

**High School Course**

**Financial Literacy 101**



**State of California  
Department of  
Real Estate**

**Student Guide**



This project is a result of a partnership by and between Sacramento Charter High School ("SCHS"), and the National Association of Real Estate Brokers-Investment Division, Inc., a HUD Housing Counseling Agency NID-HCA ("NID-HCA") and the State of California Department of Real Estate.

© State of California Department of Real Estate

First Printing: 2011

*Disclaimer: The views and opinions expressed in this text do not necessarily reflect the official policy or position of any agency of the State of California. Examples of analysis performed within this article are only examples. Assumptions made within the analysis are not reflective of the position of any State of California entity.*

For inquiries, please contact:

State of California Department of Real Estate

Dionne Young Faulk, Financial Literacy Chairperson

320 w. 4<sup>th</sup> Street, Suite 350

Los Angeles, CA 90013

Web site: [www.dre.ca.gov](http://www.dre.ca.gov)

## Acknowledgements

This Financial Literacy High School course is provided by the California Department of Real Estate (DRE) in partnership with Sacramento Charter High School ("SCHS"), and the National Association of Real Estate Brokers-Investment Division, Inc., a HUD Housing Counseling Agency NID-HCA ("NID-HCA"). Its production and distribution is part of the DRE Financial Literacy Outreach Program initiative enacted under the vision of former Real Estate Commissioner Jeff Davi. The California Department of Real Estate is committed to a very important and strategic outreach effort critical to promoting an understanding for all Californians of real estate financial transactions including but not limited to purchasing a first home, renting and refinancing an existing mortgage. California experienced a challenging financial impact caused in part by the lack of consumer knowledge and a thorough understanding regarding the financial commitment required for homeownership and the complexity of real estate transactions and financing. Knowledge is power. The DRE believes that by educating all Californians--from young adults to senior citizens--with the power of real estate knowledge, they will have greater understanding in their real estate transactions and financing and be less likely to be victimized by real estate fraud.

The California Department of Real Estate is dedicated to developing and implementing an innovative real estate financial literacy program that provides important and relevant information and resources with a specific focus based upon emerging needs.

**The following are those very key people involved in the success of this high school course:**

- The California Department of Real Estate
- Jeff Davi, Former Real Estate Commissioner, California Department of Real Estate
- Barbara Bigby, Chief Deputy Commissioner, California Department of Real Estate
- Dionne Young Faulk, Managing Deputy Commissioner and Financial Literacy Outreach Program Chairperson, California Department of Real Estate
- Jacqueline Carlisle, Executive Director, NID-Housing Counseling Agency
- Will Jarrell, Principal, Sacramento Charter High School
- Barbara Favila, Instructor, Sacramento Charter High School
- California Department of Real Estate Financial Literacy Outreach Task Force

# Table of Contents

---

## **PART 1 Study Guide**

### **Chapter 1**

#### **Financial Literacy: The Introduction**

1

What Is Finance?

1

Why Is Financial Literacy Important?

3

What Will You Learn?

4

What Is the Financial Environment You Live in?

4

How Do You Plan for Your Financial Future?

4

What Can You Do When You Don't Have Enough Money?

4

What Do You Need to Know About Going to College?

4

What Should You Do When You Have Excess Money?

4

Can You Afford to Buy a House?

5

### **Chapter 2**

#### **The Financial System in the U.S.**

6

The U.S. Dollar and the Federal Reserve

6

The Banking Industry

8

Types of Bank Accounts

9

Rate of Return

9

Privileges, Restrictions and Fees

10

Safety

10

Managing Your Bank Account

12

### **Chapter 3**

#### **Financial Planning and Budgeting**

15

Short-Term Budgeting

16

Income

16

Expenses

16

Contingencies and Savings

18

The Bottom Line

19

Periodic Review

19

Example of Short-Term Budget

19

Long-Term Budgeting

21

The Time Value of Money

22

## **Chapter 4**

### **Borrowing and Consumer Credit**

---

Using Consumer Credit	26
Types of Consumer Credit	27
Factors Creditors Consider	28
What Is a FICO Score?	29
Why Is Credit Score Important?	29
Payments of Closed-End Credit	30
How Does Good Credit Help You Save Money?	31

## **Chapter 5**

### **Financial Decision-Making in College**

---

Planning for College	34
Benefits of Attending College	34
Costs of Attending College	35
Using Credit Cards	36
Features of Credit Cards	37
Identity Theft	38
Renting an Apartment	38
Location and Building Features	39
Lease Terms	39
Insurance	40

## **Chapter 6**

### **Saving and Investing**

---

Popular Investment Vehicles	42
Bank Accounts	42
Bonds	43
Stocks	44
Real Estate	45
Mutual Funds	46
Tax Implications	46
What Types of Taxes Are You Required to Pay?	47
How Do Taxes Affect Your Financial Goals?	47

<b>Chapter 7</b>	
<b>Buying Your First Home</b>	50
Home Ownership	51
Home Buying Process	52
Home Financing	53
Types of Mortgages	53
Monthly Mortgage Payment	54
Cost of Mortgages	54

## **PART 2 PowerPoint Slides**

<b>Chapter 1</b>	58
<b>Chapter 2</b>	61
<b>Chapter 3</b>	68
<b>Chapter 4</b>	74
<b>Chapter 5</b>	81
<b>Chapter 6</b>	86
<b>Chapter 7</b>	94

<b>PART 3 Glossary</b>	99
------------------------	----

# **PART 1**

## **STUDY GUIDE**

## Chapter 1 Financial Literacy: The Introduction

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The meaning of finance and why it is important
- The financial concepts and decision-making skills you will learn in this course

### KEY TERMS

Finance  
Rate of Return

Investment  
Risk

### WHAT IS FINANCE?

Financial literacy is the ability to understand finance. It is about developing the knowledge and skills that will allow you to make better financial decisions. The first step toward financial literacy is to understand the meaning of finance. You have probably heard of the term (or a variant of it, such as financial and financing) a lot. For example, TV news reports on the *financial* crisis and how that has affected the economy; in TV commercials, automakers offer special *financing* of 0% APR to car buyers; and your guidance counselor may have told you that *finance* is one of the most popular majors in college.

What exactly does finance mean? Here are some definitions from authoritative sources:

Finance, the process of raising funds or capital for any kind of expenditure. Consumers, business firms, and governments often do not have the funds available to make expenditures, pay their debts, or complete other transactions and must borrow or sell equity to obtain the money they need to conduct their operations. Savers and investors, on the other hand, accumulate funds which could earn interest or dividends if put to productive use. These savings may accumulate in the form of savings deposits, savings and loan shares, or pension and insurance claims; when loaned out at interest or invested in equity shares, they provide a source of investment funds. Finance is the process of channeling these funds in the form of credit, loans, or invested capital to those economic entities that most need them or can put them to the most productive use.

*Britannica Encyclopedia*



1. Money or other liquid resources of a government, business, group, or individual: Finances
2. The system that includes the circulation of money, the granting of credit, the making of investments, and the provision of banking facilities
3. The science or study of the management of funds
4. The obtaining of funds or capital: Financing

*Merriam-Webster Dictionary*

These formal definitions sound complicated and may even be a little bit confusing. They probably would not help a regular person comprehend what finance is, and why understanding it is so important. A much simpler way to describe finance is that it is **a subject that deals with money**. The downside of using such a simple definition is that you may underestimate the complexity of finance and have the false sense that making financial decisions is easy. Because finance is not just about spending money (which most people are very good at) but is about managing money, you may need help to become financially literate. On the other hand, finance is not rocket science, so all you need is basic math, logical thinking and discipline in order to make sound financial decisions. The example below helps illustrate some of the factors that should be taken into account when making financial decisions.

Consider this simple question: “\$100 and \$105, which is better?” The immediate response by most people would be “\$105, of course.” However, the answer is not that straightforward and may require you to take several factors into consideration. First, are we comparing 100 US Dollars with 105 US Dollars? If there are different currencies involved (for example, the US Dollar and the Canadian Dollar), the answer would be affected. When the economic conditions change, one US Dollar may be worth more or less than one Canadian Dollar. If we focus on the US Dollar only, then the next factor to be considered is whether you’re receiving or paying the amounts. All rational people would choose to receive more, but prefer to pay less. Now suppose your choices are to receive either US\$100 or US\$105. Then the third factor is when you expect to receive the money. The sooner you get the money, the sooner you can spend it, or save it in a bank account and start earning interest. As a result, \$100 today may be a better choice than \$105 to be received three years from now. To make the two alternatives more comparable, let’s assume you expect to receive either amount in US Dollars a year from now, which one is better? The answer may depend on who promises to pay you the amount. Most people would choose \$100 promised by someone they trust, instead of \$105 from someone they barely know. This is the concept of risk, which deals with uncertainties in the future. This example demonstrates that finance is a subject that deals with the concepts of money, time, risk and how they are interrelated.

## DO THE MATH

Rate of return is a very important measure of the profitability of an investment opportunity. It is calculated as the ratio of how much you earn on the investment to how much you pay for the investment. Mathematically, the rate of return can be computed based on an investment's value now and its value at time of purchase:

$$\text{Rate of return} = \left( \frac{\text{Value now} - \text{Value at time of purchase}}{\text{Value at time of purchase}} \right)$$

Calculate the rate of return on the following investment opportunities:

- You paid \$20 for a stock and it is worth \$22 now.
- An investor bought a bond for \$980 and its value has increased to \$1,035.
- Jason purchased a house for \$300,000, and the house is now worth \$314,580.

## WHY IS FINANCIAL LITERACY IMPORTANT?

Over the course of your life, how much money do you think you are going to earn? Tens of thousands? Hundreds of thousands? For most people, the total amount of money you earn from the first job you get after finishing college to the time you retire will be over \$1 million. The average annual salary for college graduates is about \$45,000. Assume that you start your career at the age of 22 and never receive a raise (which is highly unlikely, but let's be conservative in the estimation). If you retire at the age of 65, the total amount you will earn over the 43-year period will be \$1,935,000, nearly \$2 million. With an annual increase of only 1%, your total earnings will exceed \$2.4 million. Do you know how to manage millions of dollars? It sounds like such a huge amount that you would never need to worry about running out of money, right? Unfortunately, if you don't handle your finances properly, this seemingly unlimited amount will not be enough.

David Edwards from Kentucky was the Powerball jackpot winner in August 2001 and took home \$27 million in cash. In an interview with CNN, he said he was going to be smart with his money. Six years later, Edwards was evicted from his \$1.2 million home in Florida; shortly thereafter, he was evicted from a storage unit he was living in. As his entire winnings had been blown, Edwards said that winning the lottery was a curse, not a blessing. What do you think you can learn from a story like this?

## WEB EXERCISE

Search on the Internet to find the average salary for a high school graduate, a college graduate, and one with a master's degree.

- How much more money can you earn over a 40-year career if you go to college?
- How much more can you earn if you receive a master's degree?

## WHAT WILL YOU LEARN?

The purpose of this course is to help you develop a basic understanding of finance and recognize some of the financial decisions you may encounter in your life. We will use many practical examples and show you the contrast between making the right and wrong decisions. Some of the financial concepts and skills you learn in this course will help you make better decisions immediately; others may be more applicable in the long run, benefiting you during your college years and beyond. Here is a list of the topics you will learn:

### ***What is the financial environment you live in?***

Chapter 2 describes the financial system in the U.S. It discusses the roles of the Federal Reserve system as well as the functions of the banking industry. You will learn the different financial institutions you save your money with, and the various types of accounts you can choose from. This chapter also talks about the factors you should consider when comparing different bank accounts.

### ***How do you plan for your financial future?***

Chapter 3 focuses on budgeting, specifically, making a plan that considers the money you will bring in and the money you will spend. You will learn how to prepare a short-term budget (for example, monthly) of income and expenses. This chapter will also teach you how to plan for longer-term goals, such as going to college, buying your first house, and saving for retirement. An important lesson in this topic is to know how your short-term plans may affect your chance to accomplish the long-term goals.

### ***What can you do when you don't have enough money?***

Sometimes you may not have enough money to pay for what you need (not what you want), for example, a car, a house or a college education. What can you do in this situation? With the financial system in the U.S., you can borrow the money needed from a financial institution. Chapter 4 helps you understand where and how you can get a loan, as well as the cost of various types of loans. It also talks about the factors lenders consider, especially the borrower's credit, when deciding whether a loan application should be approved or rejected.

### ***What do you need to know about going to college?***

Many of you have already made up your mind about attending college. If not, Chapter 5 may assist you in making the decision as it talks about the costs and potential benefits of getting a college degree. The chapter also discusses some of the financial decisions college students need to make, including getting a credit card, managing your credit, and selecting an apartment and signing a lease.

### ***What should you do when you have excess money?***

After finishing college, most people get a full-time job and start a career. At this stage in your life, your income is likely to exceed your total expenses (including your current consumption and the payments on loans you've borrowed). Chapter 6 helps you identify the numerous ways to save/invest your money. Each investment opportunity has its own unique characteristics, such as potential return, risk, tax implications, etc. You will learn the basics of investing and how to plan for your retirement.

### ***Can You Afford to Buy a House?***

Buying a house is the biggest investment decision in the lives of most Americans. Chapter 7 teaches you what you need to consider when choosing between renting an apartment and purchasing your own home (which could be a single-family detached house, a townhome, or a condominium). It also discusses the different types of mortgages that are available to you for your home purchase and other types of homeownership expenses you need to consider.

## **KEY TERMS TO REMEMBER**

### ***Finance***

A subject that deals with the concepts of money, time, risk and how they are interrelated.

### ***Investment***

An asset or item that is purchased with the hope that it will generate income or increase in value.

### ***Rate of Return***

The money you earn on an investment, stated as a percentage. Calculated as the (Value Now minus the Value at the Time of Purchase) divided by the Value at the Time of Purchase.

### ***Risk***

The degree of uncertainty of the rate of return on an investment.

## Chapter 2 The Financial System in the U.S.

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The financial system in the U.S. and the role of the Federal Reserve
- Various types of financial institutions that provide services to individuals
- Different types of bank accounts and how to choose among them

### KEY TERMS

The Federal Reserve System  
Commercial Bank  
Credit Union  
Savings and Loan Associations

Annual Percentage Yield (APY)  
Checking Account  
Savings Account  
Compounding

We live in an economy that has one of the most developed, advanced financial systems in the world. Everyone enjoys the convenience provided by the system on a daily basis, but we seldom think about the importance of it. What would our daily lives be like if the financial system we take for granted did not exist? Imagine a world with no banks or other financial institutions; no checks or credit cards; no ATM. People must use cash to buy everything, from groceries, to cars or even houses. If you don't have enough of your own money to buy a house, the only sources for borrowing are people you know, such as your parents, relatives and friends. If your monthly income is greater than your current spending, you need to store the excess cash in a safety box or hide it under a mattress, but you can't save the money in a bank to earn interest.

So what is the financial system? In a broader sense, the financial system covers everything that facilitates the transfer of money (capital, funds). Components of the system include banks with which you save money or from which you borrow money; credit card companies that provide you the convenience of not having to carry a lot of cash; government agencies that regulate and monitor the operations of those financial institutions; and stock and bond markets where individuals and institutions invest their funds, among others. In this chapter, we will focus on the sector that is most relevant to individuals making financial decisions: the banking industry.

### THE U.S. DOLLAR AND THE FEDERAL RESERVE

As discussed in the previous chapter, finance is the subject that deals with money. So let's start by examining the money we use. The Constitution of the United States of America states that

“The Congress shall have the power... to coin money.” As a result, the Congress created the U.S. Mint in 1792 in Philadelphia to produce coins representing the official U.S. currency. The Mint’s first production was copper cents, and it later also issued silver and gold coins as well. In 1861, due to a shortage of precious metals, the Department of Treasury began printing paper money (notes). Today, the Bureau of Engraving and Printing is responsible for producing paper currency while the U.S. Mint is responsible for producing coinage. Both government agencies are part of the U.S. Department of Treasury.

In 2010, the Bureau of Engraving and Printing printed about 6.4 million notes with a total value of nearly \$400 billion. During the same time, the U.S. Mint produced approximately \$6.4 billion worth of coins. Most of the new productions (about 95%) were used to replace notes and coins already in circulation. As of the end of 2010, approximately \$942 billion of paper currency and \$40 billion of coins were in circulation.

### WEB EXERCISE

- Take a virtual tour of “How Coins Are Made” at the U.S. Mint’s website ([http://www.usmint.gov/mint\\_tours/](http://www.usmint.gov/mint_tours/)).
- Go the website of the Bureau of Engraving and Printing ([www.moneyfactory.gov](http://www.moneyfactory.gov)) to learn the new features of the redesigned \$100 note.

After paper notes and coins are produced by the Department of Treasury, they are delivered to the Federal Reserve (the Fed) before being released to the public. Why the Federal Reserve? Because it is the central bank of the United States, and it is responsible for controlling the nation’s money supply. When an individual needs money, he can borrow from a bank; when a bank needs money, it can borrow from the Federal Reserve. Therefore, you may consider the Fed as a bankers’ bank. The Federal Reserve was founded by Congress in 1913 with the primary responsibility of maintaining a safe and stable monetary and financial system. Over the years its role has expanded. Currently, the Federal Reserve’s duties fall into four general areas: 1) conducting the nation’s monetary policy, 2) supervising and regulating banking institutions, 3) maintaining the stability of the financial system, and 4) providing services to financial institutions and the U.S. government.

The Federal Reserve system consists of the Board of Governors (in Washington D.C.) and twelve regional Federal Reserve Banks. The Board and the Reserve Banks share the responsibility of implementing the government’s economic and financial policy. The Federal Reserve operates within the overall objectives established by the government; however, its decisions do not have to be ratified by the President or anyone else in the executive branch of the government. The system is subject to oversight by the U.S. Congress. The chairman of the Board is appointed by the President and confirmed by the Senate. Because of the position’s strong influence on the largest economy in the world, the Federal Reserve chairman is often considered one of the most powerful people in the world.

