—and as we’ll insist in the rest of it—monetary decisions work out much more beneficially when they’re planned rather than improvised. Thus our emphasis on financial planning—the ongoing process of managing your personal finances in order to meet goals that you’ve set for yourself or your family.

Financial planning requires you to address several questions, some of them relatively simple:

- What’s my annual income?
- How much debt do I have, and what are my monthly payments on that debt?

Others will require some investigation and calculation:

- What’s the value of my assets?
- How can I best budget my annual income?

Still others will require some forethought and forecasting:

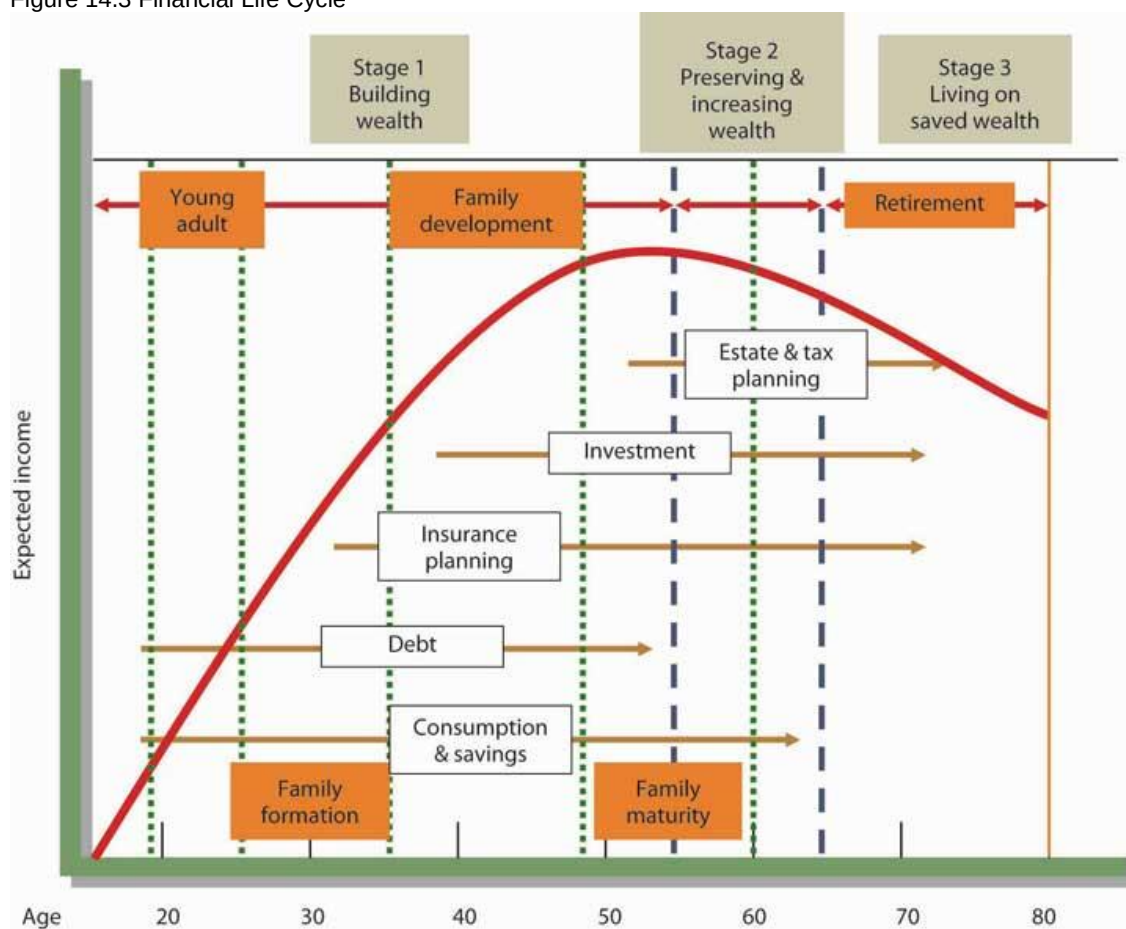
- How much wealth can I expect to accumulate during my working lifetime?
- How much money will I need when I retire?

The Financial Planning Life Cycle

Another question that you might ask yourself—and certainly would do if you were a professional in financial planning—is something like, “How will my financial plans change over the course of my life?” Figure 14.3 “Financial Life Cycle” illustrates the financial life cycle of a typical individual—one whose financial outlook and likely outcomes are probably a lot like yours (Keown, 2007). As you can see, our diagram divides this individual’s life into three stages, each of which is characterized by different life events (such as beginning a family, buying a home, planning an estate, retiring). At each stage, too, there are recommended changes in the focus of the individual’s financial planning:

- In stage 1, the focus is on building wealth.
- In stage 2, the focus shifts to the process of preserving and increasing the wealth that one has accumulated and continues to accumulate.
- In stage 3, the focus turns to the process of living on (and, if possible, continuing to grow) one’s saved wealth.

Figure 14.3 Financial Life Cycle



At each stage, of course, complications can set in—say, changes in such conditions as marital or employment status or in the overall economic outlook. Finally, as you can also see, your financial needs will probably peak somewhere in stage 2, at approximately age fifty-five, or ten years before typical retirement age.

Choosing a Career

Until you're eighteen or so, you probably won't generate much income; for the most part, you'll be living off your parents' wealth. In our hypothetical life cycle, however, financial planning begins in the individual's early twenties. If that seems like rushing things, consider a basic fact of life: this is the age at which you'll be choosing your career—not only the sort of work you want to do during your prime income-generating years, but also the kind of lifestyle you want to live in the process (Keown, 2007).

What about college? Most readers of this book, of course, have decided to go to college. If you haven't yet decided, you need to know that college is an extremely good investment of both money and time.

Table 14.1 "Education and Average Income", for example, summarizes the findings of a study conducted by the U.S. Census Bureau (U.S. Census Bureau, 2008). A quick review shows that people who graduate from high school can expect to increase their average annual earnings by about 49 percent over those of people who don't, and those who go on to finish college can expect to generate 82 percent more annual income than that. Over the course of the financial life

cycle, families headed by those college graduates will earn about \$1.6 million more than families headed by high school graduates who didn't attend college. (With better access to health care—and, studies show, with better dietary and health practices—college graduates will also live longer. And so will their children.) (U.S. Census Bureau, 2008)

Table 14.1 Education and Average Income

Education	Average income	Percentage increase over next-highest level
High school dropout	\$20,873	—
High school diploma	\$31,071	48.9%
College degree	\$56,788	82.8%
Advanced higher-education degree	\$82,320	45.0%

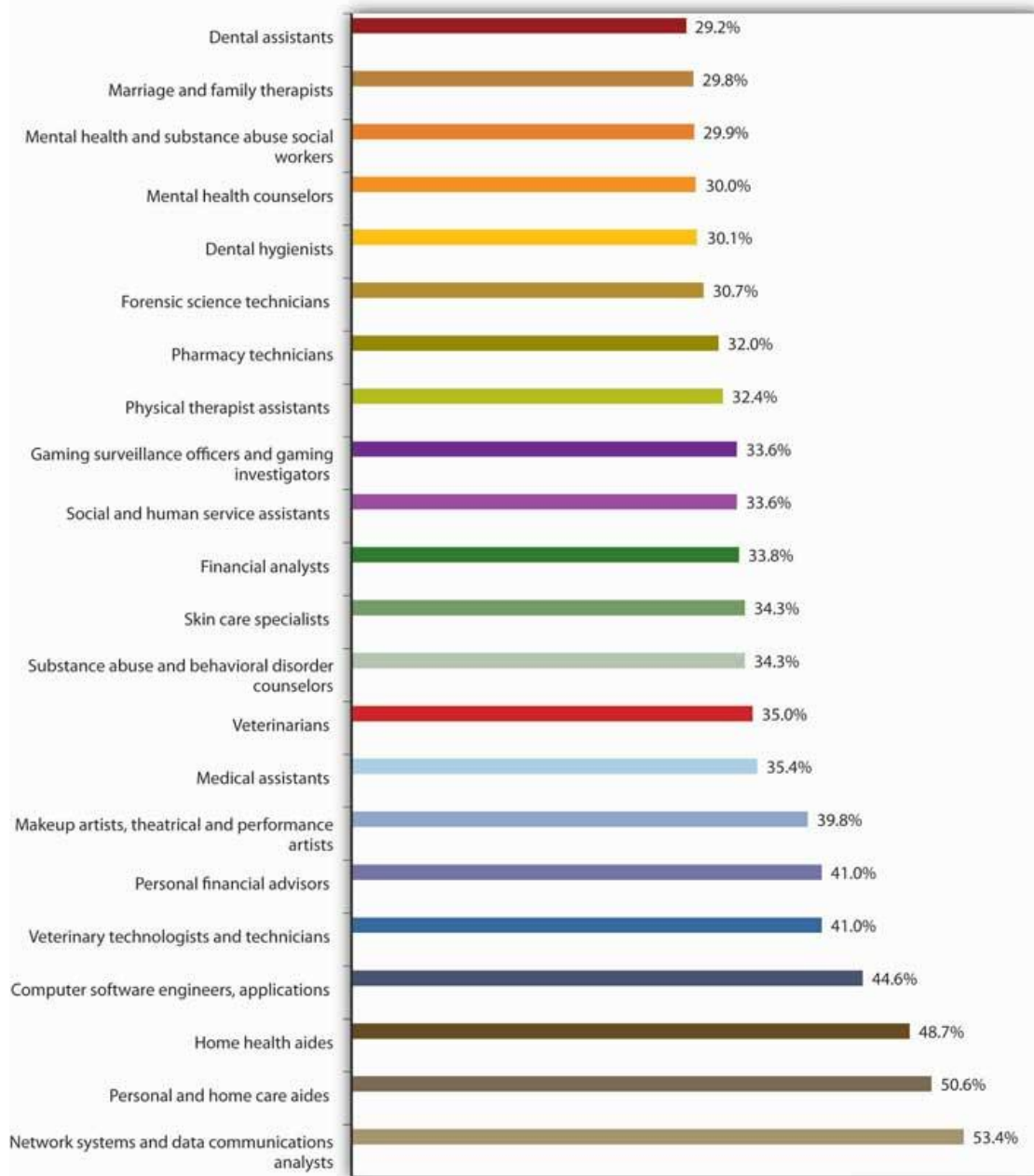
And what about the debt that so many people accumulate to finish college? For every \$1 that you spend on your college education, you can expect to earn about \$35 during the course of your financial life cycle (Hansen, 2008). At that rate of return, you should be able to pay off your student loans (unless, of course, you fail to practice reasonable financial planning).