## WEB EXERCISE

- One of the Federal Reserve's current responsibilities is consumer education. Go to the Federal Reserve website (<http://www.federalreserve.gov>) and find the brochures that are designed to help consumers learn about and deal with financial issues.
- Identify the 10 most powerful people in the world and find out why they are so powerful.

## THE BANKING INDUSTRY

One of the Federal Reserve functions is supervising and regulating banking institutions. It is important to understand what banks are, what they do, and how they affect individuals like you. Have you seen the scenes in Western movies where bandits rob a bank? Did you wonder what the differences are between banks in the 19<sup>th</sup> century and those of today? Traditionally, a bank is the place where people save their surplus income. A saver gives up the right of spending the money now; in exchange, she gets more money back later (principal plus interest). As the bank collects savings from many individuals, it uses the money to make loans to those who need more money than they currently earn. When making a loan, the bank charges an interest rate. The bank uses the difference between the rate it collects from borrowers and the rate it pays to savers (this is called a spread) to cover its expenses of doing business and to make a profit.

Today, the business of collecting deposits and making loans continues to be one of the major functions of the banking industry; however, the term "bank" is being used in a much broader sense. For example, investment banks are financial institutions that help corporations and governments raise capital by designing and marketing securities (such as stocks, bonds, and other derivative securities); mortgage banks are those that specialize in facilitating real estate transactions by bringing borrowers and lenders together. Although they are called banks, you can't open a checking/savings account with an investment bank or a mortgage bank because they do not accept deposits. So what kind of bank do you open an account with? Banks that perform the traditional functions of collecting deposits and lending are referred to as commercial banks. In early 2011, the five largest commercial banks in the U.S. were Chase, Bank of America, Citi, Wells Fargo, and US Bank. You can probably find the branch offices of some, if not all, of these banks in your neighborhood. An interesting feature of these large banks is that they have evolved into large financial conglomerates that do much more than just compiling savings and making loans. Each of them has operations in commercial banking, investment banking, mortgage banking, as well as many other financial activities.

In addition to commercial banks, several other types of financial institutions also provide similar services to individuals and businesses that need to save or borrow money. Examples include credit unions, savings and loan associations, and mutual savings banks. Since they rely on deposits from savers as the primary source of raising capital, these institutions are referred to as depository institutions. The following table summarizes some of the characteristics that traditionally differentiate the various types of depository institutions. It's important to note that all of them have expanded their services, so the differences have become blurred.

### **Financial Institutions that Collect Deposits and Make Loans**

Type of Institution	Key Services and Ownership
Commercial Banks	<ul style="list-style-type: none"><li>• Provide a full range of financial services, including checking, savings, business lending and mortgage loans</li><li>• Owned by shareholders</li></ul>
Savings and Loan Associations	<ul style="list-style-type: none"><li>• Specialize mainly in savings accounts and home mortgage loans</li><li>• Owned by shareholders</li></ul>
Mutual Savings Banks	<ul style="list-style-type: none"><li>• Specialize mainly in savings accounts and home mortgage loans</li><li>• Owned by depositors</li></ul>
Credit Unions	<ul style="list-style-type: none"><li>• Provide various financial services</li><li>• Owned by members having a common bond, such as work, church or community affiliation</li></ul>

### **TYPES OF BANK ACCOUNTS**

Many people are amazed and confused by the many different types of accounts available at a bank when they try to open their first bank account. Checking, saving, certificate of deposit, money market, etc. Which one is the best? The answer depends on your financial situation, such as how much money you have and when you will need the money. Some bank accounts have a minimum balance requirement, requiring you to have at least a certain amount of money in the bank at all times. If your balance drops below the requirement, you are charged a fee. Other accounts allow you write a limited number of checks each month. If you need to write more checks, fees will be charged. Certain accounts do not allow you to withdraw money until a specific date. If you need the money before that date, you have to pay a fee. Why would anyone accept those restrictions as they may potentially cost extra money? Because those accounts may pay a higher interest rate. Like most financial decisions, selecting the type of bank account that is right for you involves a tradeoff. Here are some of the factors you should consider.

#### ***Rate of Return***

The one factor everyone takes into consideration when selecting an account is the interest rate. The idea seems quite simple: the higher, the better. However, simply comparing the nominal interest rates may lead to the wrong decision. Another key factor to take into account is how often the interest is calculated. As interest earned in the previous period can also earn interest in the current period (that is, interest on interest, or compounding), the more frequently interest is calculated, the more money you will have in your account, given the same interest rate and time period. Suppose you have \$100 in a savings account and the interest rate is 6%. If interest is calculated annually, you will have \$106 after one year. If interest is calculated



monthly, each time it is calculated, you earn 0.5% ( $6\% \div 12$ ). As a result, you will have \$106.17 at the end of the year. You effectively earn a 6.17% rate of return over the year.

Because most consumers do not know how to calculate the effective rate of return by factoring in the compounding frequency, the laws require banks to disclose annual percentage yield (APY) so everyone can meaningfully compare the different options. APY is defined as the percentage rate expressing the total amount of interest that would be received on a \$100 deposit based on the nominal interest rate and the frequency of compounding. The number reflects how much interest an account can earn and should be the basis for comparison.

### DO THE MATH

How is annual percentage yield (APY) determined? If you know the annual interest rate ( $i$ ) and the compounding frequency ( $m$ ), the APY can be calculated with this formula:

$$APY = \left(1 + \frac{i}{m}\right)^m - 1$$

Now compare the following three alternatives. Which one has the highest APY?

- An account with a 10.50% interest rate and annual compounding
- An account with a 10.25% interest rate and monthly compounding
- An account with a 10.00% interest rate and daily compounding

### ***Privileges, Restrictions and Fees***

As mentioned before, some bank accounts have restrictions such as minimum balance requirement, or limited check writing. Some accounts charge fees for certain activities, such as ATM fees, online banking fees, and bounced checks. Many banks also offer privileges to various types of accounts. For example, some savings accounts allow you to write a limited number of checks; some banks waive the minimum balance requirement if you set up direct deposit for your paychecks (that is, your wages are electronically deposited into your account directly from your employer); some institutions reimburse the fee you are charged when using the ATM of another bank. You may be enticed to do business with a bank that pays higher APY than its competitors, but it is very important that you also consider all the privileges, restrictions and potential fees. A \$3 fee you pay at the ATM may completely offset the additional interest you earn over the whole year with a slightly higher APY.

### ***Safety***

During economic recessions, you may hear the news of banks going out of business. What would happen to your money if the bank you deposited money with filed for bankruptcy? Most banks and savings institutions are insured by agencies that are affiliated with the federal government. If the bank is insured by the Federal Deposit Insurance Corporation (FDIC), your deposits of up to \$250,000 are protected.

## WEB EXERCISE

Go to the websites of two depository institutions (a commercial bank and a credit union) that have branch offices in your local area to find information about their savings accounts. Compare their annual percentage yield, minimum balance, potential fees, and other restrictions.

Most of the depository institutions offer a variety of accounts, including checking, savings, money market, and certificates of deposit. Suppose you have some money to save, which type of account is best for you? The table below summarizes some of the key characteristics of various types of accounts.

### Types of Bank Account You Can Use to Save Money

Type of Account	Characteristics
Checking Accounts	<p>These are the most flexible accounts. You make deposits to the account, and write checks to pay your bills or make purchases. You have convenient, frequent access to your money. Most banks allow you to withdraw cash or make deposits using an automated teller machine (ATM). Many also issue debit cards so you can purchase products and services at businesses that do not accept personal checks.</p> <p>Regular checking accounts do not pay interest. Those that do pay interest typically have much lower APY than other types of account.</p>
Savings Accounts	<p>These are similar to checking accounts, but have more restrictions. Savings accounts typically allow you to make withdrawals, but without the convenience of using checks (or only a limited number of checks). If you have both checking and savings accounts with the same bank, your ATM card may be linked to both. A savings account may have a higher minimum balance requirement than a checking account.</p> <p>All savings accounts pay interest and the rate of return is typically higher than interest-earning checking accounts.</p>
Money Market Accounts	<p>Compared with checking and savings accounts, these accounts typically have higher a minimum balance requirement and other restrictions. They may allow a small number of checks and money transfers each month.</p> <p>The main benefit of money market accounts is the favorable rate of return. The yield is based on market interest rates, so it may fluctuate over time.</p>

## Certificates of Deposit (CDs)

These accounts require you to keep your money with the bank for a specific period of time. You do not have access to your money until the end of the period, that is, the maturity. CD terms range from a few days to several years. Sometimes the bank may allow you to withdraw money before maturity, but a penalty is often charged.

In exchange for the inflexibility, you receive a guaranteed yield that is typically higher than other types of accounts.

---

## MANAGING YOUR BANK ACCOUNT

An essential part of managing your finances is knowing how much money you have, how much money you earn, and how much money you can spend. As a result, knowing the balance of your bank account is very important. Traditionally, people manually record each transaction, for example, deposits, withdrawals and checks written, in order to keep track of the balance. Many checkbooks have pages of templates in which one just fills in the transaction. That is why this activity is often referred to as balancing your check book.

In the example below, Julie had \$102.50 in her checking account at the beginning. On August 10, she deposited her paycheck of \$235.20. After the amount is credited (that is, added), her account balance became \$337.70. The next day, Julie wrote a check of \$15 (check #120) to pay for pizza, so she debited (that is, subtracted) the amount from her account. On August 14, she used another check (#121) and also withdrew \$20 from an ATM. After these two transactions, her account balance was \$89.80. One thing people often forget is the fees they may have incurred in transactions. If Julie was charged a fee when taking cash out of the ATM, that amount needs to be debited from the account as well; otherwise, her record would not be consistent with the monthly statement prepared by the bank. Another potential reason for inconsistent records is that people forget to include purchases using a debit card, especially when they don't keep the receipts. Without knowing exactly how much money she has in her account, Julie might write a check for an amount exceeding her balance and consequently had to pay a hefty fee for the bounced check.



AD-Automatic Deposit • AP-Automatic Payment • ATM-Cash Withdrawal • DC-Debit Card • FT-Funds Transfer • SC-Service Charge • TD-Tax Deductions									
NUMBER OR CODE	DATE	TRANSACTION DESCRIPTION	AMOUNT	FEES	WITHDRAWALS	✓	DEPOSIT CREDIT (+)		
								\$	102.50
	8/10	Paycheck					235.20	337.70	
0120	8/11	Joe's Pizza	15.00					322.70	
0121	8/14	University Bookstore	21.20					109.80	
	8/14	ATM Withdrawal	20.00					89.80	

Today, many financial institutions offer online banking, so you can keep track of all the transactions and your balance by logging in to your account on a computer or even from your smart phone. Additionally, you can transfer funds, pay bills, or apply for a loan online. Some banks even allow you to create a budget and compare it with your actual spending. With all the new technology and tools, managing your finances has become much easier. Nevertheless, the key to a sound financial future is still careful planning and discipline.

### WEB EXERCISE

Many banks now encourage their customers to use online banking. Go to the website of Bank of America (<http://www.bankofamerica.com/onlinebanking/?context=en>) and click on the “View Demo” button to learn about how the system works.

### KEY TERMS TO REMEMBER

#### ***The Federal Reserve System***

The central bank of the US, established in 1913. It is governed by the Board of Governors located in Washington, D.C. and includes 12 regional Federal Reserve Banks. The system is authorized to implement the government’s economic and financial policy as well as to regulate the banking industry.

#### ***Annual Percentage Yield (APY)***

The APY is the interest rate actually earned or paid in one year, taking into account the effect of compounding. The APY is calculated by taking one plus the periodic rate and raising it to the number of periods in a year.

#### ***Commercial Bank***

Bank that offers a broad range of deposit accounts, including checking, savings and time deposits, and extends loans to individuals and businesses.

#### ***Credit Union***

A not-for-profit institution that offers financial services, similar to those offered by a commercial bank, to its members.

#### ***Savings and Loan Associations***

A financial institution that accepts savings deposits and invests the bulk of the funds received into mortgages.

#### ***Checking Account***

A deposit account at a financial institution that allows the holder to write checks against deposited funds.

***Savings Account***

A deposit account at a financial institution that pays interest, but cannot be withdrawn by check writing.

***Compounding***

The process of accumulating the time value of money forward in time. For example, interest earned in one period earns additional interest during each subsequent time period.

## Chapter 3 Financial Planning and Budgeting

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The meaning of budgeting and how to prepare a short-term budget
- The purpose of long-term budgeting
- The difference between short-term and long-term financial planning
- The basics of the time value of money

### KEY TERMS

Budget

Income

Surplus

Needs

Time Value of Money

Expense

Deficit

Wants

As discussed in the last chapter, an important step toward a sound financial future is keeping track of your money. You need to know how much money you've earned, how much you've spent, and how much you currently have. The next step is to draw a roadmap for the future, that is, preparing a budget. A budget is a plan of financial activities that considers the money you expect to bring in (called cash inflow) and the money you are going to spend (called cash outflow). If the money coming in exceeds the money going out during a certain period of time, you have a surplus; otherwise, you have a deficit.

When a TV broadcaster says that the federal government budget in the next fiscal year has a deficit of \$1.1 trillion, that means the amount of money the federal government expects to bring in (mainly from tax revenues) is \$1.1 trillion less than the amount it plans to spend. Why is it such a big deal? Because the shortage of money has to come from somewhere, or the government needs to reduce its spending. The government has two main options to bring in more money: raising taxes or borrowing. Either way, taxpayers (including both businesses and individuals) eventually have to pay for it. While we often hear about budget issues related to the government, the concept of budget can be applied to individuals, families and businesses as well. A teenager may want to know whether he will be able to afford a new video game when it is released; a family may need to figure out how it can save for a vacation; and a corporation may need to decide how it should raise funds for a major expansion. Preparing a detailed plan for future financial activities helps you: 1) avoid overspending; 2) assess your ability to reach certain goals; 3) identify necessary adjustments in your financial habits; and 4) prepare you for financial emergencies.

## WEB EXERCISE

- Search on the Internet to find the federal budget for the current fiscal year. How much total revenue does the federal government expect to receive? How much total expenditures does it plan to spend? Does it have a surplus or a deficit for the year?
- Find the same information for the state government.

There are different types of budgeting. A budget may focus on a relatively short period of time, such as a family's monthly budget and the government's annual budget. On the other hand, a budget may be developed for the long run. For instance, an individual may be saving money for the purchase of her first house in five years, or planning for her retirement in thirty years. This chapter teaches you how to prepare a short-term budget. You will also learn how the result of short-term budgeting may affect your long-term financial planning. An essential concept for financial decision-making, called the "time value of money," is introduced in the last section of the chapter.

## SHORT-TERM BUDGETING

The most common type of budgeting in personal finance is the preparation of a monthly budget. To prepare a monthly budget, you need to know how much you earn/receive (that is, your income) and how much you spend (expenses) in the month. The first step is to gather all the information about your income and expenses in recent months. For example, your paystubs show how much you earned and how much taxes were deducted from your income; bank account statements list all the checks you deposited, checks you wrote, and cash withdrawals you made; and credit card statements itemize all the charges. Because some income and expense items may vary from time to time, you need to estimate what is the typical amount for budgeting purposes.

### ***Income***

For a teenager, the regular income sources may include wages from a part-time job, an allowance from parents, and interest earned on a savings account. Some of you may also have other types of income that occur less frequently, such as gifts for special occasions (birthdays, Christmas, etc.) and earnings from babysitting. For a family, the parents' salaries/wages may be the primary source of income, but they may also receive investment income, or bonuses, among others. In the sample worksheet that follows, several income sources are listed. This by no means suggests that those are the only sources, or everyone should have income from each of the sources. Line items can always be added to or deleted from the template.

### ***Expenses***

After estimating the amount of money you will bring in, the next step is to determine how the money will be spent. You should start with all expenses that occur on a regular basis. First, you may need to pay taxes on some of your income (wages but not allowance). If the wages in the income section are already the after-tax amount, then you don't need to subtract the tax payment again. Other typical expenses may include education, housing, food and

Monthly Budget Worksheet			
Category	Budgeted Amount	Actual Amount	Difference
<b>Income</b>			
Wages			
Allowance			
Interest			
(Others)			
(Others)			
<b>Total Income</b>			
<b>Expenses</b>			
Taxes			
Education			
Housing			
Food			
Transportation			
Healthcare			
Entertainment			
Personal			
Debt			
Charity			
(Others)			
(Others)			
(Others)			
<b>Total Expenses</b>			
<b>Contingencies</b>			
<b>Savings</b>			
<b>Surplus/Deficit</b>			



transportation. The items in the worksheet are broad categories, and you may want to add subcategories when preparing your own budget. For example, expenses for education may include tuition and fees, books, school supplies and field trips. In terms of transportation, if you own a car, you may need to consider car payments (if you have a car loan), insurance and gasoline; if you take a bus to school/work, the cost of bus fares should be included. Some of you may have other payments that occur on a regular basis and are of a constant amount, such as a cell phone bill, membership dues to clubs, etc.

After regular expense items, you should also consider discretionary spending, like shopping (clothes, shoes, etc.), dining (pizzas, snacks, etc.) and entertainment (movies, video games, etc.). These expenses may fluctuate periodically, but you need to estimate the amount you spend in a typical month.

For families, the list of expenses is longer and the amounts are typically higher. In addition to taxes and transportation, other regular expenses may include housing (mortgage payment, rent, and/or homeowner association dues), utilities (electricity, water, gas, trash removal, etc.), groceries, and insurance (health, life and property). There are also discretionary items a family needs to consider in its monthly budgeting.

A common mistake in preparing short-term budgeting is that you forget to include expenses that occur less frequently. For example, a car registration fee is billed to the owner once a year. If you don't calculate the average amount per month and allocate it to each month, you will underestimate the overall cost of owning a car, and consequently, may have a huge cash shortfall in the month when the fee is due. For families, back-to-school and holiday shopping are often overlooked if the budget is not being prepared at a time when those expenses occur. As a result, a family that normally has a balanced budget may have a hard time meeting its financial needs during certain periods of time in a year.

### ***Contingencies and Savings***

After deriving total income and anticipated expenses, most people subtract the expenses from the income to see the bottom line. If the result is positive (that means income is greater than expenses), they would feel comfortable with their financial situation. This, however, is the bare minimum of an acceptable financial position. The expenses listed in the budget so far are all anticipated items. What if something unexpected happens? Suppose your car breaks down and the cost of repair is \$800. With car insurance, you don't need to pay for the entire amount but are still responsible for the deductible of \$500. How should expenses like this be taken into account in the budgeting process? For a family budget, the most critical factor is probably a medical emergency. Studies have shown that over 60 percent of bankruptcies in the U.S. were linked to medical expenses, even though most of those who filed bankruptcy had health insurance. How should you deal with such unexpected expenditures? The solution is to set aside a certain amount of money for "a rainy day." A teenager should probably keep 10 to 15 percent of his/her monthly income for emergency situations. In contrast, financial advisers recommend that families should maintain an emergency fund of three to six months of living expenses for unexpected financial difficulties.

If your income is just enough to cover the planned expenses and the contingency, you won't be able to save money on a regular basis. To accomplish your long-term financial goals (which will be discussed later in this chapter), you need to save money and let the money work for you over time. As a result, setting a savings target is a necessary part of the budgeting process as well.

### ***The Bottom Line***

Now you can subtract all the expenses, the contingency, and the savings from your income. If you have leftover money, you can always save more than the planned amount. Or you may choose to indulge yourself once in a while by dining out or buying new clothes. What should you do if your income is not enough? This is when the budgeting process really helps. You need to review the expenses and prioritize them. It's very important that you understand the differences between what you "need" and what you "want." We often hear people say things like "I need a new pair of shoes." If the person's shoes are falling apart and, as a result, he/she can't go to school or work, the new pair of shoes are what he/she needs. But if the reason is that the new shoes better match an outfit he/she just bought, then the purchase is what he/she wants. You are supposed to spend money on what you need first, and only buy what you want if you can afford to make the purchase.

### **WEB EXERCISE**

A very important step toward balancing your budget is understanding how to control your spending. There are many excellent resources on the Internet that help you develop better spending habits. For example, you can go to SmartAboutMoney.org ([www.smartaboutmoney.org](http://www.smartaboutmoney.org)) and search for tips on controlling spending and understanding needs vs. wants.

### ***Periodic Review***

After a budget is prepared, you need to have the discipline to follow it. It is important to review the budget on a regular basis and compare it with your actual income and expenses. If what you had planned and what actually happened is very different, you need to investigate whether it is a temporary situation/isolated case, or it is likely to be permanent. If it is the latter, either the budget needs to be revised or the way you spend your money should be adjusted.

### ***Example of Short-Term Budget***

Now let's prepare the monthly budget for two teenagers: Alan and Charlie. Alan has a part-time job at a fast food restaurant and earns about \$320 each month. He also mows the lawn at several houses in the neighborhood, making an average of \$70 a month. In terms of expenses, Alan needs to pay for lunches at school and gasoline for his car, which average about \$120 and \$75 each month, respectively. Alan recently started learning karate; he and his parents split the monthly cost of \$60 for the sport. He estimates that he spends approximately \$70 on activities such as going to movies, renting video games and hanging out with friends. Alan sets aside 10% of his monthly income for unanticipated expenses and plans to save at least \$50 each month. If there's any leftover, it would be added to his savings account.

Charlie works at the same restaurant and makes about the same amount of money as Alan. Additionally, he receives a \$30 weekly allowance from his parents. As a result, Charlie's monthly income is approximately \$440. While Charlie makes more money than Alan each month, he also spends much more. On days when he doesn't work, Charlie likes to buy a smoothie on the way home; his monthly expense on food and beverage is thus \$40 higher than Alan's, even though they spend about the same amount at the school cafeteria each day. They also pay a comparable amount on gasoline. Charlie's parents got him a cell phone and pay for the basic plan; however, he is responsible for any overage charge. He pays about \$50 each month for the additional air time. Charlie plays many sports; since his parents pay for all sport-related costs, these expenses are excluded from his budget. In addition to spending \$100 each month on entertainment, Charlie pays about \$35 for music and game downloads.

The table below compares Alan and Charlie's budgets. At first glance, both Alan and Charlie are in pretty good financial situation as they have a monthly surplus of \$6 and \$20, respectively. One may even conclude that Charlie is in a better shape. However, further investigation of the details tells a different story. In Charlie's budget, he does not consider any emergency funds, so an unexpected expense could wipe out his savings over several months. Alan, on the other hand, not only allocates money for emergencies but also sets a minimum saving target. As a result, he can save \$56 every month, or possibly even more if the contingency funds are not fully utilized.

#### Comparison of Alan and Charlie's Monthly Budgets

	Alan	Charlie
<b>Income</b>		
Wages	320	320
Allowance		120
Other Income	70	
<b>Total Income</b>	390	440
<b>Expenses</b>		
Food	120	160
Transportation	75	75
Entertainment	70	135
Sports	30	
Cell Phone		50
<b>Total Expenses</b>	295	420
<b>Contingency</b>	39	
<b>Savings</b>	50	
<b>Surplus/Deficit</b>	6	20

## WEB EXERCISE

Go to SmartAboutMoney.org ([www.smartaboutmoney.org](http://www.smartaboutmoney.org)) and click on the “resource library” link to look for tips on improving the bottom line of your budget.

## LONG-TERM BUDGETING

The purpose of long-term budgeting (or planning) is to help you figure out if, and how, you can achieve a financial goal in the future. It basically combines the results of your short-term budget over an extended period of time. While it is called “long-term” budgeting, this process can be applied to a variety of time horizons. For example, a teenager has put together a weekly budget based on his allowance and regular spending and believes he can save \$15 each week. He is really interested in a new video game that costs \$75. His budget indicates that it will take five weeks for him to save enough money for the game. Meanwhile, if he wants to buy the game when it is released in three weeks, he needs to save \$10 more each week.

The same process can be applied to a multi-year (or even multi-decade) period. Consider a young couple contemplating the purchase of their first house in five years. Their monthly budget gives them an idea how much they can save over five years and how much housing they can afford, given the types of financing available. If the couple has a specific pricing target, the long-term budgeting process can help them determine how long it will take for them to reach the goal. Another common application of long-term budgeting is retirement planning. With a monthly budget and an estimate of annual savings, one can project when he/she can retire, or what kinds of current sacrifices he/she needs to make in order to retire at a certain age. An in-depth analysis of home purchases and retirement planning will be discussed in later chapters.

One major difference between short-term and long-term budgeting is that you should take the time value of money into account when planning for the long run. What is the time value of money? It means one dollar today is worth more than one dollar in the future. Today’s one dollar can be saved or invested, and consequently earn a rate of return for you. Over time, the money you save will grow. As a result, time will help you reach your financial goal. Remember Alan, who saves about \$56 each month (\$50 target saving and \$6 surplus)? Suppose he is saving money for the down payment on a new car, how long will it take for him to accumulate \$2,000 toward the purchase? Without considering any interest he can earn, it will take nearly three years for him to reach the goal. But with an annual interest rate of 3.5% on his savings, Alan can reach the goal two months faster.

The mathematics involved in the time value of money is discussed in more detail in the next section. A few examples will be used to illustrate how the time value of money may affect your long-term financial planning.

## TIME VALUE OF MONEY

The time value of money is one of the most important financial concepts. It can simply be described as one dollar today is worth more than one dollar in the future. This is because money saved in a bank account can earn interest and money invested in the stock market may earn a rate of return. As a result, money grows and can create more value over time.

The time value of money has very important implications for your long-term budget. For example, if you save \$500 each year, the total amount saved would be \$10,000 over 20 years. However, if the money is deposited in a bank account that pays interest, the \$500 saved in the first year will earn interest during the following 19 years, the \$500 saved in the second year will earn interest during the remaining 18 years, and so on and so forth. Furthermore, the interest received in an earlier year will earn more interest later on. So how much money will you have at the end of Year 20? This answer depends on the interest rate on the bank account and how often interest is calculated (similar to the annual percentage yield concept discussed in Chapter 2). With an annual percentage yield of 3%, the total amount of money in your account will reach \$13,435, about 34% more than the amount you actually deposited.

By the same token, the time value of money can make it easier for you to reach your financial destination. Suppose your goal is to accumulate \$1 million in 40 years. How much do you need to save each year? Without earning any interest, you will have to save \$25,000 per year. In contrast, if the money is saved in the bank account and earns 3% a year, your annual deposit amount becomes only \$13,262, nearly half of the amount without earning interest. Suppose the money is invested in the stock market and, on average, earns an 8% rate of return each year; then you would only need to save approximately \$3,860 each year. This dramatic change is attributable completely to the time value of money.

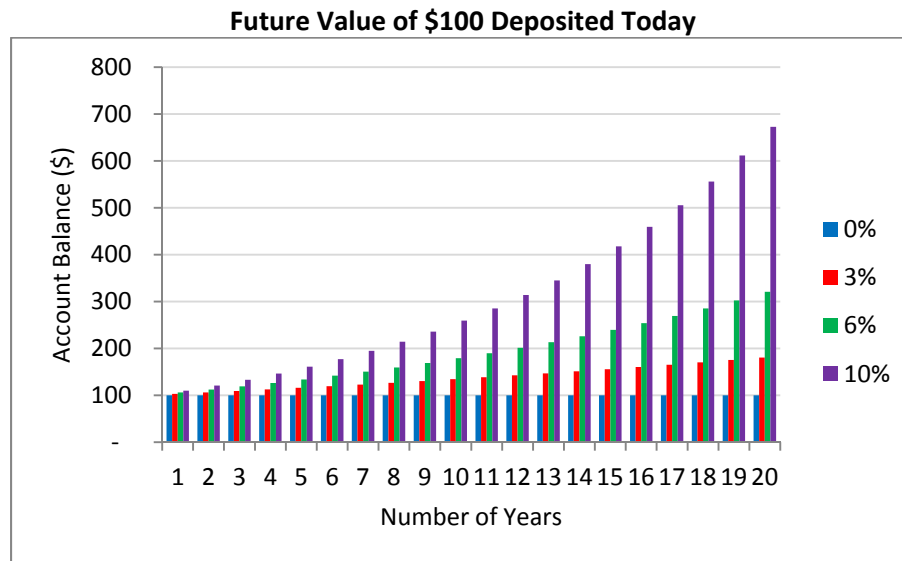
Since the idea is to allow money to earn more money for you, the sooner you put the money to work, the more you can earn over time. Therefore, if you save money on a monthly basis, instead of waiting until the end of the year, the amount you need to deposit will be even lower as the money can start working for you sooner. Given the same 8% annual return in the stock market, the amount you have to save every month in order to achieve the goal is only \$286.50 (or approximately \$3,438 a year). Do you think the goal of becoming a millionaire is achievable?

The examples above demonstrate how the time value of money may affect your long-term financial plans. Now let's learn the mathematics involved in the analysis. The basic formula is:

$$FV_n = PV \times (1 + i)^n$$

In the equation,  $FV_n$  (which stands for future value) is the amount of money you'll have in the account in  $n$  years.  $PV$  (that is present value) is how much you have in the account now, and  $i$  is the annual interest rate. For example, to find the amount of money you will have by saving \$100 in a bank account with 4% interest rate for 3 years, you can manually compute  $100 \times (1 + 0.04)^3$ , or use tools such as a financial calculator or spreadsheet software, such as Microsoft Excel. The answer is \$112.49. How fast your money will grow over time depends on

the interest rate. The exhibit below compares the future value of \$100 deposited today in accounts with different interest rates.



## DO THE MATH

Use the time value of money equation to answer the following questions:

- How much money will you have in 10 years if you deposit \$420 in an account earning a 3.2% interest rate?
- How much will \$1 become in 50 years if it is compounded at 10% annually?
- You just deposited \$200 at a 6% interest rate. How much interest will you earn over three years?

The same equation can also be used to solve different kinds of problems. For example, to find out how much money you need to deposit in an account with a 5% interest rate in order to have \$200 in five years, you solve for *PV*. That is:

$$PV = \frac{FV_n}{(1 + i)^n}$$

Given that  $FV=200$ ,  $i=0.05$  and  $n=5$ , the answer is \$156.71. You can also use the equation to solve for unknown such as  $i$  or  $n$ . For example, how long does it take to double your money in the bank account with a 10% annual rate of return? In this case, you need to enter values for  $PV$  (which can be any number),  $FV$  (which is twice as much as  $PV$ ) and  $i$ , and solve for  $n$ .

## DO THE MATH

Use the time value of money equation to answer the following questions:

- How much do you need to deposit into an account with a 7% interest rate in order to accumulate \$1,000 in five years?
- Given an annual interest rate of 6%, what is the present value of \$30,000 in 25 years?

Sometimes, the situation may require you to use the equation multiple times. The example of saving \$500 each year over 20 years can be calculated using the equation 20 times. The first deposit will be in the account earning interest for 19 years, that is  $500 \times (1 + 0.03)^{19}$ ; the second one for 18 years,  $500 \times (1 + 0.03)^{18}$ ; and the last one is deposited in 20 years, so it doesn't earn any interest. When you add the 20 future values together, the result is the total amount you will have after 20 years. The mathematical formula for calculating the future value of a stream of even cash flows (each with the amount of  $PMT$ ) is:

$$FV_n = PMT \times \frac{(1 + i)^n - 1}{i}$$

If you use a financial calculator or Excel to solve the problem, you don't need to worry about memorizing the formula or finding the answer manually. However, it is very important that you understand the rationale behind the equation and how it can be applied in financial decision-making.

## DO THE MATH

Use the equation above to solve these two problems and compare your results with the examples discussed at the beginning of this section.

- You plan to save \$500 a year. If the interest rate on your savings account is 3%, how much money will you have in 20 years?
- How much do you need to save each year into an account with a 3% interest rate in order to accumulate \$1 million in 40 years?

Similar to finding the future value ( $FV$ ) of a cash flow stream, you can also calculate the present value ( $PV$ ) of the cash flow stream. This means that the series of cash flows of  $PMT$  in each period over time has the same value as a one-time cash flow of  $PV$  today. Mathematically, the formula is:

$$PV = PMT \times \frac{1 - \frac{1}{(1 + i)^n}}{i}$$

This formula will be used in later chapters to deal with loans that are repaid with constant payments over a specified period of time.

## KEY TERMS TO REMEMBER

### ***Budget***

A detailed schedule of financial activity that pertains to income and expenses expected during a specific period in the future.

### ***Surplus***

The amount of income that remains after subtracting all expenses.

### ***Deficit***

The amount by which spending exceeds income over a period of time.

### ***Income***

Money earned through employment or investment.

### ***Expense***

A particular payment of money.

### ***Needs***

Things you must have in order to survive or meet the minimum living standards.

### ***Wants***

Discretionary expenses that may be delayed or substituted without affecting your ability to survive.

### ***Time Value of Money***

The idea that a dollar today is worth more than a dollar in the future.



## Chapter 4 Borrowing and Consumer Credit

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The meaning of credit and the pros and cons of using credit
- Various types of consumer credit
- The key factors that affect your opportunity to borrow money
- How to calculate the monthly payment of a loan

### KEY TERMS

Credit

Open-End Credit

Default

4Cs

Amortization

Consumer Credit

Closed-End Credit

Line of Credit

FICO Score

Annual Percentage Rate (APR)

Over the course of your life, there could be many occasions when you need to pay for certain expenditures but don't have enough money to make the payment. Consider the financial challenges John encountered. John is a responsible young man who has been very vigilant with his finances since he was a teenager and always makes sure that he doesn't overspend. When he was accepted to a university that was his top choice and offered a scholarship that would cover part of the tuition and fees, he needed money to pay for the rest of the tuition as well as other living expenses during the four-year period. After graduating from college, John found a new job and needed a car to go to work every day. He had saved some money from a part-time job in college, but it was not enough to pay for the entire purchase price. A few years later, John and his wife were expecting their first child. They needed more space than the one-bedroom apartment they had been renting. They would like to buy a condo in a neighborhood with excellent school quality, but the price was out of their reach. How could John deal with these situations where he just did not have enough money at the time when money was needed? Thanks to the financial system that you learned about in Chapter 2, John was able to borrow money for those expenditures. In this chapter, we will discuss various types of consumer credit and factors that may affect your ability to get a loan.

### USING CONSUMER CREDIT

Credit is an arrangement to receive cash, goods or services now and pay for them in the future. Although consumer credit is generally defined as borrowing money to meet personal needs

(buying a car, paying for an education, paying for groceries, etc.), it is more than just a substitute for cash. In fact, many services we receive in our daily lives are examples of credit. For instance, we typically consume utilities like water and electricity first, and then pay for them at the end of a billing cycle. This type of credit is provided free of charge; therefore, everyone should take advantage of it. Borrowing money, on the other hand, has a cost and may involve risk. As a result, you need to be very careful when deciding whether and how much you should borrow for a specific purpose.

Using consumer credit has several advantages. First, it allows people to enjoy goods or services now and pay for them later. Without using credit, purchasing a house would be an impossible dream for the majority of households in the U.S.; buying a car would take years of savings for most people. The types of loans designed for home (or car) purchases allow a borrower to use his/her future income to pay for the purchase over a period of time while enjoying the benefits provided the asset.

Using consumer credit also reduces the need to carry a large amount of cash. Today, most of the purchases of high-priced items are paid for with credit cards; making travel arrangements, such as flight and hotel reservations often requires a guarantee by a credit card. This is not only for the convenience, but also for the safety for consumers.

What is the downside of using credit? The single biggest issue is the temptation to overspend. When making purchases with a credit card or a loan, you are using money that you don't currently have. Many people fail to realize the fact that using credit does not increase your income or purchasing capacity. While it allows you to make a purchase early, you still need to pay for it later. Additionally, credit is not free. Creditors offer you the service and expect you to pay for it (in the form of interest and/or finance charges). Therefore, overspending ties up your income in the future and may result in severe financial consequences.