Naturally, there are exceptions to these average outcomes. You'll find English-lit majors stocking shelves at 7-Eleven, and you'll find college dropouts running multibillion-dollar enterprises. Microsoft co-founder Bill Gates dropped out of college after two years, as did his founding partner, Paul Allen. Current Microsoft CEO Steve Ballmer finished his undergraduate degree but quit his MBA program to join Microsoft (where he apparently fit in among the other dropouts in top management). It's always good to remember, however, that though exceptions to rules (and average outcomes) occasionally modify the rules, they invariably fall far short of disproving them: in entrepreneurship as in most other walks of adult life, the better your education, the more promising your financial future. One expert in the field puts the case for the average person bluntly: educational credentials "are about being employable, becoming a legitimate candidate for a job with a future. They are about climbing out of the dead-end job market" (Ramsay, 2008). Finally, does it make any difference *what* you study in college? To a perhaps surprising extent, not necessarily. Some career areas, such as engineering, architecture, teaching, and law, require targeted degrees, but the area of study designated on your degree often doesn't matter much when you're applying for a job. If, for instance, a job ad says, "Business, communications, or other degree required," most applicants and hires will have those "other" degrees. When poring over résumés for a lot of jobs, potential employers look for the degree and simply note that a candidate has one; they often don't need to focus on the particulars (Roth, 2008).

This is not to say, however, that all degrees promise equal job prospects. Figure 14.4 "Top 25 Fastest-Growing Jobs, 2006–2016", for example, summarizes a U.S. Bureau of Labor Statistics projection of the thirty fast-growing occupations for the years 2006–2016. Veterinary technicians and makeup artists will be in demand as never before, but as you can see, occupational prospects are fairly diverse².

² <http://data.bls.gov/cgi-bin/print.pl/news.release/ecopro.t06.htm> (November 11, 2011).

Figure 14.4 Top 25 Fastest-Growing Jobs, 2006–2016



Nor, of course, do all degrees pay off equally. In Table 14.2 “College Majors and Average Annual Earnings”, we’ve extracted the findings of a study conducted by the National Science Foundation on the earnings of individuals with degrees in various undergraduate fields (Penrice, 1999; Harrington & Sum, 2011). Clearly, some degrees—notably in the engineering fields—promise much higher average earnings than others. Chemical engineers, for instance, can earn nearly twice as much as elementary school teachers, but there’s a catch: if you graduate with a degree in chemical engineering, your average annual salary will be about \$67,000 *if you can find a job related to that degree*; if you can’t, you may have to settle for as much as 40 percent less (Penrice, 1999). (Supermodel Cindy Crawford cut short her studies in chemical engineering because there was more money to be made on the runway.)

Table 14.2 College Majors and Average Annual Earnings

Major	Average Earnings with Bachelor's Degree	Major	Average Earnings with Bachelor's Degree
Chemical engineering	\$67,425	History	\$45,926
Aerospace engineering	\$65,649	Biology	\$45,532
Computer engineering	\$62,527	Nursing	\$45,538
Physics	\$62,104	Psychology	\$43,963
Electrical engineering	\$61,534	English	\$43,614
Mechanical engineering	\$61,382	Health technology	\$42,524
Industrial engineering	\$61,030	Criminal justice	\$41,129
Civil engineering	\$58,993	Physical education	\$40,207
Accounting	\$56,637	Secondary education	\$39,976
Finance	\$55,104	Fine arts	\$38,857
Computer science	\$52,615	Philosophy	\$38,239
Business management	\$52,321	Dramatic arts	\$37,091
Marketing	\$51,107	Music	\$36,811
Journalism	\$46,835	Elementary education	\$34,564
Information systems	\$46,519	Special education	\$34,196

In short, when you're planning what to do with the rest of your life, it's a good idea to check into the fine points and realities, as well as the statistical data. If you talk to career counselors and people in the workforce, you might be surprised by what you learn about the relationship between certain college majors and various occupations. Onetime Hewlett-Packard CEO Carly Fiorina majored in medieval history and philosophy.

Financing a College Education

Let's revisit one of the facts included in the earlier discussion: for every \$1 that you spend on your college education, you can expect to earn about \$35 during the course of your financial life cycle. And let's say you're convinced (as you should be) that getting a college degree is a wise financial choice. You still have to deal with the cost of getting your degree. We're sure this won't come as a surprise: attending college is expensive—tuition and fees have gone up sharply, the cost of books has skyrocketed, and living expenses have climbed. Many students can attend college only if they receive some type of financial aid. Though the best way to learn what aid is available to you is to talk with a representative in the financial aid office at your school, this section provides an overview of the types of aid offered to students. Students finance their education through scholarships, grants, education loans, and work-study programs (Witmer, 2011). We'll explore each of these categories of aid:

- *Scholarships*, which don't have to be repaid, are awarded based on a number of criteria, including academic achievement, athletic or artistic talent, special interest in a particular field of study, ethnic background, or religious affiliation. Scholarships are generally funded

by private donors such as alums, religious institutions, companies, civic organizations, professional associations, and foundations.

- *Grants*, which also don't have to be repaid, are awarded based on financial need. They're funded by the federal government, the states, and academic institutions. An example of a common federal grant is the Pell Grant, which is awarded to undergraduate students based on financial need. The maximum Pell Grant award for the 2011–12 award year (July 1, 2011, to June 30, 2012) is \$5,550 (Federal Student Aid, 2011).
- *Education loans*, which must be repaid, are available to students from various sources, including the federal government, states, and academic institutions. While recent problems in the credit markets have made college loans more difficult to obtain, most students are able to get the loans they need (Snyder, 2008). The loans offered directly to undergraduate students by the federal government include the need-based, subsidized Federal Stafford, the non-need-based unsubsidized Federal Stafford, and the need-based Federal Perkins loans. With the exception of the unsubsidized Federal Stafford, no interest accrues while the student is enrolled in college at least part time. There are also a number of loans available to parents of students, such as the Federal Parent PLUS program. Under this program, parents can borrow federally guaranteed low-interest loans to fund their child's education.
- Work-study is a federally sponsored program that provides students with paid, part-time jobs on campus. Because the student is paid based on work done, the funds received don't have to be repaid.

Find a Great Job

As was highlighted earlier, your financial life cycle begins at the point when you choose a career. Building your career takes considerable planning. It begins with the selection of a major in college and continues through graduation as you enter the workforce full time. You can expect to hold a number of jobs over your working life. If things go as they should, each job will provide valuable opportunities and help you advance your career. A big challenge is getting a job offer in your field of interest, evaluating the offer, and (if you have several options) selecting the job that's right for you³.

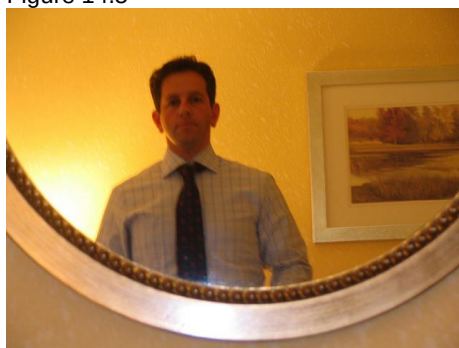
Getting a Job Offer

Most likely your college has a career center. The people working there can be a tremendous help to you as you begin your job search. But most of the work has to be done by you. Like other worthwhile projects, your job search project will be very time-consuming. As you get close to graduation, you'll need to block out time to work on this particularly important task.

The first step is to prepare a résumé, a document that provides a summary of educational achievements and relevant job experience. Its purpose is to get you an interview. A potential employer will likely spend less than a minute reviewing your résumé, so its content should be concise, clear, and applicable to the job for which you're applying. For some positions, the person in charge of hiring might read more than a hundred résumés. If you don't want your résumé kicked out right away, be sure it contains no typographical or grammatical errors. Once you've completed your résumé, you can use it to create different versions tailored to specific companies you'd like to work for. Your next step is to write a cover letter, a document accompanying your

³ This section is based in part on sections 13 and 14 of the Playbook for Life by The Hartford. The Playbook can be found on line at <http://www.playbook.thehartford.com> (accessed November 11, 2011).

Figure 14.5



Preparing well for an interview can make it easier to relax and help the interviewer get to know you.

Yaniv Yaakubovich – Trying my suite before the interview – CC BY-ND 2.0.

résumé that explains why you're sending your résumé and highlights your qualifications. You can find numerous tips on writing résumés and cover letters (as well as samples of both) online. Be sure your résumé is accurate: never lie or exaggerate in a résumé. You could get caught and not get the job (or—even worse—you could get the job, get caught, and then get fired). It's fairly common practice for companies to conduct background checks of possible employees, and these checks will point out any errors. In effect, says one expert, "you jeopardize your future when you lie about your past" (Isaacs, 2011).

After writing your résumé and cover letter, your next task is to create a list of companies you'd like to work for. Use a variety of sources, including your career services office and company Web sites, to decide which companies to put on your list. Visit the "career or employment" section of the company Web sites and search for specific openings.

You could also conduct a general search for positions that might be of interest to you, by doing the following:

- Visiting career Web sites, such as Monster.com, Wetfeet.com, or Careerbuilder.com (which maintain large databases of openings for all geographical areas)
- Searching classified ads in online and print newspapers
- Attending career fairs at your college and in your community
- Signing up with career services to talk with recruiters when they visit your campus
- Contacting your friends, family, and college alumni and letting them know you're looking for a job and asking for their help
-

Once you spot a position you want, send your résumé and cover letter (tailored to the specific company and job). Follow up in a few days to be sure your materials got to the right place, and offer to provide any additional information. Keep notes on all contacts.

When you're invited for an interview, visit to the company's Web site and learn as much as you can about the company. Practice answering questions you might be asked during the interview, and think up a few pertinent questions to ask your interviewer. Dress conservatively—males should wear a suit and tie and females should wear professional-looking clothes. Try to relax during the interview (though everyone knows this isn't always easy). Your goal is to get an offer, so let the interviewer learn who you are and how you can be an asset to the company. Send a thank-you note (or thank-you e-mail) to the interviewer after the interview.

Evaluating Job Offers

Let's be optimistic and say that you did quite well in your interviews, and you have two job offers. It's a great problem to have, but now you have to decide which one to accept. Salary is important, but it's clearly not the only factor. You should consider the opportunities the position offers: will you learn new things on the job, how much training will you get, could you move up in the organization (and if so, how quickly)? Also consider quality of life issues: how many hours a week will you have to work, is your schedule predictable (or will you be asked to work on a Friday night or Saturday at the last minute), how flexible is your schedule, how much time do you get off, how stressful will the job be, do you like the person who will be your manager, do you like your coworkers, how secure is the job, how much travel is involved, where's the company located, and what's the cost of living in that area? Finally, consider the financial benefits you'll receive. These could include health insurance, disability insurance, flexible spending accounts, and retirement plans. Let's talk more about the financial benefits, beginning with health insurance.

- Employer-sponsored health insurance plans vary greatly. Some cover the employee only, while others cover the employee, spouse, and children. Some include dental and eye coverage while others don't. Most plans require employees to share some of the cost of the medical plan (by paying a portion of the insurance premiums and a portion of the cost of medical care). But the amount that employees are responsible for varies greatly. Given the rising cost of health insurance, it's important to understand the specific costs associated with a health care plan and to take these costs into account when comparing job offers. More important, it's vital that you have medical insurance. Young people are often tempted to go without medical insurance, but this is a major mistake. An uncovered, costly medical emergency (say you're rushed to the hospital with appendicitis) can be a financial disaster. You could end up paying for your hospital and doctor care for years.
- Disability insurance isn't as well known as medical insurance, but it can be as important (if not more so). Disability insurance pays an income to an insured person when he or she is unable to work for an extended period. You would hope that you'd never need disability insurance, but if you did it would be of tremendous value.
- A flexible spending account allows a specified amount of pretax dollars to be used to pay for qualified expenses, including health care and child care. By paying for these costs with pretax dollars, employees are able to reduce their tax bill.
- There are two main types of *retirement plans*. One, called a defined benefit retirement plan, provides a set amount of money each month to retirees based on the number of years they worked and the income they earned. This form of retirement plan was once very popular, but it's less common today. The other, called a defined contribution retirement plan, is a form of savings plan. The employee contributes money each pay period to his or her retirement account, and the employer matches a portion of the contribution. Even when retirement is exceedingly far into the future, it's financially wise to set aside funds for retirement.