## **TYPES OF CONSUMER CREDIT**

There are two basic types of consumer credit. Closed-end credit typically involves borrowing that has a specified loan amount and is for a specific purpose. An agreement between the creditor (that is, the lender) and the borrower details the terms of the loan—the purpose, the amount, the cost (including the interest rate and other charges), the payment schedule, and the collateral, among others. Home mortgage loans, automobile loans and student loans are examples of closed-end credit.

In contrast to closed-end credit, open-end credit (also known as revolving credit) is typically not used for a single purpose. You can use this type of credit to make any purchases as long as the total amount you've borrowed does not exceed the maximum amount approved by the creditor, which is your line of credit. Periodically, the borrower pays interest on the amount owed and can choose to repay a portion or the entire amount of the principal borrowed. Credit cards are the most popular type of open-end credit. The U.S. Census Bureau estimated that in 2010, about 180 million people in the U.S. owned credit cards and more than 1.4 billion cards were issued by financial institutions and other businesses. About one-third of credit card users

pay off all their charges every month. By doing so, they don't incur financial costs for using the credit. Those who carry balances on their credit cards have to pay interest, and the rates on credit card debt are significantly higher than most other types of consumer credit.

Another example of open-end credit is home equity loans. This type of borrowing uses a house as collateral, but is not used for the purchase of the house. The line of credit depends on the value of the house and the amount still owed on the home mortgage. Once the home equity loan is set up, the borrower can use the credit for any purchases.

### WEB EXERCISE

Go to the Federal Reserve website at [www.federalreserve.gov/creditcard/default.htm#](http://www.federalreserve.gov/creditcard/default.htm#) and use the interactive tools to learn about:

- Credit card offers,
- Credit card statements, and
- Five tips for getting the most out of your credit card.

### FACTORS CREDITORS CONSIDER

When making a loan, the creditor is making an investment. The interest rate is the rate of return on the investment. What factors does a lender consider when deciding whether a loan application should be approved, and how much interest rate should be charged? The main consideration is how risky the investment is. Risk is uncertainty, or the chances that the lender might not receive the return he thought he would get, or might not even get the principal back. The riskiness of a loan can be reflected in two factors: the probability of incurring losses and the severity of potential loss. First, the lender assesses how likely it is that the borrower might default on the loan, which means the borrower is unable to repay the principal and/or pay interest. The more likely it is that default will happen, the riskier the loan is. The lender also considers how much he/she could lose if a default occurs. If the loan has a collateral, which is a valuable asset pledged to ensure loan payments, the loan is less risky.

In general, lenders of consumer loans consider four key factors, the 4 Cs. They are: capacity, capital, collateral and character. **Capacity** is your financial ability—mainly your income—to meet the loan obligations. A lender usually compares the required monthly payment on the loan with the borrower's monthly income. **Capital** is the assets owned by the borrower. This factor also reflects the borrower's ability to make required payments. When you apply for a loan, the lender will ask you to provide critical financial information, such as salary, investment income (interest and dividends), bank account balances, and your stock portfolio. Additionally, you need to authorize your employer and financial institutions to release the information so the creditor can verify that what you claim in the application is true. The lender uses the information to assess your capacity and capital.

**Collateral** is a valuable asset that is pledged to the loan. If the borrower defaults, the lender has the right to sell the asset and use the proceeds to recover his/her investment (or at least

part of it). For example, when you borrow an auto loan, the car is the collateral. In case you are unable to make the scheduled payments, the lender has the legal right to take possession of the car and sell it.

**Character** refers to one's attitude toward financial obligations. Some people take these obligations seriously and would rather sacrifice personal consumption in order to make loan payments. Others may not consider meeting their financial obligations a priority and be late on loan payments on a regular basis. Many lenders consider character the most important indicator in predicting whether a borrower can make timely payments on a loan and repay the principal. However, attitude is very subjective and difficult to measure. Creditors therefore use credit score as a substitute for the borrower's character. Your credit score is a number that summarizes your history of using credit. The most commonly used credit score is called a FICO score.

### ***What is a FICO score?***

The FICO score was developed by Fair Isaac Corporation (FICO) to measure credit risk. This score has a range of 300 to 850, and the higher the score, the lower the risk. When computing the score, FICO uses information from your credit report. The credit report describes the types of credit you have, the length of time you have used credit, and whether you've paid your bills on time. The information is collected and maintained by credit bureaus (or credit reporting agencies). Because there are three credit bureaus (Equifax, Experian and TransUnion) that collect information independently to prepare credit reports, each individual may have three different FICO scores.

The FICO score evaluates five main categories of information in credit reports: 1) payment history; 2) amount owed; 3) length of credit history; 4) types of credit in use; and 5) new credit. Among them, your payment history and the total amount you owe on all credit accounts are most important, as approximately 35% and 30% of your FICO score is based on these two factors. FICO scores consider a wide range of information on your credit report, but they do not take into account the interest rates charged on your loans or credit cards. Other factors that do not affect your FICO scores include your salary, occupation and title; your current employer and employment history; and where you live. Nevertheless, these factors may be considered by a lender when he/she assesses your capacity, capital and collateral.

### **WEB EXERCISE**

[www.myfico.com](http://www.myfico.com) is the website developed by Fair Isaac Corporation to educate consumers about credit scores. On the homepage, click on the link under "Understanding Credit." From here, you can learn about what is in your FICO score, what is not in your FICO score, the minimum requirements for a FICO score and a lot more.

### ***Why is credit score important?***

The better your credit score, the lower the annual percentage rate (APR) you will be charged. APR is the cost of credit expressed in a yearly rate; it includes the interest rate as well as other lender fees the borrower is required to pay. If no additional fees are charged on a loan, the APR is equal to the interest rate. Lenders charge a lower APR if you have a high FICO score

because the good FICO score indicates that you've managed your finances responsibly. For lenders, it suggests a lower possibility that you would be unable to fulfill your financial responsibility of paying interest and repaying principal. Without a good FICO score, your chance to get a loan (such as an auto loan or a home mortgage) will be slim. Even if you do find a lender who is willing to lend you the money, the interest rate will be higher, costing you much more money over time.

Since the FICO score is a key factor in determining your ability to receive credit and also the interest rate you will be charged, you may be wondering what is considered a good FICO score. Unfortunately, no single standard that is agreed upon by all lenders exists; therefore, there is no single definition of "excellent" or "good" credit. As a general guideline, Freddie Mac (you will learn more about this company in Chapter 7) suggests that a FICO score above 770 is excellent; a score between 700 and 770 is good; and a score between 650 and 700 is average. If your FICO score is below the mid-600s, you may have difficulty obtaining a loan. In mid-2011, the average FICO score in the U.S. was approximately 692; the average in California was 687.

## PAYMENTS OF CLOSED-END CREDIT

Most examples of closed-end credit are loans that are repaid with equal payments over a specified period of time. An auto loan may call for equal monthly payments over 60 months; a student loan may be repaid with equal monthly payments over 10 years; and a home mortgage loan may require equal monthly payments over 360 months. With this type of loan, each monthly payment includes both the interest payment and the principal repayment. Every month, the borrower pays interest on the amount he/she owes, and a portion of the principal is repaid so the amount initially borrowed can be completely paid off at the end of the loan term. How is the monthly payment of this type of loan determined? How much principal does the borrower need to repay each month?

Consider a \$12,000, five-year auto loan with a 4.80% APR. It may seem that the two questions above can be easily answered with very simple calculations. First, given the 0.40% monthly interest rate (4.80% annual rate divided by 12), the borrower is charged \$48 of interest every month (principal times interest rate, or \$12,000 x 0.004). Second, the principal is repaid over 60 months, so the repayment each month is \$200 (\$12,000 ÷ 60). When the results are combined, the borrower's total monthly payment becomes \$248. However, there are problems in the analysis. As the principal amount is being repaid over time (this is called amortization), the amount owed by the borrower decreases. Given the same interest rate and a declining principal balance, the interest charged on the loan should decrease over time. So how much exactly does the borrower need to pay each month? The calculation is based on one of the formulas in Chapter 3:

$$PV = PMT \times \frac{1 - \frac{1}{(1+i)^n}}{i}$$

When applying this formula to an amortization loan with monthly payments,  $PV$  is the amount borrowed,  $i$  is the monthly interest rate, and  $n$  is the number of months. For the current

example,  $PV=12,000$ ,  $i=0.04$  and  $n=60$ . After plugging in those numbers and solving for  $PMT$ , the monthly payment is \$225.36.<sup>1</sup> Over the five-year period, the borrower will pay a total of \$1,521.41 in interest, but the amount of interest payment changes month by month, ranging from \$48 in the first month to only 90 cents in the last month. The following table shows the breakdown of the monthly payments during the first and last six-month periods.

**Breakdown of Monthly Payment: Interest vs. Principal**

Month	Interest Payment	Principal Repayment	Loan Balance
1	\$48.00	\$177.36	\$11,822.64
2	47.29	178.07	11,644.58
3	46.58	178.78	11,465.80
4	45.86	179.49	11,286.30
5	45.15	180.21	11,106.09
6	44.42	180.93	10,925.16
.	.	.	.
.	.	.	.
.	.	.	.
55	5.33	220.02	1,113.39
56	4.45	220.90	892.48
57	3.57	221.79	670.70
58	2.68	222.67	448.02
59	1.79	223.56	224.46
60	0.90	224.46	0.00

**How does good credit help you save money?**

You have probably seen TV commercials by auto makers that offer special financing for customers. Suppose an automaker offers 0% APR (annual percentage rate). How much do you need to pay each month for a five-year, \$12,000 loan and how much can you save over the term of the loan? Because the interest rate is 0, the borrower only needs to pay back principal, but is not charged any interest. Every month, the payment is \$200. Compared with the loan with a 4.80% interest rate, the total saving on interest payments is \$1,521.41.

One thing you should know is that the special financing is not available to all customers. The key is your credit. Without good credit, you can't qualify for the low APR. Furthermore, if you have poor credit (the definition varies by lenders), you may not even be eligible for a loan at the regular interest rate. Depending on the borrower's FICO score and legal limits of a state, interest rates on bad credit auto loans could be double or even triple the regular rate. The

<sup>1</sup>

$$PMT = \frac{PV}{\frac{1 - \frac{1}{(1+i)^n}}{i}} = \frac{12,000}{\frac{1 - \frac{1}{(1+0.004)^{60}}}{0.004}} = 225.36$$

following table compares the payments of a five-year, \$12,000 loan with five different interest rates. It reveals how much having poor credit could potentially cost you.

#### Comparison of Loan Payments with Different Interest Rates

Interest Rate	0.0%	2.4%	4.8%	7.2%	9.6%
Monthly Payment	\$200.00	\$212.44	\$225.36	\$238.75	\$252.61
Total Interest	\$0.00	\$746.38	\$1,521.41	\$2,324.90	\$3,156.55

### KEY TERMS TO REMEMBER

#### ***Credit***

An arrangement to receive cash, goods or services now but pay for them later.

#### ***Consumer Credit***

The use of credit for personal needs by individuals and families, in contrast to credit used by businesses and governments.

#### ***Closed-End Credit***

A one-time borrowing that has a specified loan amount and is for a specific purpose. Closed-end credit that is repaid with equal periodic payments is also referred to as installment credit.

#### ***Open-End Credit***

A loan whose maximum amount is approved by the creditor but not delivered to the borrower at once. Over time, the borrower can get money from the lender (up to the maximum amount), or pay back a portion or the entire amount of the principal.

#### ***Line of Credit***

The maximum amount you can borrow using a specific open-end credit.

#### ***Default***

The situation where a borrower fails to make timely payment of interest and/or principal on a loan.

#### ***4Cs***

The four key factors lenders of consumer credit consider when they assess the riskiness of a loan. They are: capacity, capital, collateral and character.

***FICO Score***

A number that summarizes an individual's history of using credit. It was developed by Fair Isaac Corporation (FICO) and has a range of 300 to 850.

***Annual Percentage Rate (APR)***

The cost of credit expressed in a yearly rate; it includes the interest rate as well as other lender fees the borrower is required to pay.

***Amortization***

The gradual repayment of loan principal over time.



## Chapter 5 Financial Decision-Making in College

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The benefits and costs of attending college
- Key factors to consider when choosing credit cards
- Important things to know when renting an apartment

### KEY TERMS

Incremental Cost  
Identity Theft  
Lease Agreement

Opportunity Cost  
Annual Percentage Rate (APR)  
Renter's Insurance

Deciding whether or not going to college is right for you is not an easy decision. Many factors need to be taken into consideration. Furthermore, the challenge is not over when you send out applications or make the decision on which school you will attend. Once you become a college student, in addition to making decisions directly related to your education (such as selecting your major and the courses to take each semester/quarter), you will have to make many financial decisions that you may not have encountered before. One example is choosing from numerous credit card offers and determining how many cards you may need. Another example is renting an apartment. While most college students live in dormitories during their freshman year (sometimes sophomore year as well), many choose to live off campus later on. Such decisions have important implications on your financial health, both immediately and in the long run, and therefore deserve your attention and careful consideration.

### PLANNING FOR COLLEGE

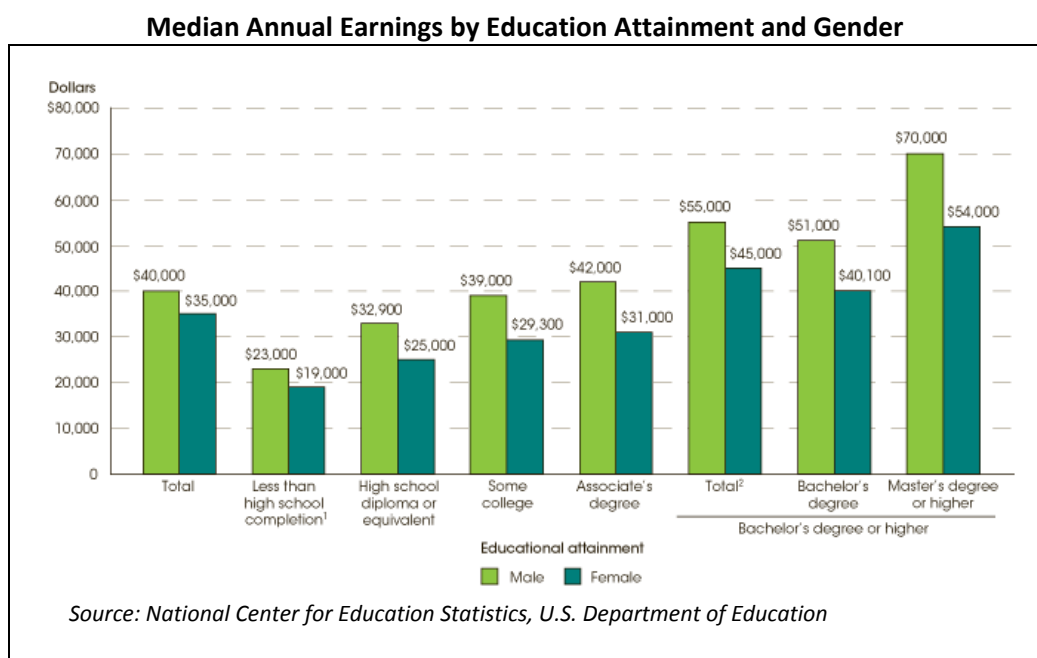
Some of you may have already made up your mind regarding whether and where you should go to college. Even if the analyses in this section cannot change your decision, they provide you with a decision-making framework and help identify key factors in financial decision-making. Like many decisions in your life, the choice of going to college has significant impact on your financial future. An essential step in making this type of decision is to compare the benefits and costs.

#### ***Benefits of Attending College***

Can a college degree guarantee that you will find a well-paying job? Does the lack of college education mean you will never be successful in life? Of course the answers to both of these

questions are no. Attending college is a long-term investment and nobody can guarantee that it will pay off. Whether you will have a successful career also depends on your work ethic, the profession you choose, and maybe a little bit of luck. Nevertheless, if you have a college education, the odds are in your favor.

According to the U.S. Department of Education, the median annual salary for young adults (ages 25-34) with a high school diploma is about \$29,000, and the median salary for those with a bachelor's degree is about \$45,000. Moreover, the income growth potential is greater in professions that require higher education. Even in the same company, an employee with better education is more likely to get promoted or receive a bigger raise. As a result, the income gap between those with and without a college degree is likely to widen as your career progresses.



### ***Costs of Attending College***

It is evident that a college education can help improve your future income. But with the increasing cost of higher education, you may be wondering whether this investment can really pay off. Let's examine the cost of attending college. An obvious cost is tuition and fees. How much you need to pay depends on the type of institution (for example, four-year university vs. community college; public vs. private school) and your residence status. For four-year public colleges, in-state students on average pay about \$8,000 a year, while out-of-state students pay nearly \$20,000. The average tuition and fees at private colleges is about \$27,000 a year. That is a very substantial amount over four years.

Additionally, you will also incur room and board, books and supplies, transportation and other personal expenses. While all of these are actual expenses you (or your parents) have to pay for while you're in college, not all should be considered in order to compare the benefits and costs of attending college. For example, transportation is an expense you will incur regardless of your decision. Even if you don't go to college and start working full-time right after high school graduation, you still need to drive, or take a bus, or take the subway to work. Transportation costs could actually be higher if you don't go to college than if you do, especially if you live on

or near campus. When you make a financial decision, you should focus on the incremental (or marginal) cost, not the total cost.

Not so obvious is the opportunity cost. What is opportunity cost? Opportunity cost is the cost of an activity measured in terms of the value of the best alternative that is not chosen. After high school, if you join the workforce and get paid the median salary, you will earn about \$29,000 each year. In contrast, if you go to college on a full-time basis, you won't be able to work full-time and therefore have to give up the opportunity to earn nearly \$120,000 during the four-year period. Although this is not a cost you actually need to pay for (with cash, checks or credit cards), it is an important component in the total costs of attending college.