Key Takeaways

- *Finance* concerns the flow of money from one place to another; your *personal finances* concern your money and what you plan to do with it as it flows in and out of your possession. **Personal finance** is thus the application of financial principles to the monetary decisions that you make, either for your individual benefit or for that of your family.
- **Financial planning** is the ongoing process of managing your personal finances to meet goals that you've set for yourself or your family.
- The *financial life cycle* divides an individual's life into three stages, each of which is characterized by different life events. Each stage also entails recommended changes in the focus of the individual's financial planning:
 1. In stage 1, the focus is on *building* wealth.
 2. In stage 2, the focus shifts to the process of *preserving and increasing* the wealth that one has accumulated and continues to accumulate.
 3. In stage 3, the focus turns to the process of *living on* (and, if possible, continuing to grow) one's saved wealth.
- According to the model of the financial life cycle, financial planning begins in the individual's early twenties, the age at which most people choose a *career*—both the sort of *work* they want to do during their income-generating years and the kind of *lifestyle* they want to live in the process.
- College is a good investment of both money and time. People who graduate from high school can expect to improve their average annual earnings by about 49 percent over those of people who don't, and those who go on to finish college can expect to generate 82 percent more annual income than that. The area of study designated on your degree often doesn't matter when you're applying for a job: when poring over résumés, employers often look for the degree and simply note that a candidate has one.
- The first step in your job search is to prepare a **résumé**, a document that provides a summary of educational achievements and relevant job experience. Your résumé should be concise, clear, applicable to the job for which you are applying, and free of errors and inaccuracies.
- A **cover letter** is a document that accompanies your résumé and explains why you're sending your résumé and highlights your qualifications.
- To conduct a general search for positions that might be of interest to you, you could:
 1. Visit career Web sites, such as Monster.com, Wetfeet.com, or Careerbuilder.com.
 2. Search classified ads in online and print newspapers.
 3. Attend career fairs at your college and in your community.
 4. Talk with recruiters when they visit your campus.
 5. Contact people you know, tell them you're looking for a job, and ask for their help.
- When you're invited for an interview, you should research the company, practice answering questions you might be asked in the interview, and think up pertinent questions to ask the interviewer.
- When comparing job offers, consider more than salary. Also of importance are quality of life issues and benefits. Common financial benefits include health insurance, disability insurance, flexible spending accounts, and retirement plans.
 1. *Employer-sponsored health insurance* plans vary greatly in coverage and cost to the employee.

2. Disability insurance pays an income to an insured person when he or she is unable to work for an extended period of time.
 3. A *flexible spending account* allows a specified amount of pretax dollars to be used to pay for qualified expenses, including health care and child care. By paying for these costs with pretax dollars, employees are able to reduce their tax bill.
- There are two main types of *retirement plans*: a defined benefit plan, which provides a set amount of money each month to retirees based on the number of years they worked and the income they earned, and a defined contribution plan, which is a form of savings plan into which both the employee and employer contribute. A well-known defined contribution plan is a 401(k).

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14.3 Time Is Money

The fact that you have to choose a career at an early stage in your financial life cycle isn't the only reason that you need to start early on your financial planning. Let's assume, for instance, that it's your eighteenth birthday and that on this day you take possession of \$10,000 that your grandparents put in trust for you. You could, of course, spend it; in particular, it would probably cover the cost of flight training for a private pilot's license—something you've always wanted but were convinced that you couldn't afford for another ten or fifteen years. Your grandfather, of course, suggests that you put it into some kind of savings account. If you just wait until you finish college, he says, and if you can find a savings plan that pays 5 percent interest, you'll have the \$10,000 plus another \$2,209 to buy a pretty good used car.

The total amount you'll have— \$12,209—piques your interest. If that \$10,000 could turn itself into \$12,209 after sitting around for four years, what would it be worth if you actually held on to it until you did retire—say, at age sixty-five? A quick trip to the Internet to find a compound-interest calculator informs you that, forty-seven years later, your \$10,000 will have grown to \$104,345 (assuming a 5 percent interest rate). That's not really enough to retire on, but after all, you'd at least have some cash, even if you hadn't saved another dime for nearly half a century. On the other hand, what if that four years in college had paid off the way you planned, so that (once you get a good job) you're able to add, say, another \$10,000 to your retirement savings account every year until age sixty-five? At that rate, you'll have amassed a nice little nest egg of slightly more than \$1.6 million.

Compound Interest

In your efforts to appreciate the potential of your \$10,000 to multiply itself, you have acquainted yourself with two of the most important concepts in finance. As we've already indicated, one is the principle of compound interest, which refers to the effect of earning interest on your interest.

Let's say, for example, that you take your grandfather's advice and invest your \$10,000 (your *principal*) in a savings account at an annual interest rate of 5 percent. Over the course of the first year, your investment will earn \$512 in interest and grow to \$10,512. If you now reinvest the entire \$10,512 at the same 5 percent annual rate, you'll earn another \$537 in interest, giving you a total investment at the end of year 2 of \$11,049. And so forth. And that's how you can end up with \$104,345 at age sixty-five.

Time Value of Money

You've also encountered the principle of the time value of money—the principle whereby a dollar received in the present is worth more than a dollar received in the future. If there's one thing that we've stressed throughout this chapter so far, it's the fact that, for better or for worse, most people prefer to consume now rather than in the future. This is true for both borrowers and lenders. If you borrow money from me, it's because you can't otherwise buy something that you want at the present time. If I lend it to you, it's because I'm willing to postpone the opportunity to purchase something I want at the present time—perhaps a risk-free, ten-year U.S. Treasury bond with a present yield rate of 3 percent.

I'm willing to forego my opportunity, however, only if I can get some compensation for its loss, and that's why I'm going to charge you interest. And you're going to pay the interest because you need the money to buy what you want to buy. How much interest should we agree on? In theory, it could be just enough to cover the cost of my lost opportunity, but there are, of course, other factors. Inflation, for example, will have eroded the value of my money by the time I get it back

from you. In addition, while I would be taking no risk in loaning money to the U.S. government (as I would be doing if I bought that Treasury bond), I am taking a risk in loaning it to you. Our agreed-on rate will reflect such factors (Gallager & Andrews Jr., 2003).

Finally, the time value of money principle also states that a dollar received today starts earning interest sooner than one received tomorrow. Let's say, for example, that you receive \$2,000 in cash gifts when you graduate from college. At age twenty-three, with your college degree in hand, you get a decent job and don't have an immediate need for that \$2,000. So you put it into an account that pays 10 percent compounded *and* you add another \$2,000 (\$167 per month) to your account every year for the next eleven years⁴. The left panel of Table 14.3 "Why to Start Saving Early (I)" shows how much your account will earn each year and how much money you'll have at certain ages between twenty-three and sixty-seven. As you can see, you'd have nearly \$52,000 at age thirty-six and a little more than \$196,000 at age fifty; at age sixty-seven, you'd be just a bit short of \$1 million. The right panel of the same table shows what you'd have if you hadn't started saving \$2,000 a year until you were age thirty-six. As you can also see, you'd have a respectable sum at age sixty-seven—but less than half of what you would have accumulated by starting at age twenty-three. More important, even to accumulate that much, *you'd have to add \$2,000 per year for a total of thirty-two years, not just twelve*.

Table 14.3 Why to Start Saving Early (I)

Age	Savings accumulated from age 23, with deposits of \$2,000 annually until age 67			Savings accumulated from age 36, with deposits of \$2,000 annually until age 67		
	Annual deposit	Annual interest earned	Total saved at the end of the year	Annual deposit	Annual interest earned	Total saved at the end of the year
23	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
24	\$2,000	\$200.00	\$2,200.00	\$0.00	\$0.00	\$0.00
25	\$2,000	\$420.00	\$4,620.00	\$0.00	\$0.00	\$0.00
30	\$2,000	\$1,897.43	\$20,871.78	\$0.00	\$0.00	\$0.00
35	\$2,000	\$4,276.86	\$47,045.42	\$0.00	\$0.00	\$0.00
36	\$0.00	\$4,704.54	\$51,749.97	\$2,000	\$200.00	\$2,200.00
40	\$0.00	\$6,887.92	\$75,767.13	\$2,000	\$1,221.02	\$13,431.22
45	\$0.00	\$11,093.06	\$122,023.71	\$2,000	\$3,187.48	\$35,062.33
50	\$0.00	\$17,865.49	\$196,520.41	\$2,000	\$6,354.50	\$69,899.46
55	\$0.00	\$28,772.55	\$316,498.09	\$2,000	\$11,455.00	\$126,005.00
60	\$0.00	\$46,338.49	\$509,723.34	\$2,000	\$19,669.41	\$216,363.53
65	\$0.00	\$74,628.59	\$820,914.53	\$2,000	\$32,898.80	\$361,886.65
67	\$0.00	\$90,300.60	\$993,306.53	\$2,000	\$40,277.55	\$442,503.09

Source: Data from Consumer Credit Counseling Service of Maryland and Delaware Inc., "Power of Saving Early" (2008), http://www.cccs-inc.org/tools/tools_saving_early.php (accessed November 15, 2008).

⁴ This 10 percent interest rate is not realistic for today's economic environment. It's used for illustrative purposes only.

Here's another way of looking at the same principle. Suppose that you're twenty years old, don't have \$2,000, and don't want to attend college full-time. You are, however, a hard worker and a conscientious saver, and one of your (very general) financial goals is to accumulate a \$1 million retirement nest egg. As a matter of fact, if you can put \$33 a month into an account that pays 12 percent interest compounded⁵, you can have your \$1 million by age sixty-seven. That is, *if you start at age twenty*. As you can see from Table 14.4 "Why to Start Saving Early (II)", if you wait until you're twenty-one to start saving, you'll need \$37 a month. If you wait until you're thirty, you'll have to save \$109 a month, and if you procrastinate until you're forty, the ante goes up to \$366 a month (Keown, 2007).

Table 14.4 Why to Start Saving Early (II)

First Payment When You Turn	Required Monthly Payment	First Payment When You Turn	Required Monthly Payment
20	\$33	30	\$109
21	\$37	31	\$123
22	\$42	32	\$138
23	\$47	33	\$156
24	\$53	34	\$176
25	\$60	35	\$199
26	\$67	40	\$366
27	\$76	50	\$1,319
28	\$85	60	\$6,253
29	\$96		

Source: Arthur J. Keown, *Personal Finance: Turning Money into Wealth*, 4th ed. (Upper Saddle River, NJ: Pearson Education, 2007), 23.