There are many ways to reduce the costs of going to college. Grants, for example, are financial aid that is based on need; scholarships are typically based on academic, artistic or athletic credentials. Neither one needs to be repaid. Student loans, on the other hand, are financial aid that will have to be paid back with interest. You should work with your guidance counselor and/or the financial aid office at the college you are applying to find ways to minimize your out-of-pocket costs.

### WEB EXERCISE

The College Board is a not-for-profit organization whose goal is to ensure that every student has the opportunity to prepare for, enroll in and graduate from college. Go to its website at <http://www.collegeboard.com/student/index.html?student> to learn about how you can:

- Plan for college
- Find a college
- Apply to college
- Pay for college

### USING CREDIT CARDS

As discussed in Chapter 4, having good credit is very important and one of the factors determining your FICO score is the length of your credit history. For most people, the first step of establishing a credit record is to have a credit card account. When in college, you will receive offers that encourage you to apply for new credit cards. They provide all kinds of incentives: low APR, cash rebates, cash advances, and a waiver of the annual fee, among others. Which credit card is right for you? Should you apply for all of them? How many should you have?

### WEB EXERCISE

Go to CreditCards.com (<http://www.creditcards.com>) to learn about various types of credit cards (such as low interest rate, balance transfer, reward, cash back, and student credit cards) and the average APR in each card category.

### **Features of Credit Cards**

When selecting a credit card, there are several features of the card you should consider. The first one is the **interest rate**, or annual percentage rate (APR). A card with a low APR can help you save on interest charges. However, when you see an incredibly attractive offer, you need to pay attention to how long the low interest rate is good for. It is possible that the “introductory” rate is only available for a limited time and the regular rate (usually in the fine print) might be higher than rates on other cards. The second factor is the **credit limit**, which is the amount of money the creditor allows you to borrow. This limit can range from a few hundred dollars to tens of thousands of dollars, depending on your credit. **Fees and penalties** are another important factor. Some credit card issuers charge an annual fee, while others don’t. Many charge fees for certain transactions, such as cash advances and balance transfers. Most issuers charge a penalty if you pay your bill late or spend over the credit limit. Finally, you should consider the **incentives** offered by the card. Many card issuers have reward programs to attract customers, from cash rebates to airline miles. These could be nice benefits if they are free and you are going to make the purchases anyway.

Which of these features is most important depends on your situation. If you expect to carry a balance, then the APR is critical; on the other hand, if plan to pay the bill in full every month, the interest rate is not as crucial. If you’re going to use one card for most purchases, it needs to have a generous credit limit. If it doesn’t, the likelihood of going over the limit increases, and you’re running the risk that you might have to pay a fee and your credit score would be affected. Since you’ll use this card often, a good reward program may provide extra benefits. If a card will be used mainly for an emergency situation, the credit limit and incentives become less important.

Several credit issuers offer cards designed for college students. These cards typically have lower credit requirements, charge no annual fees, and allow you to earn cash back on purchases. The credit limit is relatively low and some of them require an adult as cosigner. How can you take control of your credit card and avoid falling into a credit card trap? Here are some suggestions. First, carry only one credit card for regular purchases, and possibly a second one for emergency. Keep in mind that credit cards help you establish credit and provide convenience, but they do not increase your spending capacity. Having a large number of cards doesn’t mean you can afford to buy more stuff. How much you can afford to purchase with credit cards should be based on your budget, not the credit limits of your cards.

Another very important thing to remember is that you should always pay the bill on time. Even if you cannot make the payment in full, pay at the least the minimum amount on time. A late payment could trigger a much higher interest rate and also affect your credit score adversely. Having a credit card may be the beginning of building your credit and you want to make sure that you are off to a good start.

## WEB EXERCISE

Learning how to use credit cards responsibly right from the beginning can save you from having to dig yourself out of debt later. Even if you don't have a credit card now, understanding how to take control of credit cards is very a valuable lesson. Many organizations offer advice on being credit card smart. For example, go to the website of Consumer Union ([www.consumersunion.org/pub/core\\_financial\\_services/004893.html](http://www.consumersunion.org/pub/core_financial_services/004893.html)) and learn tips that can help you build and maintain strong credit and make a credit card work for you.

## ***Identity Theft***

Once you start using credit, it's very important that you understand how to manage your credit accounts and also how to protect them, especially against identity theft. The Federal Bureau of Investigation (FBI) calls identity theft one of the fastest growing crimes in the country. It occurs when a person's identification (including name, social security number and/or any account number) is used or transferred by someone else for unlawful activities. If it happens, you may have to spend extensive time to close bad accounts and open new ones; it may cost you a lot of money and time to fix credit records; you may even be denied loans or jobs due to bad credit caused by identity theft. The consequences could be quite serious.

It is estimated by the FBI that more than half a million Americans become victims each year. Unfortunately, four out of five victims have no idea how the thief got their personal information. Additionally, identity theft often goes undetected for a long time. About half of the victims were not aware of the problem one month after their identity was stolen; about 10% of the crimes remain unnoticed two or more years later. It is very important that you understand how to protect yourself from being a victim of identity theft.

## WEB EXERCISE

Go to the website of the Federal Reserve Bank of Boston (<http://www.bos.frb.org/consumer/identity/video.htm>) and watch the "Identity Theft: Protect Yourself" video. You should also download and read the *Identity Theft* brochure available on this webpage.

## RENTING AN APARTMENT

Many universities require students to live in a dormitory in the first year (or the first two years) in school. After that, many students choose to live off campus by renting an apartment with roommates. This could be an exciting experience because it might be the first time you live on your own without adult supervision. However, the freedom comes with additional responsibilities. Choosing an apartment is as much a life-style decision as a financial decision. Here are some of the factors you need to consider when selecting an apartment.

### ***Location and Building Features***

The first thing to consider is where you want to live. An apartment is a type of real estate, and real estate professionals often say “the three most important things in real estate are: location, location, location.” The location of an apartment may affect your decision in many different ways. For example, the distance to school and availability of public transportation may have an effect on your commute, in terms of both time and cost; access to services (like stores, restaurants and recreational activities) and/or close proximity to friends may be important for you. A crucial factor that you must take into account is the safety of the neighborhood.

After the area is determined, you need to select an apartment in the area. You need to consider features of the building (or community) as well as the unit you will live in. Does the building have enough parking for residents and guests? Does it have amenities such as secured access, a swimming pool and exercise room? If your unit is not on the ground floor, are there elevators? Does the unit have enough storage space? What appliances are included? These are just some examples of questions you should ask. Keep in mind that you usually have to pay a higher rent for the additional features. When determining the apartment you can afford, you should pay more attention to what you need than to what you want.

### ***Lease Terms***

A lease is a contract you need to sign with the landlord. It details your rights and responsibilities as a tenant. Additionally, it specifies the financial terms, such as the monthly rent you need to pay, when the agreement expires, the options you may have, the security deposit, and incentives. You need to review the terms very carefully so there are no surprises when something happens later.

When comparing the cost of different alternatives, you should take into account not only the monthly rent, but also other factors. For example, the rent of an apartment is \$1,200 a month with a nine-month lease; if you sign a one-year lease, the landlord is willing to lower the monthly rent to \$1,150. It seems to be a good deal as you can save \$600 during the term of the lease. However, if you are not going to stay in the apartment during summer (for example, going home for the entire summer, studying abroad for a couple of months, or taking an internship in a different city), the three additional months you have to pay rent for could end up costing you a lot of money.

### **WEB EXERCISE**

In the process of finding an apartment, signing the lease, and moving your stuff into your new apartment, there are so many things you need to deal with. Go to [apartments.com](https://www.apartments.com/printablechecklists) (at [living.apartments.com/printablechecklists](https://www.apartments.com/printablechecklists)) and find checklists for:

- Things you should pay attention to when touring an apartment community/unit.
- Questions you should ask before signing a lease.
- Things you should prepare for before the move-in day.

### ***Insurance***

Most apartment owners have an insurance policy that protects the property against accidents or natural disasters. If the building is destroyed by fire or damaged by an earthquake, the insurance company will help the owner repair or rebuild the property. These insurance policies protect the building, but not things in the building. If your valuables are damaged in an apartment unit, it is typically not the landlord's responsibility, regardless of the cause of the damage.

To protect your personal belongings, you should get renter's insurance. With this type of policy, the insurance company will replace things you lose due to fire, earthquake, theft or other reasons. Many people think "accidents won't happen to me." But they do happen, and they can happen to you. By paying a small price every month, you can eliminate the possibility of incurring a huge loss later.

## **KEY TERMS TO REMEMBER**

### ***Incremental Cost***

The cost associated with one additional unit of production, or a specific decision.

### ***Opportunity Cost***

The cost of an activity that is measured in terms of the value of the best alternative that is not chosen.

### ***Identity Theft***

The situation where a person's identification (including name, social security number and/or any account number) is used or transferred by someone else for unlawful activities.

### ***Annual Percentage Rate (APR)***

The cost of credit expressed in a yearly rate; it includes the interest rate as well as other lender fees the borrower is required to pay.

### ***Lease***

A written agreement under which a property owner (the landlord) allows someone else (the tenant) to use the property for a specified period of time in exchange for a monetary benefit (the rent).

### ***Renter's Insurance***

A type of home insurance that protects the holder against accidents, damages and losses that occur in a rented residence.

## Chapter 6 Saving and Investing

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The popular means to invest money for long-term goals
- The impact of paying taxes on your rate of return
- The basics of stock and bond markets
- Various ways to invest in real estate
- How mutual funds work

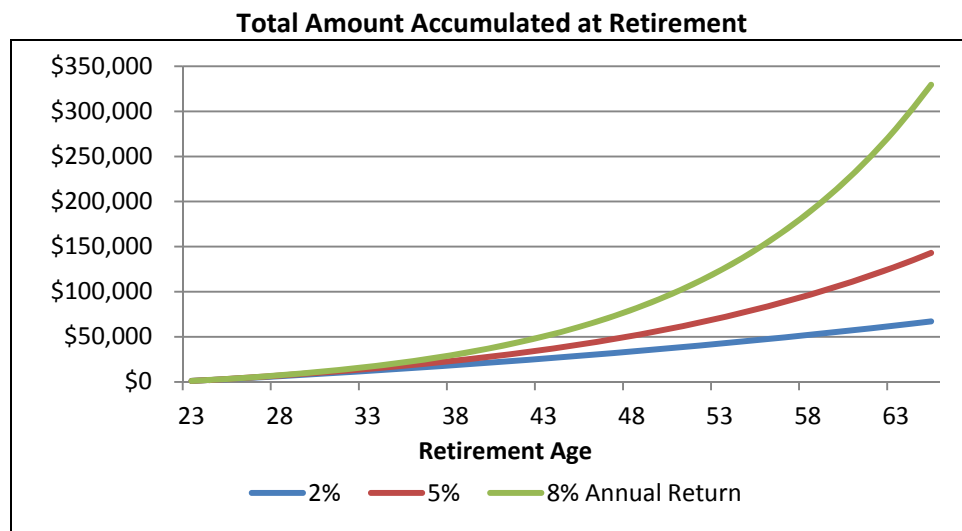
### KEY TERMS

Bonds	Bond Issuer
Bondholder	Bond Rating
Junk Bonds	Stocks
Shareholder	Dividends
Capital Gain	Dow Jones Industrial Average
NASDAQ	S&P 500
Commercial Real Estate	Mutual Funds
Diversification	Portfolio
Before-Tax Rate of Return	After-Tax Rate of Return
Individual Retirement Account (IRA)	

In Chapter 3 you learned about long-term financial planning and how the time value of money affects the outcome. One example discussed in that chapter was retirement. Based on an annual deposit, you can estimate how long it will take for you to reach your retirement goal; or given a target retirement age, you can determine how much money you must save each year in order to reach the goal. A key factor in the retirement planning process is the rate of return you expect to earn on your investment. Suppose you start working full-time at the age of 22 and save \$1,000 each year before retiring at the age of 65. How much money will you have when you retire? If you keep the money in a bank account and earn an average return of 2% a year, you will have about \$67,000 in 43 years; if the money is invested in the bond market and generates an average return of 5% each year, you will have almost \$143,000 at retirement; if you invest in the stock market, which produces an average return of 8%, you will have more than \$329,000 at the end. The chart on the next page compares the amount you will have if the money is invested in three different types of investments. It clearly shows that the higher the rate of return, the more money you will have for retirement. What type investment provides the highest rate of return? What is the downside of investing in those with higher



returns? In this chapter, we will discuss the characteristics of several popular investment vehicles.



## POPULAR INVESTMENT VEHICLES

Thanks to the well-developed financial system in the U.S., there are many different ways for you to save or invest money. Some investments provide higher, but more volatile, returns, while others provide more stable, but lower, returns. Which one is the best choice for you depends on many factors, including your personal preferences and the stage in your life cycle.

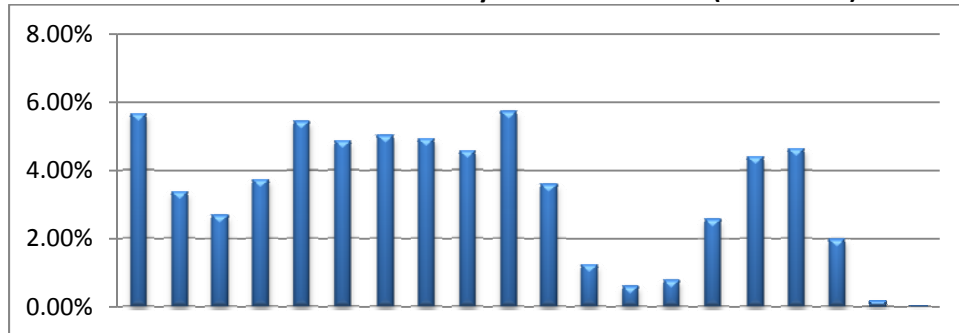
The life cycle of investing covers four stages: accumulation, consolidation, spending and gifting. When you are young, you can focus on accumulating wealth by choosing investments with high returns. Because there's a long time before you reach retirement, temporary volatility will not affect you as much. As you grow older, the time to retirement shortens. Preservation of what you have accumulated becomes more important. During the consolidation stage you should shift to a lower-risk portfolio. Once you retire, you enter the spending stage as your income will not be sufficient to cover all the expenses. Later on in the life cycle, if you have managed your finances responsibly and made smart investment decisions, it's possible that you will have more savings than needed for expenses during your remaining life. Consequently, you may want to donate money to charitable organizations.

### ***Bank Accounts***

The simplest way to grow your money is to save it in a bank account. In Chapter 2, you learned about several different types of accounts. Saving money in a bank is safe and gives you flexibility. Most depository institutions are insured by the Federal Deposit Insurance Corporation (FDIC) or similar federal agencies. Therefore, even if the institution is in financial difficulty, your savings (up to \$250,000) is protected. These accounts allow you to withdraw money when you need it with no or very low transaction cost. The only exception is certificates of deposit (CDs) although in this situation, the term is relatively short, so you are not stuck for an extended period of time. What is the price you have to pay for safety and flexibility? The relatively low rate of return. The following chart shows the annual returns on money market

accounts from 1991 to 2010. During the 20-year period, the average annual return was 3.30%. Although the return fluctuated, it was always positive, ranging from 0.1% to 5.7%.

**Annual Rate of Return: Money Market Accounts (1991-2010)**



### **Bonds**

Bonds are debt securities. That means the issuer (a company or a government) borrows money by selling the bonds to investors (called bondholders). There are many types of bonds: bonds issued by the U.S. federal government are called Treasury bonds; those issued by state or local governments are called municipal bonds; and those issued by corporations are called corporate bonds. If you invest in a bond, you will receive an interest payment from the issuer periodically and get the principal back at the bond's maturity date. How much rate of return you can earn depends on the interest rate. Prior to maturity, you cannot redeem the bond back to the issuer for cash, but you can sell it in the bond market to other investors. How much you receive from the sale could be different from the principal amount, depending on the economic conditions at the time.

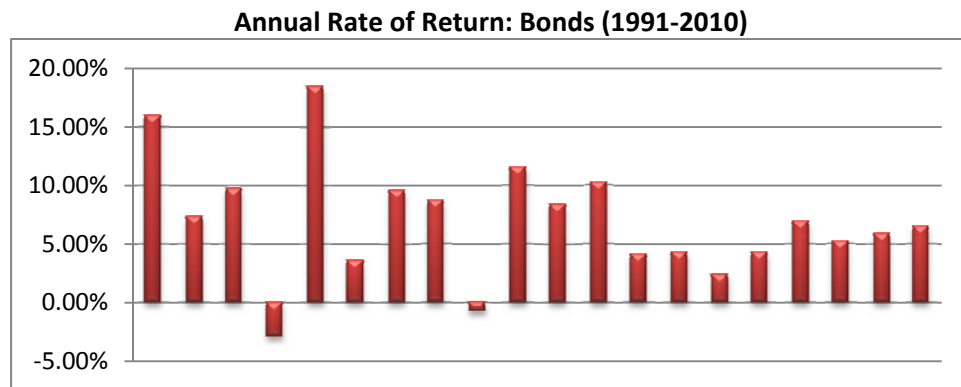
Since a bond is a debt security, it is possible that the borrower might default. When that happens, bondholders lose money. Similar to the consumer credit markets where creditors assess the riskiness of a loan based on the borrower's credit score, in the bond market, investors measure credit risk using a bond rating system. Several rating agencies (Moody's, S&P and Fitch) examine the borrower's financial strength and the bond's features to assign a rating to the bond. The table below summarizes the bond rating system:

**The Bond Rating System**

Moody's	S&P	Fitch	
Aaa	AAA	AAA	Investment Grade
Aa	AA	AA	
A	A	A	
Baa	BBB	BBB	
Ba	BB	BB	Non-Investment Grade (Junk Bonds)
B	B	B	
C	C	C	
D	D	D	In Default

A higher bond rating (for example, AAA) indicates that the probability of borrower default is very low. As a result, the interest rate on the bond is low. On the other hand, the lower a

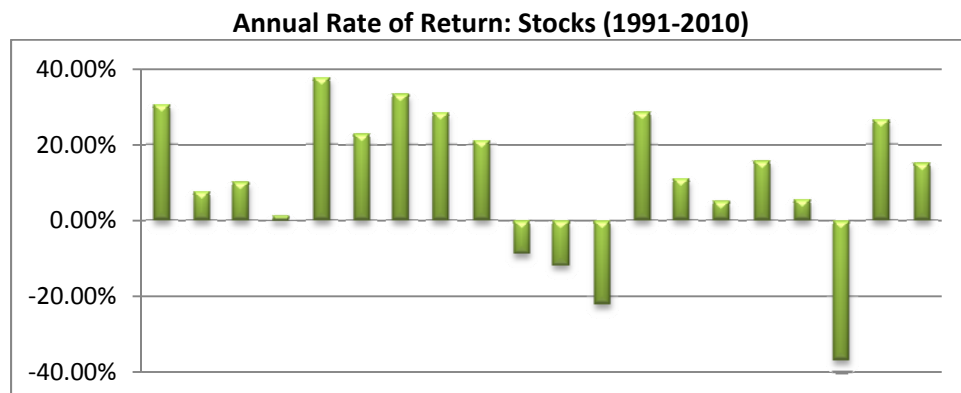
bond's rating, the more risk is involved and consequently, a higher interest rate is charged. Due to regulations, many financial institutions (such as banks) are allowed to invest in only investment-grade bonds. As an investment, bonds are considered riskier than bank accounts but safer than stocks. During the last 20 years, the average annual return on bonds was 7.0%. In two of those years, investors earned more than 15%, but in two other years, they lost money. The chart reveals the returns over this period of time.