The moral here should be fairly obvious: a dollar saved today not only starts earning interest sooner than one saved tomorrow (or ten years from now) but also can ultimately earn a lot more money in the long run. Starting early means in your twenties—early in stage 1 of your financial life cycle. As one well-known financial advisor puts it, "If you're in your 20s and you haven't yet learned how to delay gratification, your life is likely to be a constant financial struggle" (Clements, 2006).

Key Takeaways

- The principle of **compound interest** refers to the effect of earning interest on your interest.
- The principle of the **time value of money** is the principle whereby a dollar received in the present is worth more than a dollar received in the future.
- The principle of the time value of money also states that a dollar received today starts earning interest sooner than one received tomorrow.
- Together, these two principles give a significant financial advantage to individuals who begin saving early during the financial-planning life cycle.

⁵ Again, this 12 percent interest rate is not realistic for today's economic environment. It's used for illustrative purposes only.

References

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14.4 The Financial Planning Process

We’ve divided the financial planning process into three steps:

1. Evaluate your current financial status by creating a net worth statement and a cash flow analysis.
2. Set short-term, intermediate-term, and long-term financial goals.
3. Use a budget to plan your future cash inflows and outflows and to assess your financial performance by comparing budgeted figures with actual amounts.

Step 1: Evaluating Your Current Financial Situation

Just how are you doing, financially speaking? You should ask yourself this question every now and then, and it should certainly be your starting point when you decide to initiate a more or less formal financial plan. The first step in addressing this question is collecting and analyzing the records of what you *own* and what you *owe* and then applying a few accounting terms to the results:

- Your personal *assets* consist of what you *own*.
- Your personal *liabilities* are what you *owe*—your obligations to various creditors, big and small.

Preparing Your Net-Worth Statement

Your net worth (accounting term for your *wealth*) is the difference between your assets and your liabilities. Thus the formula for determining net worth is:

$$\text{Assets} - \text{Liabilities} = \text{Net worth}$$

If you own more than you owe, your net worth will be *positive*; if you owe more than you own, it will be *negative*. To find out whether your net worth is on the plus or minus side, you can prepare a personal net worth statement like the one in Figure 14.6 “Net Worth Statement”, which we’ve drawn up for a fictional student named Joe College. (Note that we’ve included lines for items that may be relevant to some people’s net worth statements but left them blank when they don’t apply to Joe.)

Figure 14.6 Net Worth Statement

Joe College's Personal Net Worth Statement as of August 31, 2012	
ASSETS (what you own)	Value
Cash	\$ 200
Checking accounts	1,000
Savings accounts/CDs/money market accounts	400
Market value of investments (stocks, bonds, mutual funds)	—
Retirement accounts	—
Market value of real estate	—
Cars	8,000
Furniture and appliances	1,500
Computers	900
Stereo/video equipment/cell phones	400
Jewelry	—
Clothing	300
Other assets	—
Total Assets	12,700
LIABILITIES (what you owe)	Amount
Credit card balances	1,200
Charge account balances	200
Student loans	7,000
Car loans	2,300
Home mortgage	—
Other liabilities	—
Total Liabilities	10,700
Assets – Liabilities = Net worth	
Total Net Worth	\$ 2,000

Assets

Joe has two types of assets:

- First are his *monetary* or *liquid* assets—his cash, the money in his checking accounts, and the value of any savings, CDs, and money market accounts. They're called *liquid* because either they're cash or they can readily be turned into cash.
- Everything else is a *tangible* asset—something that Joe can use, as opposed to an investment. (We haven't given Joe any *investments*—such financial assets as stocks, bonds, or mutual funds—because people usually purchase these instruments to meet such long-term goals as buying a house or sending a child to college.)

Note that we've been careful to calculate Joe's assets in terms of their fair market value—the price he could get by selling them at present, not the price he paid for them or the price that he could get at some future time.

Liabilities

Joe's net worth statement also divides his liabilities into two categories:

- Anything that Joe owes on such items as his furniture and computer are *current liabilities*—debts that must be paid within one year. Much of this indebtedness no doubt ends up on Joe's credit card balance, which is regarded as a current liability because he *should* pay it off within a year.
- By contrast, his car payments and student-loan payments are *non-current liabilities*—debt payments that extend for a period of more than one year. Joe is in no position to buy a house, but for most people, their mortgage is their most significant non-current liability.

Finally, note that Joe has positive net worth. At this point in the life of the average college student, positive net worth may be a little unusual. If you happen to have negative net worth right now, you're technically *insolvent*, but remember that a major goal of getting a college degree is to enter the workforce with the best possible opportunity for generating enough wealth to reverse that situation.

Preparing Your Cash-Flow Statement

Now that you know something about your financial status *on a given date*, you need to know more about it *over a period of time*. This is the function of a cash-flow or income statement, which shows where your money has come from and where it's slated to go.

Figure 14.7 "Cash-Flow Statement" is Joe College's cash-flow statement. As you can see, Joe's *income* (his cash *inflows*—money coming in) is derived from two sources: student loans and income from a part-time job. His expenditures (cash *outflows*—money going out) fall into several categories: housing, food, transportation, personal and health care, recreation/entertainment, education, insurance, savings, and other expenses. To find out Joe's *net cash flow*, we subtract his expenditures from his income:

$$\$25,700 - \$25,300 = \$400$$

Figure 14.7 Cash-Flow Statement

Joe College's Personal Cash-Flow Statement as of August 31, 2012	
CASH INFLOWS (cash coming in)	
Wages (full time in summer/part time during semester)	\$ 18,700
Student loan	7,000
Total inflow of cash	25,700
CASH OUTFLOWS (cash going out)	
<i>Housing</i>	
Rent	5,400
Utilities (electricity, heat, water, cable)	700
Communication (phone and internet access)	900
<i>Food</i>	
Groceries	2,300
Eating out	1,200
<i>Transportation</i>	
Gas and maintenance	1,400
Car loan payments	1,400
<i>Personal and healthcare</i>	
Medical co-payments and dental	200
Clothing	200
Laundry/cleaning supplies/miscellaneous	100
<i>Recreation/Entertainment</i>	
Night life/movies/concerts	900
Magazines/music/miscellaneous	200
<i>Education</i>	
Tuition	5,500
Books	1,000
Student loan payments	—
<i>Insurance</i>	
Car, health, renter's	1,900
<i>Savings</i>	1,200
<i>Other expenses</i>	800
Total outflow of cash	25,300
Cash inflow – Cash outflow = Net cash flow	
Net Cash Flow	\$ 400

Joe has been able to maintain a positive cash flow for the year ending August 31, 2012, but he's cutting it close. Moreover, he's in the black only because of the inflow from student loans— income that, as you'll recall from his net worth statement, is also a non-current liability. We are, however, willing to give Joe the benefit of the doubt: Though he's incurring the high costs of an

Figure 14.8 Joe's Goals

Short-term goals (less than 2 years)	Intermediate-term goals (2 – 5 years)	Long-term goals (more than 5 years)
· Pay off car loan · Pay off credit card and change account debt	· Complete college · Take one-month vacation after completing college	· Pay off student loans · Buy a home · Save for retirement

education, he's willing to commit himself to the debt (and, we'll assume, to careful spending) because he regards education as an investment that will pay off in the future.

Remember that when constructing a cash-flow statement, you must record only income and expenditures that pertain to a given period, whether it be a month, a semester, or (as in Joe's case) a year. Remember, too, that you must figure both inflows and outflows *on a cash basis*: you record income only when you receive money, and you record expenditures only when you pay out money. When, for example, Joe used his credit card to purchase his computer, he didn't actually pay out any money. Each monthly payment on his credit card balance, however, is an outflow that must be recorded on his cash-flow statement (according to the type of expense—say, recreation/entertainment, food, transportation, and so on).

Your cash-flow statement, then, provides another perspective on your *solvency*: if you're *insolvent*, it's because you're spending more than you're earning. Ultimately, your net worth and cash-flow statements are most valuable when you use them together. While your net worth statement lets you know what you're worth—how much wealth you have—your cash-flow statement lets you know precisely what effect your spending and saving habits are having on your wealth.

Step 2: Set Short-Term, Intermediate-Term, and Long-Term Financial Goals

We know from Joe's cash-flow statement that, despite his limited income, he feels that he can save \$1,200 a year. He knows, of course, that it makes sense to have some cash in reserve in case of emergencies (car repairs, medical needs, and so forth), but he also knows that by putting away some of his money (probably each week), he's developing a habit that he'll need if he hopes to reach his long-term financial goals.

Just what are Joe's goals? We've summarized them in Figure 14.8 "Joe's Goals", where, as you can see, we've divided them into three time frames: short-term (less than two years), intermediate-term (two to five years), and long-term (more than five years). Though Joe is still in an early stage of his financial life cycle, he has identified and structured his goals fairly effectively. In particular, they satisfy four criteria of well-conceived goals: they're *realistic* and *measurable*, and Joe has designated both *definite time frames* and *specific courses of action* (Kapoor, et. al., 2007).

They're also sensible. Joe sees no reason, for example, why he can't pay off his car loan, credit card, and charge account balances within two years. Remember that, with no income other than student-loan money and wages from a part-time job, Joe has decided (rightly or wrongly) to use his credit cards to pay for much of his personal consumption (furniture, electronics equipment, and so forth). It won't be an easy task to pay down these balances, so we'll give him some credit (so to speak) for regarding them as important enough to include paying them among his short-

term goals. After finishing college, he'll splurge and take a month-long vacation. This might not be the best thing to do from a financial point of view, but he knows this could be his only opportunity to travel extensively. He is realistic in his classification of student loan repayment and the purchase of a home as long-term. But he might want to revisit his decision to classify saving for his retirement as a long-term goal. This is something we believe he should begin as soon as he starts working full-time.

Step 3: Develop a Budget and Use It to Evaluate Financial Performance

Once he has reviewed his cash-flow statement, Joe has a much better idea of what cash flowed in for the year that ended August 31, 2012, and a much better idea of where it went when it flowed out. Now he can ask himself whether he's satisfied with his annual inflow (income) and outflow (expenditures). If he's anything like most people, he'll want to make some changes—perhaps to increase his income, to cut back on his expenditures, or, if possible, both. The first step in making these changes is drawing up a personal budget—a document that itemizes the sources of his income and expenditures for the coming year, along with the relevant money amounts for each.

Having reviewed the figures on his cash-flow statement, Joe did in fact make a few decisions:

- Because he doesn't want to jeopardize his grades by increasing his work hours, he'll have to reconcile himself to just about the same wages for another year.
- He'll need to apply for another \$7,000 student loan.
- If he's willing to cut his spending by \$1,200, he can pay off his credit cards. Toward this end, he's targeted the following expenditures for reduction: rent (get a cheaper apartment), phone costs (switch plans), auto insurance (take advantage of a "good-student" discount), and gasoline (pool rides or do a little more walking). Fortunately, his car loan will be paid off by midyear.

Revising his figures accordingly, Joe developed the budget in Figure 14.9 "Joe's Budget" for the year ending August 31, 2013. Look first at the column headed "Budget." If things go as planned, Joe expects a cash surplus of \$1,600 by the end of the year—enough to pay off his credit card debt and leave him with an extra \$400.

Figure 14.9 Joe's Budget

Joe College's Budget for year ending August 31, 2013.			
Item	Budget	Actual	Variance (actual vs. budgeted)
CASH INFLOW			
Wages	\$ 18,700	\$ 19,000	\$ 300 favorable
Student loan	7,000	7,000	—
Total	25,700	26,000	300 favorable
CASH OUTFLOW			
<i>Housing</i>			
Rent	5,100	5,100	—
Utilities (electricity, heat, water, TV cable)	700	800	100 unfavorable
Communication (phone and internet)	800	800	—
<i>Food</i>			
Groceries	2,300	2,100	200 favorable
Eating out	1,200	1,300	100 unfavorable
<i>Transportation</i>			
Gas and maintenance	1,300	1,400	100 unfavorable
Car loan payments	900	900	—
<i>Personal and healthcare</i>			
Medical co-payments and dental	200	300	100 unfavorable
Clothing	200	300	100 unfavorable
Laundry/cleaning supplies/miscellaneous	100	100	—
<i>Recreation/Entertainment</i>			
Night life/movies/concerts	900	1,000	100 unfavorable
Magazines/music/miscellaneous	200	200	—
<i>Education</i>			
Tuition	5,500	5,500	—
Books	1,000	1,000	—
<i>Insurance</i>			
Car, health, renter's	1,700	1,700	—
<i>Savings</i>	1,200	1,200	—
<i>Other expenses</i>	800	600	200 favorable
Total	24,100	24,300	200 unfavorable
Surplus (Deficit)	\$ 1,600	\$ 1,700	\$ 100 favorable

Figuring the Variance

Now we can examine the two remaining columns in Joe's budget. Throughout the year, Joe will keep track of his actual income and actual expenditures and will enter the totals in the column labeled "Actual." Like most reasonable people, however, Joe doesn't really expect his actual figures to match with his budgeted figures. So whenever there's a difference between an amount in his "Budget" column and the corresponding amount in his "Actual" column, Joe records the difference, whether plus or minus, as a variance. Two types of variances appear in Joe's budget:

- *Income variance.* When actual *income* turns out to be higher than expected or budgeted income, Joe records the variance as "favorable." (This makes sense, as you'd find it

favorable if you earned more income than expected.) When it's just the opposite, he records the variance as "unfavorable."

- *Expense variance.* When the actual amount of an *expenditure* is more than he had budgeted for, he records it as an "unfavorable" variance. (This also makes sense, as you'd find it unfavorable if you spent more than the budgeted amount.) When the actual amount is less than budgeted, he records it as a "favorable" variance.

Setting Mature Goals

Before we leave the subject of the financial-planning process, let's revisit the topic of Joe's goals. Another look at Figure 14.8 "Joe's Goals" reminds us that, at the current stage of his financial life cycle, Joe has set fairly simple goals. We know, for example, that Joe wants to buy a home, but when does he want to take this major financial step? And of course, Joe wants to retire, but what kind of lifestyle does he want in retirement? Does he expect, like most people, a retirement lifestyle that's more or less comparable to that of his peak earning years? Will he be able to afford both the cost of a comfortable retirement and, say, the cost of sending his children to college? As Joe and his financial circumstances mature, he'll have to express these goals (and a few others) in more specific terms.

Levels of Mature Goals

Let's fast-forward a decade or so, when Joe's picture of stages 2 and 3 of his financial life cycle have come into clearer focus. If he hasn't done so already, Joe is now ready to identify a primary goal to guide him in identifying and meeting all his other goals (Winger & Frasca, 2003). Suppose that because Joe's investment in a college education has paid off the way he'd planned ten years ago, he's in a position to target a primary goal of financial independence—by which he means a certain financially secure life not only for himself but for his children, as well. Now that he's set this *primary* goal, he can identify a more specific set of goals—say, the following:

- A standard of living that reflects a certain level of comfort—a level associated with the possession of certain assets, both tangible and intangible.
- The ability to provide his children with college educations.
- A retirement lifestyle comparable to that of his peak earning years.

Having set this *secondary* level of goals, Joe's now ready to make specific plans for reaching them. As we've already seen, Joe understands that plans are far more likely to work out when they're focused on specific goals. His next step, therefore, is to determine the goals on which he should focus this next level of plans.

As it turns out, Joe already knows what these goals are, because he's been setting the appropriate goals every year since he drew up the cash-flow statement in Figure 14.7 "Cash-Flow Statement". In drawing up that statement, Joe was careful to create several line items to identify his various expenditures: *housing, food, transportation, personal and health care, recreation/entertainment, education, insurance, savings, and other expenses*. When we introduced these items, we pointed out that each one represents a cash outflow—something for which Joe expected to pay. They are, in other words, things that Joe intends to *buy* or, in the language of economics, *consume*. As such, we can characterize them as *consumption goals*. These "purchases"—what Joe wants in such areas as housing, insurance coverage, recreation/entertainment, and so forth—make specific his secondary goals and are therefore his *third-level* goals.

Figure 14.10 Three-Level Goals/Plans

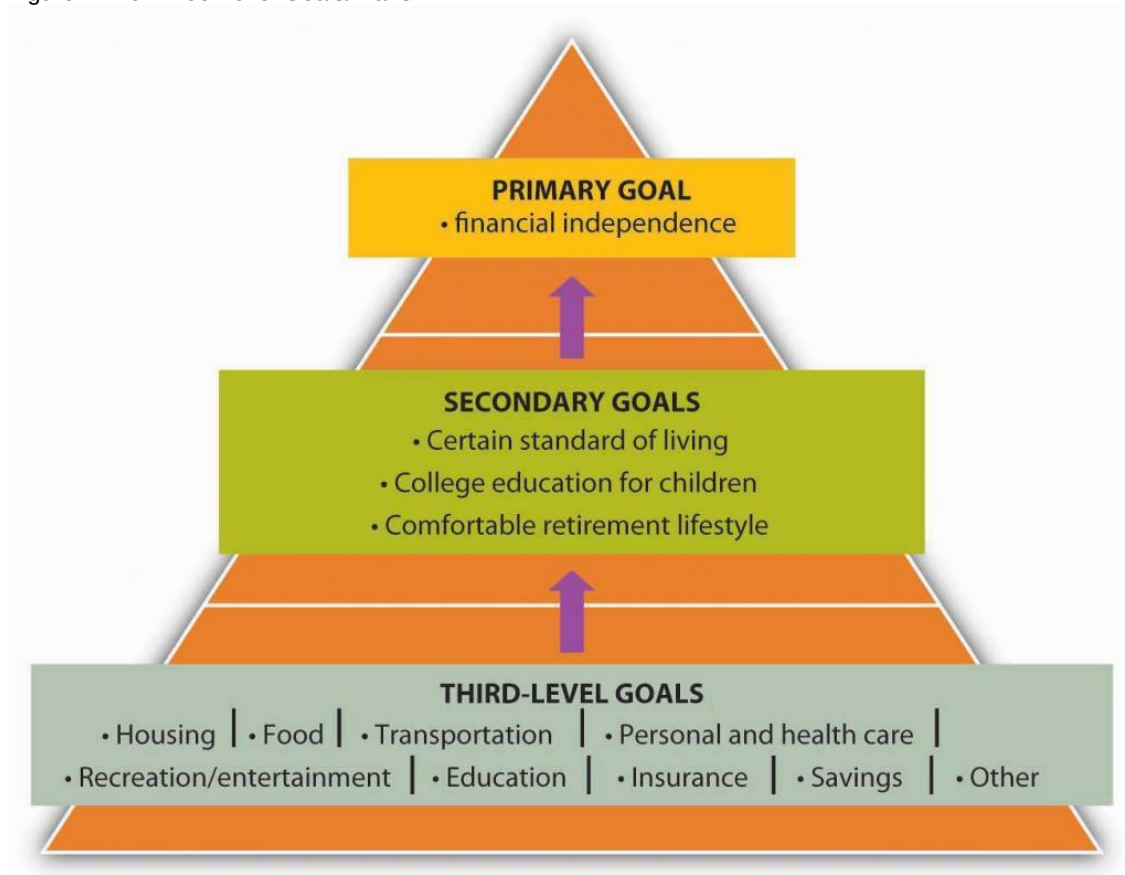


Figure 14.10 “Three-Level Goals/Plans” gives us a full picture of Joe’s three-level hierarchy of goals.

Present and Future Consumption Goals

A closer look at the list of Joe’s consumption goals reveals that they fall into two categories:

1. We can call the first category *present* goals because each item is intended to meet Joe’s present needs and those (we’ll now assume) of his family—housing, health care coverage, and so forth. They must be paid for as Joe and his family take possession of them—that is, when they use or consume them. All these things are also necessary to meet the first of Joe’s secondary goals—a certain standard of living.
2. The items in the second category of Joe’s consumption goals are aimed at meeting his other two secondary goals: sending his children to college and retiring with a comfortable lifestyle. He won’t take possession of these purchases until sometime in the *future*, but (as is so often the case) there’s a catch: they must be paid for out of *current* income.

A Few Words about Saving

Joe’s desire to meet this second category of consumption goals—*future* goals such as education for his kids and a comfortable retirement for himself and his wife—accounts for the appearance

on his list of the one item that, at first glance, may seem miss-classified among all the others: namely, *savings*.

Paying Yourself First

It's tempting to glance at Joe's budget and cash-flow statement and assume that he shares with most of us a common attitude toward saving money: when you're done allotting money for various spending needs, you can decide what to do with what's left over—save it or spend it. In reality, however, Joe's budgeting reflects an entirely different approach. When he made up the budget in Figure 14.9 “Joe's Budget”, Joe *started out* with the decision to save \$1,600—or at least to avoid spending it. Why? Because he had a goal: to be free of credit card debt. To meet this goal, he planned to use \$1,200 of his *current* income to pay off what would continue to hang over his head as a *future* expense (his credit card debt). In addition, he *planned* to have \$400 left over after he'd paid his credit card balance. Why? Because he had still longer-term goals, and he intended to get started on them early—as soon as he finished college. Thus his intention from the outset was to put \$400 into savings.

In other words, here's how Joe went about budgeting his money for the year ending August 31, 2013 (as shown in Figure 14.9 “Joe's Budget”):

1. He calculated his income—total cash inflows from his student loan and his part-time job (\$25,700).
2. He subtracted from his total income two targeted consumption goals—credit card payments (\$1,200) and savings (\$400).
3. He allocated what was left (\$24,100) to his remaining consumption goals: housing (\$6,600), food (\$3,500), education (\$6,500), and so forth.

If you're concerned that Joe's sense of delayed gratification is considerably more mature than your own, think of it this way: *Joe has chosen to pay himself first*. It's one of the key principles of personal-finances planning and an important strategy in doing something that we recommended earlier in this chapter—starting early (Keown, 2007).