### ***Stocks***

The stock market is the most commonly referred to investment opportunity. You probably hear about it every day on the news; if you take an investment course in college, the primary focus will be on stocks. But what is a stock? A stock represents ownership in a corporation. Each share of stock represents a portion of the ownership. For example, ABC Corporation has issued 20,000 shares of stock, and you own 1,000 of them. You own 5% ( $1,000 \div 20,000$ ) of the company and are entitled to 5% of its profits. Companies typically pay a portion of their profits to shareholders each quarter. The payment is called dividends.

If you buy shares of stock of a company (such as Microsoft, AT&T, General Motors and Apple), you receive dividends periodically. Additionally, as the company grows, the value of the shares you own appreciates as well. You can sell the stock when you need cash. If the sale price is higher than the price you paid for the stock, you have a capital gain (that means you've made a profit); otherwise, you have a capital loss.



From 1991 to 2010, the average annual return on a stock investment (which includes both dividends and price appreciation) was about 11.0%. In three of those years, the return was

above 30%. While the long-term average return is quite appealing, there's no guarantee that you are going to earn the same return every year. In fact, in four of the 20 years, investors in the stock market suffered losses, as high as 37%. Another factor to consider is the transaction cost. It's very easy to sell stocks when you need cash, but the transaction is not free. If you have to buy and sell stocks frequently, the costs could add up quickly.

People talk about the stock market all the time. What exactly is the stock market? That is not an easy question to answer. A market is usually defined as the place where goods or services are traded, such as a supermarket or a farmer's market. Based on the definition, a stock market is a place where stocks are traded. Where are stocks traded? There are many ways stocks are traded, and the market could be a virtual marketplace. For example, the New York Stock Exchange (NYSE) has a physical location where traders communicate with each other in person to make a trade. In contrast, NASDAQ is a telecommunication network that connects buyers and sellers through computers so all trades are executed electronically.

Because there are thousands of stocks being traded on a regular basis, it is difficult to assess the general performance of the stock market when the prices of some stocks increase and those of others decrease. Stock market indexes were therefore created to measure the overall performance. The most recognized stock market index in the U.S. is the Dow Jones Industrial Average, or Dow Jones. This is the average price of 30 famous companies. Other indexes include the S&P 500 and NASDAQ Composite.

### WEB EXERCISE

Go to [www.djaverages.com](http://www.djaverages.com) and select DJ Industrial Average/Overview to find out what companies are included in the famous stock index. How many of the 30 stocks are you familiar with?

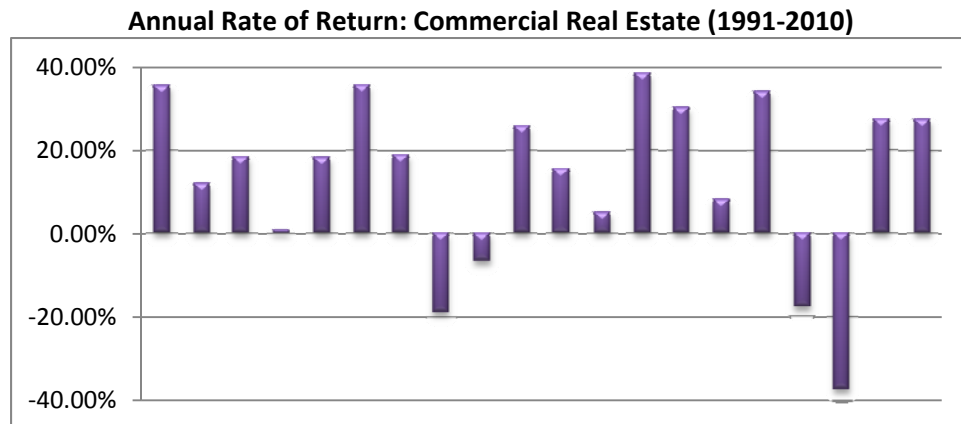
### **Real Estate**

Real estate is defined as land and improvements (such as buildings, infrastructure, landscaping, etc.) attached to the land. It includes houses in the suburbs, apartments and high-rise condominiums in downtown, office buildings, shopping centers, parks, factories, and even your school. Is real estate a good investment? For most Americans, the purchase of their home is the single biggest investment in their lives. Over time, this investment may provide a healthy return. However, housing prices could fluctuate widely at times, making this a risky investment in the short term. Additionally, transaction costs on real estate are the highest among popular investment vehicles.

In addition to your own house, you can also invest in commercial real estate, such as office buildings, retail shopping centers, apartment communities and hotels. Owners of these buildings lease the space to tenants (including businesses in an office building, retail stores in a shopping center, residents in an apartment, and guests in a hotel) and collect rents. If the revenue is greater than the costs of operating the property, the owner can make a profit. Over time, real estate value tends to increase so the owner can earn a capital gain when selling the investment. Because commercial real estate is generally much more expensive than single-

family homes, it requires special expertise to manage commercial buildings. It is not a typical investment alternative for individuals and families.

Generally speaking, commercial real estate is an investment with high risk and high reward. The average annual return over the last 20 years was 13.6%, higher than other types of investment we have discussed. The tradeoff, however, is the volatility. The chart below clearly shows that return on commercial real estate is very unpredictable.



### ***Mutual Funds***

Financial advisors usually recommend their clients to have a diversified portfolio, which means investing in a broad range of assets. However, some investments are very expensive, making it difficult for individuals with limited financial resources to diversify. What should you do if you don't have a lot of money? Instead of investing in stocks, bonds or real estate directly, you can buy mutual funds. With a mutual fund, money from many investors is pooled together and invested. A stock mutual fund buys a large number of stocks; a bond mutual fund invests in various types of bonds; a hybrid fund splits the investment in both stocks and bonds. There are also mutual funds with other specializations. Through mutual funds, you can invest in a variety of investments you otherwise won't be able to buy.

Another benefit mutual funds provide to small investors is professional management. Well-educated and experienced investment experts are hired by mutual funds to manage the money and make decisions for you. To receive the services, you need to pay a fee to the mutual fund company.

### **TAX IMPLICATIONS**

When discussing budgeting in Chapter 3, you learned that the federal government's primary source of revenue is taxes. Taxes are fees charged by the governments (including federal, state and local) on products, income or activities. The money is used to provide services to the public. For example, it may be used to pay the salaries of public employees like police, firefighters and public school teachers. It may be used to pay for expenditures such as building new highways and maintaining existing streets. Without tax revenues, the governments won't be functional.

### ***What types of taxes are you required to pay?***

The two types of taxes people are most familiar with are **income tax** and **sales tax**. When you earn wages or salaries, you need to give a portion of your income to the federal and state governments. The percentage depends on your income level. Usually the higher your income, the more taxes you pay. When you make a purchase (including groceries at a supermarket, food at a restaurant, books at a bookstore, or movie tickets at a theater), you need to pay a certain percent of the purchase price to the state government (sometimes also the local government) as sales tax. Homeowners need to pay taxes based on the value of the property they own. This is called **property tax**.

The rate of return on your investments is affected by taxation as well. If you need to pay part of your investment profit to the government, then the return provided by the investment (that is, the before-tax return) will be different from the return you actually receive after paying taxes (that is, the after-tax return). As an investor, you are subject to two types of taxes. First, the investment income you receive periodically—such as dividends from stocks and interest from bank accounts or bonds—are subject to income taxes, just like wages and salaries. Additionally, when you sell the investment, if there is a capital gain (meaning the sales price you receive now is greater than the purchase price you paid initially), the gain is subject to **capital gains tax**.

### ***How do taxes affect your financial goals?***

Because of taxation, what you actually receive is less than what the investment provides; therefore, the after-tax return is always lower than the before-tax return, unless the investor does not pay any taxes. Due to taxation, either you have to save more money periodically or it will take longer to reach the same long-term financial goal. Otherwise, you will end up with less money at the time to make a major purchase or retire. The formula below shows the relationship between before- and after-tax returns.

$$\text{After-Tax Return} = \text{Before-Tax Return} \times (1 - \text{Tax Rate})$$

Suppose you are subject to a 20% income tax rate (including federal and state) and your investment earns 10% in the year. After paying income taxes, how much is your actual rate of return? Using the formula above, it can be calculated as:  $10\% \times (1 - 20\%) = 8\%$ . There are tax-saving methods that can help mitigate the impact. The government allows you to save money into a retirement account without paying taxes immediately, but the tax is due when you withdraw money from the account. For example, an individual retirement account (IRA) allows you to contribute up to \$5,000 a year into your retirement fund without having to pay taxes on that amount. Without using the IRA, you need to pay taxes on your income before investing it. If you are in the 20% tax bracket and contribute the maximum amount into the IRA, it is like getting \$1,000 in free money from the government that you can invest for your retirement. You should take advantage of it as much as you can.

## KEY TERMS TO REMEMBER

### ***Bonds***

Bonds are contracts through which governments and corporations (the issuer) borrow money from investors (the bondholders).

### ***Bond Issuer***

The entity that borrows money by issuing a bond.

### ***Bondholder***

An investor who purchases a bond. Bondholders are creditors to the issuer.

### ***Bond Rating***

A system that evaluates the possibility of default by a bond issuer. The higher a bond's rating, the safer it is.

### ***Junk Bonds***

Bonds whose ratings are below investment grade (typically BB and below). Junk bonds have much higher risk than investment-grade bonds.

### ***Stocks***

Ownership of a corporation represented by shares that are a claim on the corporation's earnings and assets.

### ***Shareholder***

An investor who owns shares of a corporation. Shareholders are owners of the corporation.

### ***Dividends***

Periodic payments of a company's earnings to its shareholders.

### ***Capital Gain***

The amount by which the sale price of an investment exceeds its initial purchase price.

### ***Dow Jones Industrial Average***

A stock index that is based on the prices of 30 large companies. It is the oldest and most quoted stock market indicator.

### ***NASDAQ***

A stock index that is based on the prices of all stocks traded on the NASDAQ system.

### ***S&P 500***

A stock index that is based on the prices of 500 large corporations.

***Commercial Real Estate***

Real estate that is purchased for income-producing purposes. Owners of commercial real estate lease space in their properties to tenants and collect rent.

***Mutual Funds***

An entity that pools money from many investors and invests it in various investment opportunities.

***Diversification***

A strategy designed to reduce investment risk by combining a variety of investments.

***Portfolio***

A collection of investments owned by the same individual or organization.

***Before-Tax Rate of Return***

The rate of return generated by an investment before its owner pays taxes on the earnings.

***After-Tax Rate of Return***

The rate of return an investor gets to keep after paying taxes to the government.

***Individual Retirement Account (IRA)***

A special investment account that allows the owner to defer paying taxes on money saved for retirement.



## Chapter 7 Buying Your First Home

### STUDENT LEARNING OBJECTIVES

In this chapter, you will learn:

- The benefits and costs of home ownership
- How to choose real estate professionals to help you with your home purchase decision
- How to identify the right house for you
- How to select from numerous types of home mortgages

### KEY TERMS

Median Home Price

Real Estate Taxes

Real Estate Agent

Mortgage

Fixed-Rate Mortgages

Discount Points

Tax Deduction

Hazard Insurance

Mortgage Broker

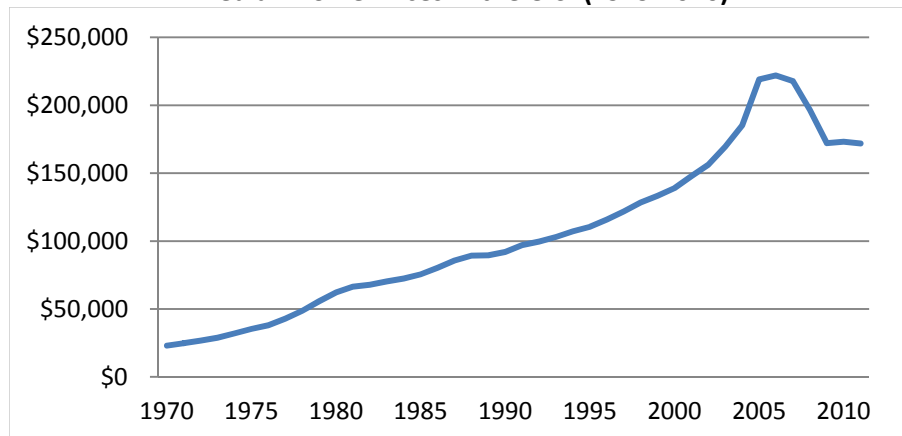
Adjustable-Rate Mortgages

Closing Costs

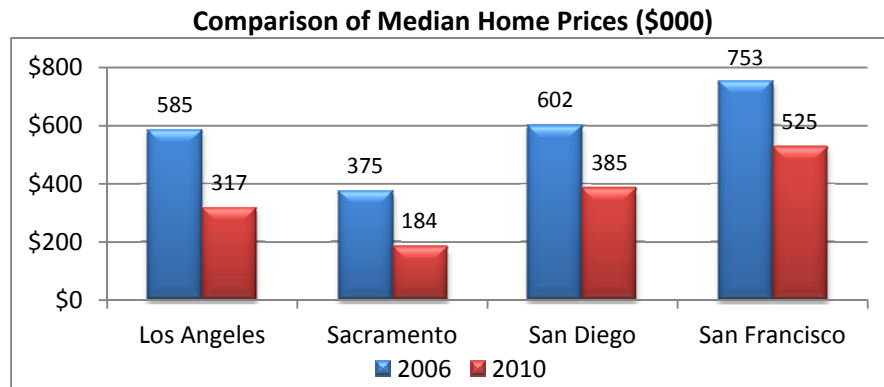
Annual Percentage Rate (APR)

For most Americans, buying a house is the most expensive (and arguably the most important) purchase in their lifetime. According to the National Association of Realtors, the median price of existing single-family homes in the U.S. reached the all-time high in 2006, exceeding \$220,000. Impacted by the Great Recession, the median price retracted to about \$170,000 in 2010. Even at this price level, it is difficult for an average household to save enough money for the purchase of a home without using any kind of credit.

**Median Home Prices in the U.S. (1979-2010)**



Housing prices vary greatly across the country. In California, for example, housing is much more expensive than in most of the country. Even within the state, the median price of single-family homes changes dramatically from one metropolitan area to another. The chart below compares home prices at the peak in 2006 in four markets with those in 2010. The median price in San Francisco was above \$750,000 in 2006 and had decreased by about 30% in four years. In contrast, housing in Sacramento cost approximately half of that in San Francisco in 2006; after a 50% drop, it was only a third of the price in San Francisco in 2010.



Another reason that home-purchasing decisions require careful consideration and thorough analysis is that such decisions cannot be changed easily or cancelled. A home transaction takes weeks or even months to complete, and the transaction costs are usually thousands of dollars or more. A mistake could cost you your life savings and/or ruin your credit.

While a home purchase is a crucial decision you eventually may need to make, it is probably not something you need to worry about in the near future. Thus, this chapter does not discuss in detail all aspects of the home-buying process. Instead, a general overview is provided to help you understand the basic concepts and key terminology.

## HOME OWNERSHIP

The first question regarding home ownership is whether it is right for you. An obvious factor that must be considered when answering the question is the cost of renting vs. owning your residence. If you rent an apartment or a house, you pay rent to the landlord every month; if you own a house or a condo (and have borrowed money for the purchase), you make monthly mortgage payments. Typically, the rental payment is lower than the mortgage payment on a similar residence. However, you also need to take into account other factors. A portion of the mortgage payment may be tax-deductible, helping you reduce tax liabilities; a part of the mortgage payment may be recouped when the house is sold, so it becomes a way to accumulate wealth. These aspects will be further discussed later in this chapter.

In addition to comparing rent with mortgage payments, you should also consider other costs/constraints of home ownership. These include decreased mobility, additional responsibilities and initial costs. Renters usually sign a short-term (six to twelve month) lease, so it's easy to relocate when desired. If you want to move to a new apartment when the current lease expires, the only cost is moving your personal belongings. If you own a house, on

the other hand, the cost of switching to a new home could be expensive. You need to pay a real estate agent who helps you sell the house and fees to get a loan for the purchase of a new house. The total could exceed thousands of dollars.