Key Takeaways

- The financial planning process consists of three steps:
 1. Evaluate your current financial status by creating a net worth statement and a cash flow analysis.
 2. Set short-term, intermediate-term, and long-term financial goals.
 3. Use a budget to plan your future cash inflows and outflows and to assess your financial performance by comparing budgeted figures with actual amounts.
- In step 1 of the financial planning process, you determine what you *own* and what you *owe*:
 1. Your personal *assets* consist of what you own.
 2. Your personal *liabilities* are what you owe—your obligations to various creditors.
- Most people have two types of assets:
 1. *Monetary* or *liquid* assets include cash, money in checking accounts, and the value of any savings, CDs, and money market accounts. They're called *liquid* because either they're cash or they can readily be turned into cash.
 2. Everything else is a *tangible asset*—something that can be used, as opposed to an investment.
- Likewise, most people have two types of liabilities:
 1. Any debts that should be paid within one year are *current liabilities*.
 2. *Noncurrent liabilities* consist of debt payments that extend for a period of more than one year.
- Your **net worth** is the difference between your assets and your liabilities. **Your net worth statement** will show whether your net worth is on the plus or minus side on a given date.
- In step 2 of the financial planning process, you create a **cash-flow or income statement**, which shows where your money has come from and where it's slated to go. It reflects your financial status over a period of time. Your cash *inflows*—the money you have coming in—are recorded as *income*. Your cash *outflows*—money going out—are itemized as *expenditures* in such categories as housing, food, transportation, education, and savings.
- A good way to approach your financial goals is by dividing them into three time frames: short-term (less than two years), intermediate-term (two to five years), and long-term (more than five years). Goals should be realistic and measurable, and you should designate definite time frames and specific courses of action.
- Net worth and cash-flow statements are most valuable when used together: while your net worth statement lets you know what you're worth, your cash-flow statement lets you know precisely what effect your spending and saving habits are having on your net worth.
- If you're not satisfied with the effect of your spending and saving habits on your net worth, you may want to make changes in future inflows (income) and outflows (expenditures). You make these changes in step 3 of the financial planning process, when you draw up your personal **budget**—a document that itemizes the sources of your income and expenditures for a future period (often a year).
- In addition to the itemized lists of inflows and outflows, there are three other columns in the budget:
 1. The "Budget" column tracks the amounts of money that you *plan* to receive or to pay out over the budget period.
 2. The "Actual" column records the amounts that did in fact come in or go out.

3. The final column records the **variance** for each item—the difference between the amount in the “Budget” column and the corresponding amount in the “Actual” column.
- There are two types of variance:
 1. An *income variance* occurs when actual income is higher than budgeted income (or vice versa).
 2. An *expense variance* occurs when the actual amount of an expenditure is higher than the budgeted amount (or vice versa).

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14.5 A House Is Not a Piggy Bank: A Few Lessons from the Subprime Crisis

Joe isn't old enough to qualify, but if his grandfather had deposited \$1,000 in an account paying 7 percent interest in 1945, it would now be worth \$64,000. That's because money invested at 7 percent compounded will double every ten years. Now, \$64,000 may or may not seem like a significant return over fifty years, but after all, the money did all the heavy lifting, and given the miracle of compound interest, it's surprising that Americans don't take greater advantage of the opportunity to multiply their wealth by saving more of it, even in modest, interest-bearing accounts. Ironically, with \$790 billion in credit card debt, it's obvious that a lot of American families are experiencing the effects of compound interest—but in reverse (Frank, 2005).

As a matter of fact, though Joe College appears to be on the right track when it comes to saving, many people aren't. A lot of Americans, it seems, do indeed set savings goals, but in one recent survey, nearly 70 percent of the respondents reported that they fell short of their monthly goals because their money was needed elsewhere. About one-third of Americans say that they're putting away something but not enough, and another third aren't saving anything at all. Almost one-fifth of all Americans have net worth of zero—or less (Taylor, 2007; Frank, 2005).

As we indicated in the opening section of this chapter, this shortage of savings goes hand in hand with a surplus in spending. “My parents,” says one otherwise gainfully employed American knowledge worker, “are appalled at the way I justify my spending. I think, ‘Why work and make money unless you're going to enjoy it?’ That's a fine theory,” she adds, “until you're sixty, homeless, and with no money in the bank” (Gardner, 2008). And indeed, if she doesn't intend to alter her personal-finances philosophy, she has good reason to worry about her “older adult” years. Sixty percent of Americans over the age of sixty-five have less than \$100,000 in savings, and only 30 percent of this group have more than \$25,000; 45 percent have less than \$15,000. As for income, 75 percent of people over age sixty-five generate less than \$35,000 annually, and 30 percent are in the “poverty to near-poverty” range of \$10,000 to \$20,000 (as compared to 12 percent of the under-sixty-five population) (Rubin, et. al., 2000).

Figure 14.11 U.S. Savings Rate
 *Shaded areas indicate US recessions.



Disposing of Savings

Figure 14.11 “U.S. Savings Rate” shows the U.S. *savings rate*—which measures the percentage of disposable income devoted to savings for the period 1960 to 2010. As you can see, it suffered a steep decline from 1980 to 2005 and remained at this negligible savings rate until it started moving up in 2008. The recent increase in the savings rate, however, is still below the long-term average of 7 percent (Economic Research, 2008; Dickson, 2007).

Now, a widespread tendency on the part of Americans to spend rather than save doesn’t account entirely for the downward shift in the savings rate. In late 2005, the Federal Reserve cited at least two other (closely related) factors in the decline of savings (Federal Reserve Bank of San Francisco, 2005):

- An increase in the ratio of stock-market wealth to disposable income
- An increase in the ratio of residential-property wealth to disposable income

Assume, for example, that, in addition to your personal savings, you own some stock and have a mortgage on a home. Both your stock and your home are (supposedly) *appreciable assets*—their value used to go up over time. (In fact, if you had taken out your mortgage in 2000, by the end of 2005 your home would have appreciated at double the rate of your disposable personal income.) The decline in the personal savings rate during the mid-2000s, suggested the Fed, resulted in part from people’s response to “long-lived bull markets in stocks and housing”; in other words, a lot of people had come to rely on the appreciation of such assets as stocks and residential property as “a substitute for the practice of saving out of wage income.”

Subprime Rates and Adjustable Rate Mortgages

Let’s assume that you weren’t ready to take advantage of the boom in mortgage loans in 2000 but did set your sights on 2005. You may not have been ready to buy a house in 2005 either, but there’s a good chance that you got a loan anyway. In particular, some lender might have offered you a so-called subprime mortgage loan. Subprime loans are made to borrowers who don’t qualify for market-set interest rates because of one or more risk factors—income level, employment status, credit history, ability to make only a very low down payment. As of March 2007, U.S. lenders had written \$1.3 trillion in mortgages like yours (Associated Press, 2007).

Granted, your terms might not have been very good. For one thing, interest rates on subprime loans may run from 8 percent to 10 percent and higher (consumeraffairs.com, 2005). In addition, you probably had to settle for an adjustable-rate mortgage (ARM)—one that's pegged to the increase or decrease of certain interest rates that your lender has to pay. When you signed your mortgage papers, you knew that if those rates went up, your mortgage rate—and your monthly payments—would go up, too. Fortunately, however, you had a plan B: with the value of your new asset appreciating even as you enjoyed living in it, it wouldn't be long before you could refinance it at a more manageable and more predictable rate.

The Meltdown

Now imagine your dismay when housing prices started to go *down* in 2006 and 2007. As a result, you weren't able to refinance, your ARM was set to adjust upward in 2008, and foreclosures were already happening all around you—1.3 million in 2007 alone (Lahart, 2008). By April 2008, one in every 519 American households had received a foreclosure notice (RealtyTrac Inc., 2008). By August, 9.2 percent of the \$12 trillion in U.S. mortgage loans was delinquent or in foreclosure

Figure 14.12



foreclosure notice.

Taber Andrew Bain – Foreclosure – CC BY 2.0.

In 2008, nearly one out of five hundred households in the United States received a

(Mortgage Bankers Association, 2008; Duhigg, 2008).

The repercussions? Banks and other institutions that made mortgage loans were the first sector of the financial industry to be hit. Largely because of mortgage-loan defaults, profits at more than 8,500 U.S. banks dropped from \$35 billion in the fourth quarter of 2006 to \$650 million in the corresponding quarter of 2007 (a decrease of 89 percent). Bank earnings for the year 2007 declined 31 percent and dropped another 46 percent in the first quarter of 2008 (Federal Deposit Insurance Corporation, 2007; FDIC, 2008).

Losses in this sector were soon felt by two publicly traded government-sponsored organizations, the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Both of these institutions are authorized to make loans and provide loan guarantees to banks, mortgage companies, and other mortgage lenders; their function is to make sure that these lenders have enough money to lend to prospective home buyers. Between them, Fannie Mae and Freddie Mac backed approximately half of that \$12 trillion in outstanding mortgage loans, and when the mortgage crisis hit, the stock prices of the two corporations began to drop steadily. In September 2008, amid fears that both organizations would run out of capital, the U.S. government took over their management.

Freddie Mac also had another function: to increase the supply of money available for mortgage loans and new home purchases, Freddie Mac bought mortgages already written by lenders,

pooled them, and sold them as mortgage-backed securities to investors on the open market. Many major investment firms did much the same thing, buying individual subprime mortgages from original lenders (such as small banks), pooling the projected revenue—payments made by the original individual home buyers—and selling securities backed by the pooled revenue.

But when their rates went too high and home buyers couldn't make these payments, these securities plummeted in value. Institutions that had invested in them—including investment banks—suffered significant losses (Tully, 2007). In September 2008, one of these investment banks, Lehman Brothers, filed for bankruptcy protection; another, Merrill Lynch, agreed to sell itself for \$50 billion. Next came American International Group (AIG), a giant insurance company that insured financial institutions against the risks they took in loaning and investing money. As its policyholders buckled under the weight of defaulted loans and failed investments, AIG, too, was on the brink of bankruptcy, and when private efforts to bail it out failed, the U.S. government stepped in with a loan of \$85 billion (Robb, et. al., 2008). The U.S. government also agreed to buy up risky mortgage-backed securities from teetering financial institutions at an estimated cost of “hundreds of billions” (Mortgage Bankers Association, 2008).

Subprime Directives: A Few Lessons from the Subprime Crisis

If you were one of the millions of Americans who took out subprime mortgages in the years between 2001 and 2005, you probably have some pressing financial problems. If you defaulted on your subprime ARM, you may have suffered foreclosure on your newly acquired asset, lost any equity that you'd built up in it, and taken a hit in your credit rating. (We'll assume that you're not one of the people whose eagerness to get on the subprime bandwagon caused fraudulent mortgage applications to go up by 300 percent between 2002 and 2006.) (Financial Crimes Enforcement Network, 2006).

On the other hand, you've probably learned a few lessons about financial planning and strategy. Let's conclude with a survey of three lessons that you should have learned from your hypothetical adventure in the world of subprime mortgages.

Lesson 1: All mortgages are not created equal. Despite (or perhaps because of) the understandable enticement of home ownership, your judgment may have been faulty in this episode of your financial life cycle. Generally speaking, you're better off with a fixed-rate mortgage—one on which the interest rate remains the same regardless of changes in market interest rates—than with an ARM (Keown, 2007). As we've explained at length in this chapter, planning is one of the cornerstones of personal-finances management, and ARMs don't lend themselves to planning. How well can you plan for your future mortgage payments if you can't be sure what they're going to be?

In addition, though interest rates may go up or down, planning for them to go *down* and to take your mortgage payments with them doesn't make much sense. You can wait around to get lucky, and you can even try to get lucky (say, by buying a lottery ticket), but you certainly can't *plan* to get lucky. Unfortunately, the only thing you can really *plan* for is higher rates and higher payments. An ARM isn't a good idea if you don't know whether you can meet payments higher than your initial payment. In fact, if you have reason to believe that you can't meet the *maximum* payment entailed by an ARM, you probably shouldn't take it on.

Lesson 2: It's risky out there. You now know—if you hadn't suspected it already—that planning your personal finances would be a lot easier if you could do it in a predictable economic

environment. But you can't, of course, and virtually constant instability in financial markets is simply one economic fact of life that you'll have to deal with as you make your way through the stages of your financial life cycle.

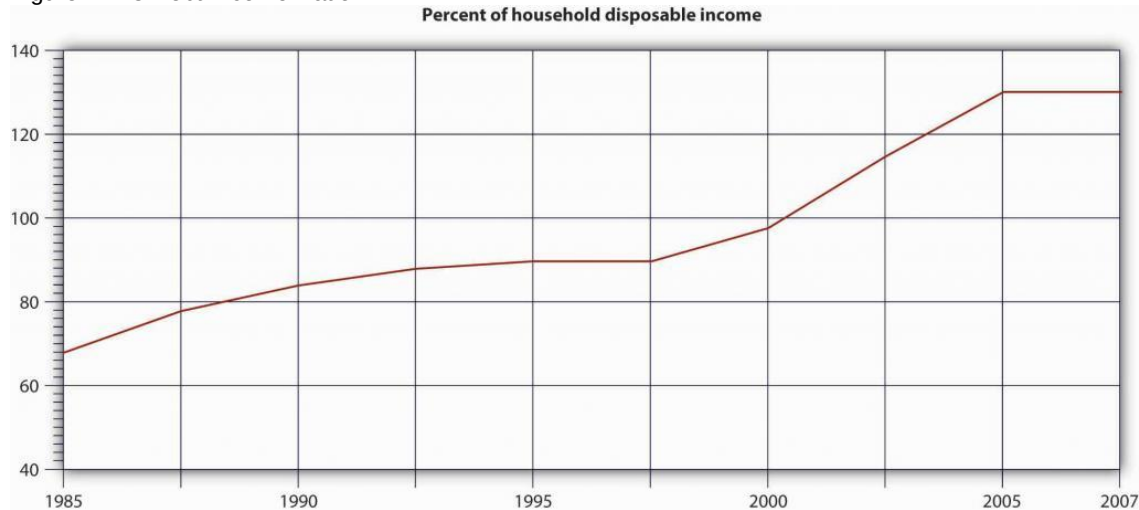
In other words, any foray into financial markets is risky. Basically, *risk* is the possibility that cash flows will be variable (Keown, 2008). Unfortunately, volatility in the overall economy is directly related to just one category of risks. There's a second category—risks related to the activities of various organizations involved in your financial transactions. You've already been introduced to the effects of these forms of financial risk, some of which have affected you directly, some of which have affected you indirectly, and some of which may affect you in the future (Winger & Frasca, 2003):

- *Management risk* is the risk that poor management of an organization with which you're dealing may adversely affect the outcome of your personal-finances planning. If you couldn't pay the higher rate on your ARM, managers at your lender probably failed to look deeply enough into your employment status and income.
- *Business risk* is the risk associated with a product that you've chosen to buy. The fate of your mortgagor, who issued the original product—your subprime ARM—and that of everyone down the line who purchased it in some form (perhaps Freddy Mac and Merrill Lynch) bear witness to the pitfalls of business risk.
- *Financial risk* refers to the risk that comes from ill-considered indebtedness. Freddie Mac, Fannie Mae, and several investment banks have felt the repercussions of investing too much money in financial instruments that were backed with shaky assets (namely, subprime mortgages).

In your own small way, of course, you, too, underestimated the pitfalls of all three of these forms of risk.

Lesson 3: Not all income is equally disposable. Figure 14.13 “Debt-Income Ratio” shows the increase in the ratio of debt to disposable income among American households between 1985 and 2007. As you can see, the increase was dramatic—from 80 percent in the early 1990s to about 130 percent in 2007 (Economist.com, 2007). This rise was made possible by greater access to credit—people borrow money in order to spend it, whether on consumption or on investments, and the more they can borrow, the more they can spend.

Figure 14.13 Debt-Income Ratio



In the United States, greater access to credit in the late 1990s and early 2000s was made possible by rising housing prices: the more valuable your biggest asset, the more lenders are willing to lend you, even if what you're buying with your loan—your house—is your biggest asset. As the borrower, your strategy is twofold: (1) Pay your mortgage out of your wage income, and (2) reap the financial benefits of an asset that appreciates in value. On top of everything else, you can count the increased value of your asset as *savings*: when you sell the house at retirement, the difference between your mortgage and the current value of your house is yours to support you in your golden years.

As we know, however, housing prices had started to fall by the end of 2006. From a peak in mid-2006, they had fallen 8 percent by November 2007, and by April 2008 they were down from the 2006 peak by more than 19 percent—the worst rate of decline since the Great Depression. And most experts expected it to get worse before it gets better, and unfortunately they were right. Housing prices have declined by 33 percent from the mid-2006 peak to the end of 2010 (Streitfeld, 2011; Walayat, 2008).

So where do you stand? As you know, your house is worth no more than what you can get for it on the open market; thus the asset that you were counting on to help provide for your retirement has *depreciated* substantially in little more than a decade. If you're one of the many Americans who tried to substitute equity in property for traditional forms of income savings, one financial specialist explains the unfortunate results pretty bluntly: your house "is a place to live, not a brokerage account" (Doll, 2006). If it's any consolation, you're not alone: a recent study by the Security Industries Association reports that, for many Americans, nearly half their net worth is based on the value of their home. Analysts fear that many of these people—a significant proportion of the baby-boom generation—won't be able to retire with the same standard of living that they've been enjoying during their wage-earning years (Hoak, 2006).

Key Takeaways

- Personal saving suffered a steep decline from 1980 to 2005 and remained at this negligible savings rate until it started moving up in 2008. The recent increase in the savings rate, however, is still below the long-term average of 7 percent.
- In addition to Americans' tendency to spend rather than save, the Federal Reserve observed that a lot of people had come to rely on the appreciation of such assets as stocks and residential property as a substitute for the practice of saving out of wage income.
- **Subprime loans** are made to would-be home buyers who don't qualify for market-set interest rates because of one or more risk factors—income level, employment status, credit history, ability to make only a very low down payment. Interest rates may run from 8 percent to 10 percent and higher.
- An **adjustable-rate mortgage (ARM)** is a home loan pegged to the increase or decrease of certain interest rates that the lender has to pay. If those rates go up, the mortgage rate and the home buyer's monthly payments go up, too. A **fixed-rate mortgage** is a home loan on which the interest rate remains the same regardless of changes in market interest rates.
- In the years between 2001 and 2005, lenders made billions of dollars in subprime ARM loans to American home buyers. In 2006 and 2007, however, housing prices started to go down. Homeowners with subprime ARM loans weren't able to refinance, their mortgage rates began going up, and foreclosures became commonplace.
- In 2006 and 2007, largely because of mortgage-loan defaults, banks and other institutions that made mortgage loans began losing huge sums of money. These losses carried over to Fannie Mae and Freddie Mac, publicly traded government-sponsored organizations that make loans and provide loan guarantees to banks and other mortgage lenders.
- Next to be hit were major investment firms that had been buying subprime mortgages from banks and other original lenders, pooling the projected revenue—payments made by the original individual home buyers—and selling securities backed by the pooled revenue. When their rates went too high and home buyers couldn't make their house payments, these securities plummeted in value, and the investment banks and other institutions that had invested in them suffered significant losses.
- *Risk* is the possibility that cash flows will be variable. Three types of risk are related to the activities of various organizations that may be involved in your financial transactions:
 1. *Management risk* is the risk that poor management of an organization with which you're dealing may adversely affect the outcome of your personal-finances planning.
 2. *Business risk* is the risk associated with a product that you've chosen to buy.
 3. *Financial risk* refers to the risk that comes from ill-considered indebtedness.

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14.6 Investing for the Future ^(KC)

Now that you understand the securities market and have learned about the importance of budgeting, setting goals and saving, it is time to consider how to best invest your savings. Every individual will have different investment criteria depending on his or her goals, and tolerance for risk. Your goals and your investment time line should be matched; that is if your goal is long term, then your investment outlook should be long term as well. Conversely if your goal is short term, you should select a short-term investment vehicle.

Safety and Risk

All investors would like to choose investments that are guaranteed to provide a good return, but as Benjamin Franklin said, "nothing is certain but death and taxes." Because we cannot know what will happen in the future, we must select investments based on our personal risk tolerance. The Securities and Exchange Commission defines risk tolerance as:

"your ability and willingness to lose some or all of your original investment in exchange for greater potential returns. An aggressive investor, or one with a high-risk tolerance, is more likely to risk losing money to get better results. A conservative investor, or one with a low-risk tolerance, tends to favor investments that will preserve his or her original investment. In the words of the famous saying, conservative investors keep a "bird in the hand," while aggressive investors seek "two in the bush."⁶

To gauge your risk tolerance, many financial advisors rely on a series of questions that they ask clients. You can find examples of these questionnaires by doing an internet search for "risk tolerance questionnaires".

Once you have determined your risk tolerance then you want to select investments based on their safety versus their potential reward. Investments range from very safe to very high risk and their

⁶ Securities and Exchange Commission. (2009). *Beginners' Guide to Asset Allocation, Diversification, and Rebalancing*. <https://www.sec.gov/reportspubs/investor-publications/investorpubsassetallocationhtm.html>

Figure 14-14

Understanding the investment risk pyramid

With great risk comes great reward. When weighing your options, first understand where your potential investments fall on the investment risk pyramid.



Source: "Taking Control," Wells Fargo Advisors Guide.

<http://www.estate123.com/insight/2015/06/the-investment-risk-pyramid/>

expected returns will vary as well. The diagram below created by Wells Fargo Advisors, illustrates the investment pyramid, at the top are the most speculative investments and at the bottom are the safest; conversely, the returns are expected to be the greatest at the top, and the lowest at the bottom.

Examining the pyramid above we can identify a wide variety of investment vehicles. At the bottom, secure investments are cash, money markets, pension funds, annuities and savings bonds. Money market accounts are interest bearing, and provide limited check writing ability (a maximum number of checks per month). Pension funds are retirement accounts, with contributions made by employers and employees. Money market accounts are insured by the Federal Deposit Insurance Corporation, a U.S. government corporation, and pension funds are insured by the Pension Benefit Guaranty Corporation, a non-profit overseen by the Dept. of Labor. Annuities are contracts wherein the investor provides an initial investment and the other party guarantees future payments. Annuities are sold by insurance companies and other financial organizations. Savings bonds are issued by the U.S. government; they are long term and sold at a discount, which means that the buyer pays a lower amount than the bonds face value, and as time passes the bonds actual value grows to match the face value.

At the second tier, safety and income, are bonds (I.O.U.'s or a promise to pay interest and ultimately repay the principal, or borrowed amount, at a future date). Bonds are issued by corporations and by government entities. There are also mutual funds which invest in bonds, and investors can buy shares in a fund.