Homeowners also have more financial responsibilities than renters. Periodically, homeowners need to pay for expenses such as real estate taxes, hazard insurance (different from renter's insurance), maintenance and repairs. Additionally, the initial cost for a home purchase could be quite substantial. The down payment and other closing costs could add up to tens of thousands of dollars. If you rent a house, the money can be saved or invested and thus generate a return for you. This should be considered an opportunity cost, even though it is not an out-of-pocket expense.

### **WEB EXERCISE**

The Department of Real Estate (DRE) of the State of California provides useful resources that help consumers prepare for issues they may encounter during the home-buying process. For further information, go to the DRE website at [http://dre.ca.gov/mlb\\_info\\_hmbuyers.html](http://dre.ca.gov/mlb_info_hmbuyers.html).

If home ownership is right for you, then you need to estimate how much house you can afford before you start searching for a home. The answer to this question depends on your savings, your income and also the market conditions. You need to have enough money at the time of purchase to pay for the down payment and closing costs. You also need to have sufficient income to cover the monthly mortgage payment and other housing expenses. These two factors are interrelated. If you can afford a larger down payment, you won't need to borrow as much through the mortgage and, as a result, your monthly mortgage payment is lower. How much house you can afford also depends on the market conditions, such as mortgage interest rates and lender's underwriting requirements.

### **HOME-BUYING PROCESS**

Because home purchase is expensive and involves a complicated process, most homebuyers need help from people specialized in the business. A real estate agent may show you homes on the market that meet your needs; represent you in negotiations with the seller; and assist you in obtaining financing for the purchase. Before selecting an agent, you must do your homework. Interview several real estate agents to find out their level of experience in the area you wish to buy. You want to make sure the person you hire is properly licensed and there are no disciplinary actions or complaints filed against him/her. You may also want to consider how well you and that person will work together over an extended period of time.

A mortgage professional may also play a critical role in your home buying experience. For the majority of residential mortgages, borrowers work with mortgage brokers to obtain the financing, instead of working directly with lenders. Typically, mortgage brokers take a loan application, order verifications, process and review credit, and prepare loan documents for the lender. Since they are familiar with the market conditions and understand the pros and cons of

various types of mortgages, finding a mortgage broker who can advise you on choosing the right type of mortgage is very important.

## HOME FINANCING

Because the cost of a home is so high, most homebuyers borrow money to pay for a large portion of the purchase price. A loan that is used to finance the purchase of real estate usually has the property as collateral. This type of loan is called a mortgage. Mortgages with various features have been created to meet the needs of consumers. Now let's consider some of the popular types of mortgages.

### ***Types of Mortgages***

The majority of mortgages have a term to maturity of 30 years, which means the loan will be repaid over 30 years. There are other lengths of mortgage terms, including 15, 20 and 40 years. If the interest rate on a mortgage remains unchanged during the term of the mortgage, it is called a fixed-rate mortgage (FRM); on the other hand, if the interest rate changes periodically, it is called an adjustable-rate mortgage (ARM). Some loans combine the features of a FRM and an ARM, with its interest rate fixed over an extended period of time and then adjusted thereafter. A 7/1 mortgage may have a term to maturity of 30 years, but the interest rate is fixed for the first seven years and then adjusted annually during the remaining 23 years.

While the principal of most mortgages is repaid over time (through amortization), some loans require the borrower to pay interest each month without repaying a portion of the principal. Since each monthly payment consists of only interest payment, they are called interest-only loans.

### **Types of Mortgages Commonly Used to Finance Home Purchases**

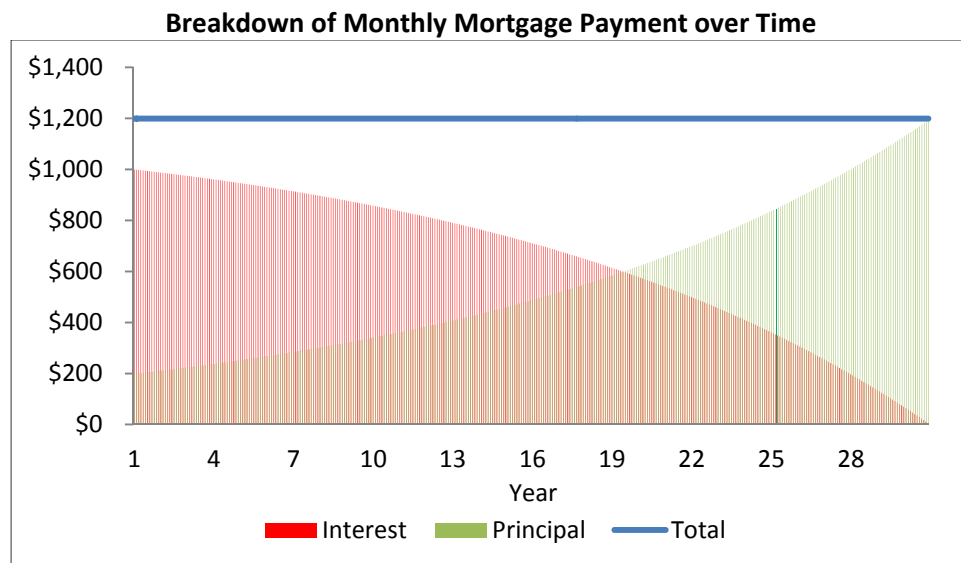
Type of Mortgage	Characteristics
Fixed-Rate Mortgage (FRM)	A mortgage whose interest rate remains constant over its entire term to maturity.
Adjustable-Rate Mortgage (ARM)	A mortgage whose interest rate changes periodically.
Hybrid Mortgage	A mortgage whose interest rate stays the same for a number of years and then changes periodically. For example, the interest rate on a 7/1 mortgage stays constant for seven years and then changes every year.
30-Year Mortgage	A mortgage that will be repaid over 30 years, with 360 monthly payments.
15-Year Mortgage	A mortgage that will be repaid over 15 years, with 180 monthly payments.
Interest-Only Mortgage	A mortgage whose monthly payments do not include principal repayment. As a result, the mortgage balance stays constant.

### Monthly Mortgage Payment

In the mortgage market today, the most popular type of loan is a 30-year, fixed-rate mortgage with amortization. With such a loan, the borrower makes a constant payment each month and after 360 equal payments, the loan is paid off. Every month, the borrower pays not only interest but also some principal, so this is an example of the amortization loan discussed in Chapter 4. Let's review how the monthly payment of such a loan is calculated. Suppose you borrow \$200,000, and the interest rate is 6.000%. Because the interest rate is an annual rate but the payments are made on monthly basis,  $i$  in the following formula should be the monthly rate, or 0.500%. As a result, the monthly payment is:

$$PMT = \frac{PV}{\frac{1 - \frac{1}{(1+i)^n}}{i}} = \frac{200,000}{\frac{1 - \frac{1}{(1+0.005)^{360}}}{0.005}} = 1,199.10$$

At the beginning, most of the payment represents interest and only a small portion is principal. In the first month, for instance, the borrower pays \$1,000 of interest and repays only \$199.10 of principal. As the principal balance declines over time, the interest charge will go down. With a constant monthly payment, the borrower will pay back principal at a faster pace later on. The following graph illustrates the breakdown of the \$1,199.10 monthly payment over time. The U.S. tax code allows mortgage borrowers to deduct interest payments from their income. Therefore, in the early years of the mortgage term, the majority of the mortgage payment is tax-deductible. Over time, the tax-deductibility declines. On the other hand, principal repayment represents money that belongs to you, not the lender. By repaying a portion of the principal each month, you accumulate equity in your home and will be able to get the money back when the house is sold.



### Cost of Mortgages

Mortgages are more complicated than most other types of consumer credit. In addition to interest, borrowers often need to pay other fees in order to get a loan. Suppose you need to

borrow \$320,000 for the purchase of a \$400,000 home and have decided to use a 30-year, fixed-rate mortgage. What is the interest rate on such a loan? The following exhibit shows the rates offered by a large mortgage lender.

Interest Rates on 30-Year Fixed-Rate Mortgages					
<b>Your custom rate quote:</b> <b>Loan type</b> Purchase <b>Loan amount</b> \$320,000.00 <b>Property value</b> \$400,000.00 <b>ZIP code</b> 95817 <b>Property type</b> Single family <b>Your credit</b> Excellent (720 +) <b>How will you use this property?</b> Primary Residence <b>How will you pay property tax?</b> Escrow <a href="#">modify search</a>			<b>Compare Conforming Rates - Purchase</b> <b>30 Year Fixed</b> Showing 6 of 6: <a href="#">show less</a>		
			<input type="checkbox"/> 3.750% Interest Rate 4.041% APR <a href="#">rate details</a>	Discount Points 2.900 Closing Costs \$15,504.90	Est. Monthly Pymt \$1,481.97
			<input type="checkbox"/> 3.875% Interest Rate 4.082% APR <a href="#">rate details</a>	Discount Points 1.900 Closing Costs \$12,338.24	Est. Monthly Pymt \$1,504.76
			<input type="checkbox"/> 3.990% Interest Rate 4.146% APR <a href="#">rate details</a>	Discount Points 1.275 Closing Costs \$10,368.90	Est. Monthly Pymt \$1,525.89
			<input type="checkbox"/> 4.000% Interest Rate 4.156% APR <a href="#">rate details</a>	Discount Points 1.275 Closing Costs \$10,371.57	Est. Monthly Pymt \$1,527.73
			<input type="checkbox"/> 4.125% Interest Rate 4.239% APR <a href="#">rate details</a>	Discount Points 0.775 Closing Costs \$8,804.90	Est. Monthly Pymt \$1,550.88
			<input type="checkbox"/> 4.250% Interest Rate 4.333% APR <a href="#">rate details</a>	Discount Points 0.400 Closing Costs \$7,638.24	Est. Monthly Pymt \$1,574.21
<b>Need Help?</b> <a href="#">How is my rate calculated?</a> <a href="#">Interest rate vs. APR</a> <a href="#">What's included in my mortgage payment?</a>					

For the same type of loan, the lender offers six different choices, each of which has a different interest rate. Holding everything else the same, you should choose the one with the lowest interest rate. However, everything else is not the same. Every choice in the table has “discount points,” which is an up-front fee borrowers pay to the lender in order to get the specific interest rate. A discount point is equal to one percent of the loan amount. For example, in order to get the lowest interest rate (3.750%), you need to pay 2.90% of the amount you want to borrow as a non-refundable fee, that is  $\$320,000 \times 0.034 = \$9,280$ . If you prefer to minimize the up-front expenses, you can choose the one with only 0.40 points (or \$1,280), but you will have to pay an annual interest rate of 4.250%.

There are many other fees mortgage lenders may charge when making a loan: application fee, underwriting fee, origination fee, processing fee, administration fee, brokerage fee, etc. It’s not easy for a borrower to figure out which of the options offered by a lender is the best; it’s even more difficult to compare the offers from different lenders. To help consumers shop for the best alternative, the laws require lenders of consumer credit to disclose the annual percentage rate (APR). Because of the closing costs, the APR for a mortgage loan is more complicated than other types of credit (like auto loans or credit cards).

## WEB EXERCISE

Go to [www.bankrate.com](http://www.bankrate.com) and compare mortgage rates by changing the following criteria:

- Loan amount (\$400,000 vs. \$500,000)
- Term to maturity (30-year vs. 15-year)
- Borrower credit (FICO>700 vs. FICO<680)
- Down payment (20% down vs. 10% down)

## KEY TERMS TO REMEMBER

### ***Median Home Price***

The midpoint of an ordered array of actual transaction prices of homes. This is a commonly used market indicator of housing value.

### ***Tax Deduction***

An expense subtracted from income when calculating tax liability. With a 30% tax rate, each dollar of tax deduction reduces taxable income by one dollar and, thus, tax liability by 30 cents.

### ***Real Estate Taxes***

A tax assessed by state or local governments on real estate according to its value.

### ***Hazard Insurance***

Insurance coverage on real estate that compensates the owner for damage to a property caused by fire, wind or other hazards.

### ***Real Estate Agent***

A licensed individual who provides real estate services such as showing homes, making offers and counteroffers, negotiating prices, and assisting in the closing.

### ***Mortgage***

A loan that uses real estate as collateral for the repayment of the loan.

### ***Mortgage Broker***

A firm or individual who solicits and takes a mortgage application, and later sells it to a lender for a commission.

### ***Fixed-Rate Mortgage***

A mortgage whose interest rate remains constant over the entire life of the loan.

### ***Adjustable-Rate Mortgage***

A mortgage whose interest rate changes periodically based on a predetermined formula.

***Discount Points***

A one-time fee paid by the borrower to reduce the interest rate on a mortgage. Each point is one percent of the amount borrowed.

***Closing Costs***

Expenses that are related to completing a real estate transaction but separate from the actual price of the property.

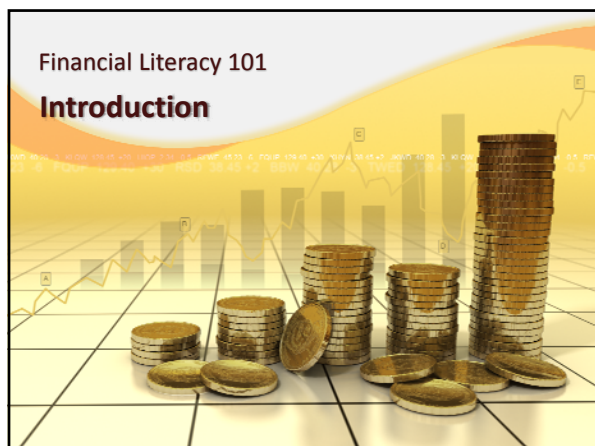
***Annual Percentage Rate (APR)***

The cost of credit expressed in a yearly rate; it includes the interest rate as well as other lender fees the borrower is required to pay, such as discount points, origination fee, broker fee, etc.



## **PART 2**

### **POWERPOINT SLIDES**



---

---

---

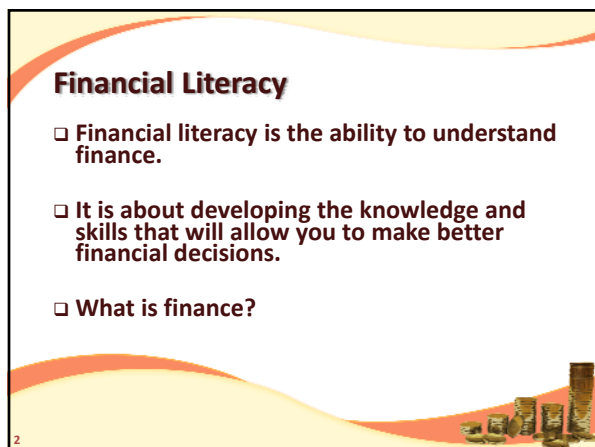
---

---

---

---

---



---

---

---

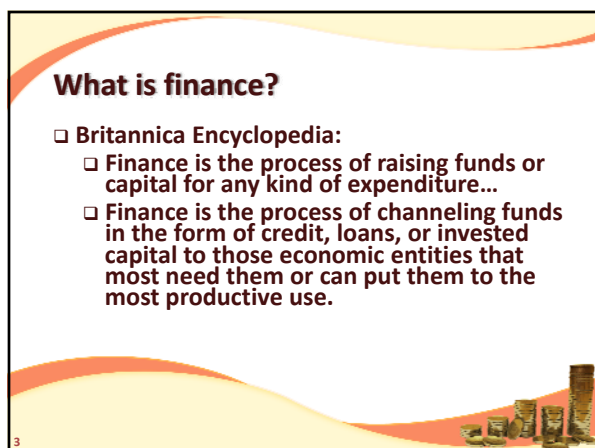
---

---

---

---

---



---

---

---

---

---


---

---

---

### What is finance?

- ❑ Merriam-Webster Dictionary:
  1. Money or other liquid resources of a government, business, group, or individual: Finances
  2. The system that includes the circulation of money, the granting of credit, the making of investments, and the provision of banking facilities
  3. The science or study of the management of funds
  4. The obtaining of funds or capital: Financing



4

---

---

---

---

---


---

---

---

### What is finance?

- ❑ Finance is the subject that deals with money.
- ❑ It deals with the concepts of money, time, risk and how they are interrelated.
- ❑ \$100 and \$105, which is better?



5

---

---

---

---

---

---

---


---

### Important Financial Concepts

- ❑ Rate of Return
  - ❑ A measure of the profitability of an investment opportunity.
  - ❑ The ratio of how much you earn on the investment to how much you pay for it.

$$\text{Rate of Return} = \left( \frac{\text{Value}_1 - \text{Value}_0}{\text{Value}_0} \right)$$

*Value<sub>1</sub> : Value of investment now*  
*Value<sub>0</sub> : Value at time of purchase*



6

---

---

---

---

---

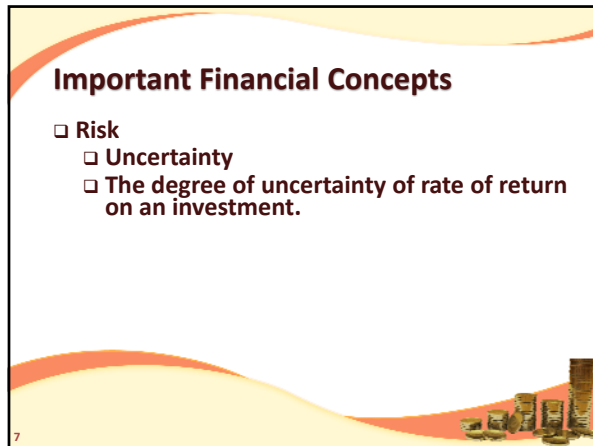
---

---

---

### Important Financial Concepts

- ❑ Risk
  - ❑ Uncertainty
  - ❑ The degree of uncertainty of rate of return on an investment.