The third tier, growth, includes blue chip stocks, growth stocks and real estate. Blue chips are stocks of well established companies, that are expected to be able to weather downturns in the

economic cycle. Growth stocks are stocks in stable companies, who are outperforming peers in their industry and who generate large amounts of cash. Real estate (owned as an investment) is a property which generates cash flow from rental income, it can be either residential or commercial property.

The top tier are speculative investments, and include: venture capital (investments in small companies who do not have the ability to access capital (issue stocks or bonds) in public markets; metals and other commodities (e.g. cotton, coffee, pork bellies); and speculative stocks (stock in companies with little or no track record, such as an initial public offering).

Income

Income is another important factor to consider when selecting an investment. Some investments generate current income, while others are held for long term growth which we will discuss in the next section. Investments such as bank accounts, certificates of deposit, and bonds, all pay interest to their owners. Preferred stock pays a fixed dividend, or a share of the profits. However most individual investors do not invest in preferred stock. While a preferred stock pays a dividend, it is a riskier investment than a bond which pays interest. If a company gets into financial difficulty and perhaps even bankruptcy, a bondholder is a creditor and must be paid before any owners (of preferred or common stock) are repaid. If the financial situation is not as dire as bankruptcy but the company's cashflow is still impacted, they may elect to cut the preferred dividend, but they cannot stop paying their bond interest or they will be in default. In some cases, the preferred stock dividend is cumulative and any missed dividends are accumulated with the intent to be paid later, but again, only after all creditor obligations are paid. Typically, corporations invest in preferred stock because they receive certain tax benefits for doing so. Common stock may pay a dividend, but the dividend is at the discretion of the company management and board of directors and therefore is not guaranteed. Real estate investments may generate cash flow in the form of rent payments, but real estate is often an illiquid investment. WE will discuss liquidity later.

Why might one investor need liquidity and another not? If Investor A has other income, perhaps from a job, and is also in a high tax bracket, then the investor may not need or want current income, but would prefer to invest for long term growth. By contrast, Investor B, may rely on his or her investments to provide income or to supplement income from other sources.

Growth

Investors seeking growth, are hoping that the value of their investment increases over time. Examples of growth investments would be stocks in companies that are growing faster than their competitors and who are in an expansionary mode. Growth stocks can also be volatile and may be impacted by changes in interest rates, because they may have considerable debt. A growing company will not issue dividends because all excess cash is reinvested back in the business to propel further growth. Real estate can also be a growth investment. If an investor buys a property whose cash flows may not be that large, but the expectation is that the assets will rapidly appreciate (for example buying a rundown property in a developing area).

Liquidity

A liquid asset is one that can be bought and sold quickly without impacting the value. Cash is the ultimate liquid asset. One way to measure liquidity is to examine the market for a given asset. If

you are selling a publicly traded stock, you can look at the daily volume of shares traded and determine if selling your shares would have an impact on the price. In another example, you buy vintage cars (a collectible) as an investment. You want to sell your 1936 Aston Martin. While vintage cars have outperformed other collectible markets in recent years, there are a limited number of buyers and it may take many months to sell the car. If you need the cash more quickly, you may need to sell the car for less than you believe it is worth.

Time

Each of the goals you established should have a time horizon. Is your goal measured in months, years or decades? If you are saving for a vacation that is only months away, then you will want to select an investment that is not likely to decrease in value in a short time frame (safety); if you are saving for retirement that is many decades in the future, then you can afford to take a greater risk to achieve greater returns. In the first example, you have a short time horizon and may not be able to recoup any losses; in the second example, you may want to take on additional risk to get a larger return, because you have decades from which to recover from any downturn in the investment's value. As we learned when discussing compound interest, time can be your friend; but it can also be your enemy if you do not have the ability to recover from an economic downturn.

If you plan to buy a home in the next two years, should your savings towards a down payment be invested in the stock market? You might be tempted because the returns over the last few years have been strong (up almost 22% in 2017, as measured by the S & P). But if you were in this scenario in 2000, when the market declined for three straight years (by 9%, 12% and 22% in 2000-2002) then your savings for the down payment would have diminished significantly. If on the other hand you were investing in 2000, for a planned retirement in 2030, then you could afford to leave your portfolio invested and wait for the market to turn around. In this example let's pretend you had \$100,000 saved at the start of 2000; by the end of 2002, that account had dropped to approximately \$69,000. If you needed the cash in 2002 you would have realized a \$31,000 loss, or almost a third of your savings. If however you could afford to wait, then by the end of 2005, your holdings were once again about \$100,000.

Diversification or Asset Allocation

Diversification is the process of investing in a wide variety of asset types to spread your risk. The hope is that when one asset class declines, another will increase in value. The chart below provides the annual return for a variety of different asset classes from 2004 to 2014. The asset classes include: small, mid-sized and large capitalization companies in the U.S. as measured by the S & P 500, the S & P 400 and the Russell 2000; equities in other parts of the world as measured by the MSCI Emerging Markets and MSCI EAFE index (Morgan Stanley indices tracking 800+ companies in 23 emerging markets and equities in Europe, Australasia and the Far East, respectively); Barclays Aggregate Bond index (treasury securities, government agency bonds, mortgage-backed bonds, corporate bonds, and a small amount of foreign bonds traded in the US.); the Bloomberg Commodities Index (tracks 22 different commodities markets); the average price of gold; REITs (real estate investment trusts) and Market Neutral Hedge funds (which use hedging to avoid market risk).

Once you have decided on an asset allocation that meets your needs, you should review your portfolio at least annually to determine if rebalancing the portfolio is needed. For example, you might have decided that your portfolio should contain no more than 33% U.S. equities, but

because the stock market performed so well, the equity portion of your portfolio grew quickly, with the result that at year end, U.S. equities represented 50% of your portfolio. You may then decide to sell some equities and rebalance the portfolio, or you might decide that you can tolerate 50% of your assets in U.S. equities.

Figure 14-15

Total Returns by Asset Class Rankings												
2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	10-Years 2005-'14 Annualized	January- June 2015
REITs 30.4%	MSCI EmMkts 34.6%	REITs 34.0%	MSCI EmMkts 39.2%	Barclays Agg Bond 5.2%	MSCI EmMkts 78.0%	Gold 29.3%	Gold 9.6%	REITs 19.7%	Russell 2000 38.6%	REITs 27.2%	Gold 10.0%	MSCI EAFE 7.0%
MSCI EmMkts 25.5%	Gold 17.8%	MSCI EmMkts 32.1%	Gold 30.5%	Gold 4.9%	S&P 400 36.9%	REITs 27.6%	Barclays Agg Bond 7.8%	MSCI EmMkts 18.3%	S&P 400 33.2%	S&P 500 13.5%	S&P 400 9.6%	Russell 2000 4.8%
MSCI EAFE 20.5%	B'berg Commod 17.5%	MSCI EAFE 26.8%	MSCI EAFE 11.8%	Russell 2000 -33.6%	MSCI EAFE 31.7%	Russell 2000 26.6%	REITs 7.3%	S&P 400 17.7%	S&P 500 32.0%	S&P 400 9.7%	MSCI EmMkts 8.8%	S&P 400 4.2%
Russell 2000 18.1%	MSCI EAFE 14.0%	Gold 22.5%	B'berg Commod 11.1%	S&P 400 -35.9%	REITs 27.8%	S&P 400 26.4%	Mkt Neut HFs 4.5%	MSCI EAFE 17.7%	MSCI EAFE 23.1%	Barclays Agg Bond 6.0%	Russell 2000 7.7%	MSCI EmMkts 3.1%
S&P 400 16.3%	S&P 400 12.5%	Russell 2000 18.2%	Mkt Neut HFs 9.3%	S&P 500 -36.6%	Russell 2000 26.7%	MSCI EmMkts 18.9%	S&P 500 2.1%	Russell 2000 16.3%	Mkt Neut HFs 9.3%	Russell 2000 4.8%	S&P 500 7.6%	S&P 500 1.2%
S&P 500 10.7%	REITs 8.3%	S&P 500 15.6%	S&P 400 8.0%	B'berg Commod -36.6%	S&P 500 25.9%	B'berg Commod 16.7%	S&P 400 -1.7%	S&P 500 15.9%	REITs 2.3%	Mkt Neut HFs -1.2%	REITs 7.3%	Gold 0.5%
B'berg Commod 7.6%	Mkt Neut HFs 6.1%	Mkt Neut HFs 11.2%	Barclays Agg Bond 7.0%	REITs -37.8%	Gold 24.0%	S&P 500 14.8%	Russell 2000 -4.2%	Gold 6.6%	Barclays Agg Bond -2.0%	MSCI EmMkts -2.0%	MSCI EAFE 5.2%	Barclays Agg Bond -0.1%
Mkt Neut HFs 6.5%	S&P 500 4.8%	S&P 400 10.3%	S&P 500 5.6%	Mkt Neut HFs -40.3%	B'berg Commod 18.7%	MSCI EAFE 8.1%	MSCI EAFE -11.1%	Barclays Agg Bond 4.2%	MSCI EmMkts -2.3%	Gold -2.2%	Barclays Agg Bond 4.7%	B'berg Commod -1.6%
Gold 4.6%	Russell 2000 4.4%	Barclays Agg Bond 4.3%	Russell 2000 -1.5%	MSCI EAFE -41.8%	Barclays Agg Bond 5.9%	Barclays Agg Bond 6.5%	B'berg Commod -13.4%	Mkt Neut HFs 0.9%	B'berg Commod -9.6%	MSCI EAFE -4.0%	Mkt Neut HFs -1.0%	Mkt Neut HFs -1.9%
Barclays Agg Bond 4.3%	Barclays Agg Bond 2.4%	B'berg Commod -2.7%	REITs -17.8%	MSCI EmMkts -52.2%	Mkt Neut HFs 4.1%	Mkt Neut HFs -0.8%	MSCI EmMkts -17.8%	B'berg Commod -1.1%	Gold -28.3%	B'berg Commod -17.0%	B'berg Commod -3.3%	REITs -5.4%

Source: Oppenheimer Asset Management Research, Bloomberg's total returns calculator, Standard and Poor's, Credit Suisse, Barclays, MSCI, Bloomberg, and NAREIT. At press time, June, 2015 data for the Credit Suisse Hedge Fund Neutral Index was not yet available. Return calculations exclude applicable costs including interest and commissions.

<https://www.businessinsider.com.au/quilt-total-returns-by-asset-class-rankings-2015-7>

What is important to note about the chart above is that no one asset class consistently provided the best return. Note that over the ten-year period, gold, was at the top of the list. Note also from the earlier depiction of the investment pyramid, that gold is one of the most speculative investments.

Figure 14-15 is a bit misleading however because it examines a period when the markets were generally doing well. Looking at some alternate time frames, we would see that at the start of 1994 gold was selling for \$652 an ounce, by April 2001 gold had dropped to \$363 an ounce. We already discussed the large U.S. stock market downturns in 2000-2002.

Key Takeaways

- Markets will rise and fall, so our investments should be diversified and should match the time horizons of our goals.
- Investments should reflect our risk tolerance, need for liquidity and current income, or a desire for capital appreciation (growth).