7

---

---

---

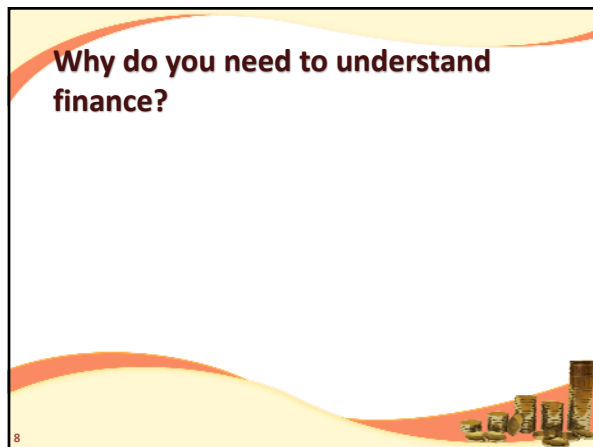
---

---

---

---

### Why do you need to understand finance?



8

---

---

---

---

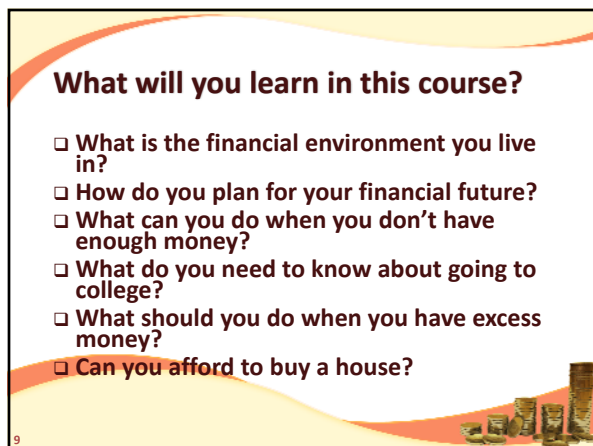
---

---

---

### What will you learn in this course?

- ❑ What is the financial environment you live in?
- ❑ How do you plan for your financial future?
- ❑ What can you do when you don't have enough money?
- ❑ What do you need to know about going to college?
- ❑ What should you do when you have excess money?
- ❑ Can you afford to buy a house?



9

---

---

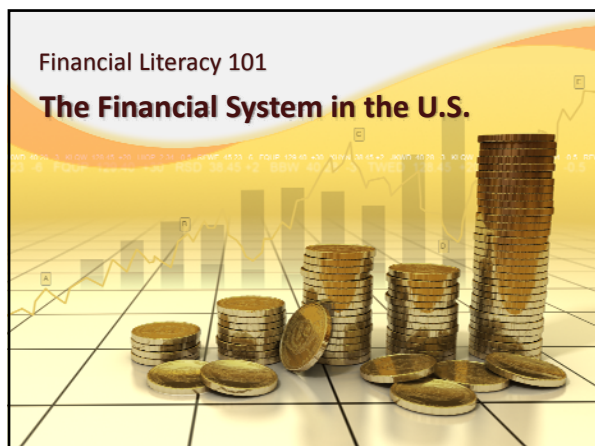
---

---

---

---

---



---

---

---

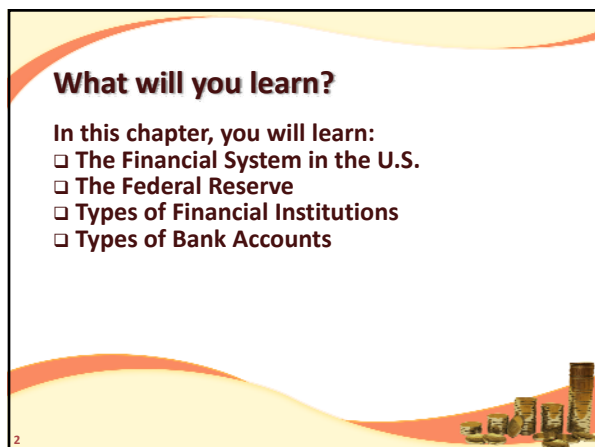
---

---

---

---

---



---

---

---

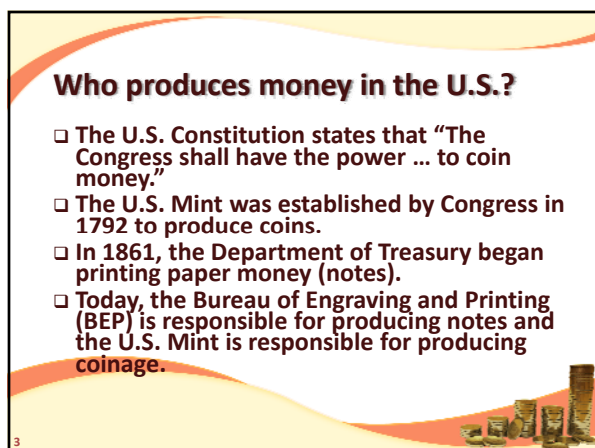
---

---

---

---

---



---

---

---

---

---

---

---

---

### How much money is there?



**\$942 billion**



**\$40 billion**



4

---

---

---

---

---

---

---

---

### What kinds of currency are used in other countries?

- ☐ Canada
- ☐ Mexico
- ☐ United Kingdom
- ☐ Germany
- ☐ China
- ☐ Japan



5

---

---

---

---

---


---

---

---

### What is the Federal Reserve?

- ☐ In the U.S., after paper notes and coins are produced, they are delivered to the Federal Reserve (the Fed) before being released to the public.
- ☐ The Federal Reserve is the central bank of the United States and is responsible for controlling the nation's money supply.
- ☐ The Federal Reserve is a bankers' bank.



6

---

---

---

---

---

---

---

---

### What is the Federal Reserve?

- ❑ The Federal Reserve was founded in 1913 by Congress.
- ❑ The Federal Reserve system consists of
  - ❑ The Board of Governors
  - ❑ Twelve regional Federal Reserve Banks

---

---

---

---

---

---

---

---

### What is the Federal Reserve?

- ❑ Currently, the Fed’s duties include:
  - ❑ Conducting the nation’s monetary policy
  - ❑ Supervising and regulating banking institutions
  - ❑ Maintaining stability of the financial system
  - ❑ Providing services to financial institutions and the U.S. government

---

---

---

---

---

---

---

---

### What is the Federal Reserve?

- ❑ The Federal Reserve’s decisions do not have to be ratified by the President, or anyone else in the executive branch of the government.
- ❑ The system is subject to oversight by the U.S. Congress.

---

---

---

---

---


---

---

---

Who is the current chairman of the Federal Reserve?

10



---

---

---

---

---


---

---

---

What is a bank?

11



- ❑ There are different types of banks.
- ❑ Investment banks help corporations and governments raise capital by designing and marketing securities (such as stocks and bonds).
- ❑ Mortgage banks help facilitate real estate transactions by bringing borrowers and lenders together.
- ❑ The focus of our discussion is on commercial banks and other financial institutions that provide similar services.

---

---

---

---

---


---

---

---

What do commercial banks do?

12



- ❑ The primary function of commercial banks is collecting deposits from savers, and then using the money to make loans to individuals and businesses.
- ❑ Other types of financial institutions that provide similar services include:
  - ❑ Savings and loan associations (S&Ls)
  - ❑ Mutual savings banks
  - ❑ Credit unions

---

---

---

---

---

---

---


---



## Comparison of Financial Institutions

Type of Institution	Key Services and Ownership
Commercial Banks	<ul style="list-style-type: none"> <li>• Provide a full range of services</li> <li>• Owned by shareholders</li> </ul>
Savings & Loans Associations	<ul style="list-style-type: none"> <li>• Specialize in savings accounts and home mortgages</li> <li>• Owned by shareholders</li> </ul>
Mutual Savings Banks	<ul style="list-style-type: none"> <li>• Specialize in savings accounts and home mortgages</li> <li>• Owned by depositors</li> </ul>
Credit Unions	<ul style="list-style-type: none"> <li>• Provide various financial services</li> <li>• Owned by members having a common bond</li> </ul>

13




---

---

---

---

---

---


---

---

## Types of Bank Accounts

- ☐ Checking Account
- ☐ Savings Account
- ☐ Money Market Account
- ☐ Certificate of Deposit

14




---

---

---

---

---

---


---

---

## How do you choose a bank account?

- ☐ Rate of Return
  - ☐ The idea is very simple: the higher, the better. However, simply comparing the interest rate is not enough.
- ☐ Annual Percentage Yield (APY)
  - ☐ The percentage rate expressing the total amount of interest that would be received on a \$100 deposit based on the nominal interest rate and the frequency of compounding.

15




---

---

---

---

---

---

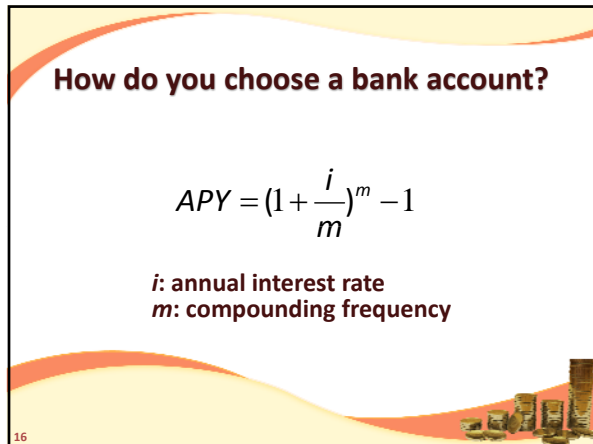
---

---

### How do you choose a bank account?

$$APY = \left(1 + \frac{i}{m}\right)^m - 1$$

*i*: annual interest rate  
*m*: compounding frequency



16

---

---

---

---

---

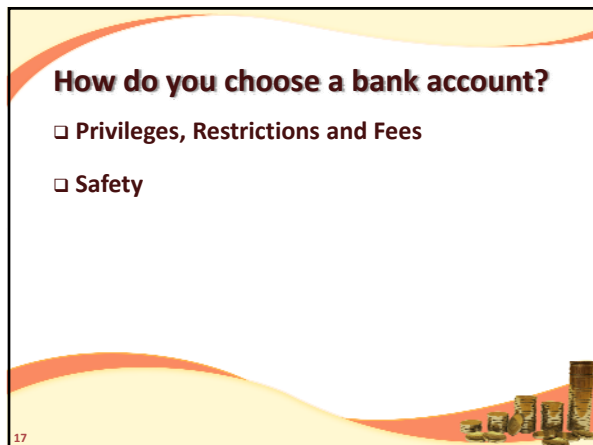
---

---

---

### How do you choose a bank account?

- ☐ Privileges, Restrictions and Fees
- ☐ Safety



17

---

---

---

---

---

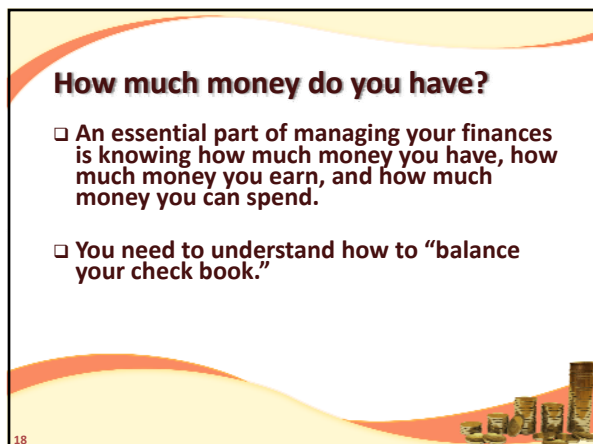
---

---

---

### How much money do you have?

- ☐ An essential part of managing your finances is knowing how much money you have, how much money you earn, and how much money you can spend.
- ☐ You need to understand how to “balance your check book.”



18

---

---

---

---

---


---

---

---

### How much money do you have?

- ❑ Today, many financial institutions offer online banking, so you can keep track of all the transactions and your balance by logging in to your account on a computer or even from your smart phone.
- ❑ Additionally, you can transfer funds, pay bills, or apply for a loan online.
- ❑ Some banks even allow you to create a budget and compare it with your actual spending.



19

---

---

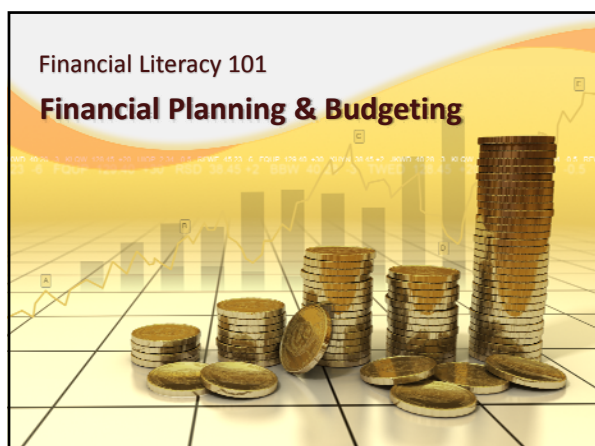
---

---

---

---

---



---

---

---

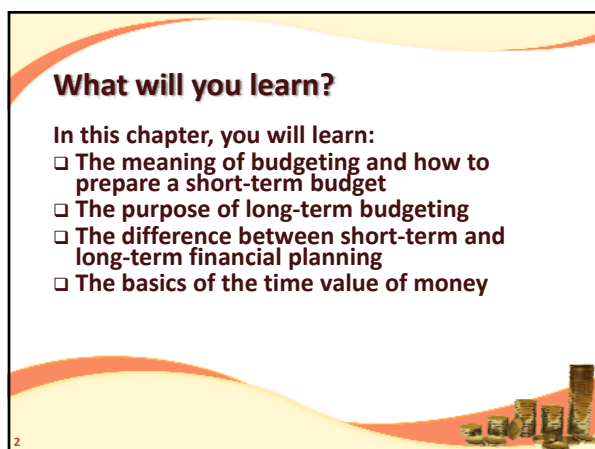
---

---

---

---

---



---

---

---

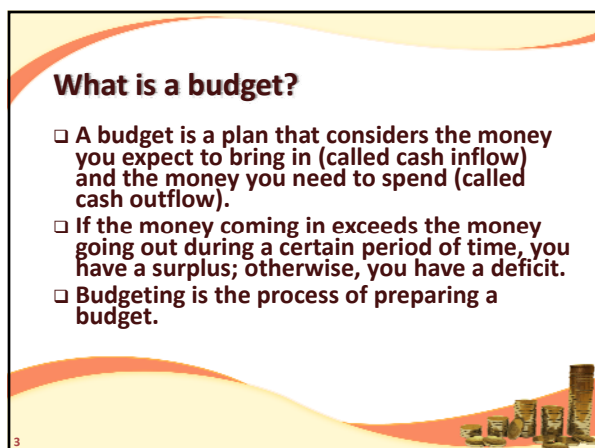
---

---

---

---

---



---

---

---

---

---

---

---

---

### Why is budgeting important?

- ☐ A budget helps you keep track of your money: how much you've earned, how much you've spent, and how much you currently have.
- ☐ It also helps you plan for the future: how much you are going to earn, how much you can afford to spend, and how much, if any, you will be able to save.
- ☐ It helps you assess your financial health in the long run.

---

---

---

---

---

---

---

---

### What should be considered in short-term budgeting?

- ☐ Income
- ☐ What are your income sources?
  - ☐ Allowance
  - ☐ Wages
  - ☐ Other Sources?

---

---

---

---

---

---

---

---

### What should be considered in short-term budgeting?

- ☐ Expenses
- ☐ What types of expenses will you incur?
  - ☐ Taxes
  - ☐ Education
  - ☐ Food
  - ☐ Transportation
  - ☐ Housing
  - ☐ Others

---

---

---

---

---

---

---

---

### Do you have enough money?

- ☐ If your income is more than the total expenses, you have a surplus.
- ☐ If the expenses exceed your income, you have a deficit.
- ☐ What else do you need to consider?
  - ☐ Contingencies
  - ☐ Savings

---

---

---

---

---

---

---

---

### What should you do if you have a deficit?

- ☐ Review income sources
- ☐ Review and prioritize expenses
- ☐ Needs vs. Wants

---

---

---

---

---

---

---

---

### What is long-term budgeting?

- ☐ The purpose of long-term budgeting is to help you figure out if, and how, you can achieve a financial goal in the future.
- ☐ It combines the results of your short-term budget over an extended period of time.
- ☐ How long is "long-term?"

---

---

---

---

---

---

---

---

### What is the difference between short-term and long-term budgeting?

- ❑ One major difference is that you should consider the time value of money in long-term planning.

10

---

---

---

---

---

---

---

---

### What is the time value of money?

- ❑ The time value of money means one dollar today is worth more than one dollar in the future.
- ❑ Today's one dollar can be saved or invested, and therefore earn a rate of return for you.
- ❑ As a result, time will help you reach your long-term financial goal.

11

---

---

---

---

---

---

---

---

### What is time value of money?

- ❑ The time value of money concept is based on a simple equation:

$$FV_n = PV \times (1 + i)^n$$

where  $FV_n$  is the amount of money you will have in a bank account in  $n$  years;  $PV$  is how much you have in the account now; and  $i$  is the annual interest rate.

12

---

---

---

---

---

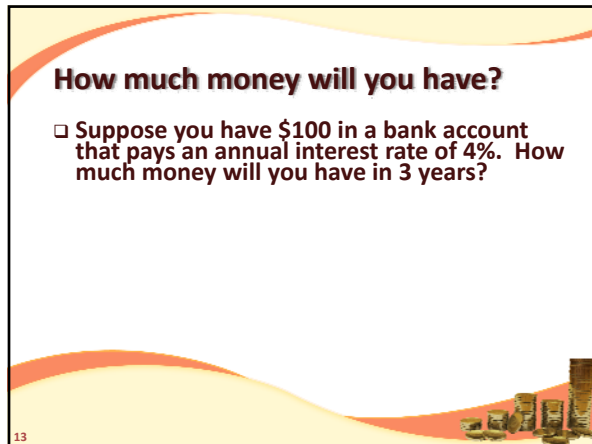
---

---

---

**How much money will you have?**

- Suppose you have \$100 in a bank account that pays an annual interest rate of 4%. How much money will you have in 3 years?



13

---

---

---

---

---

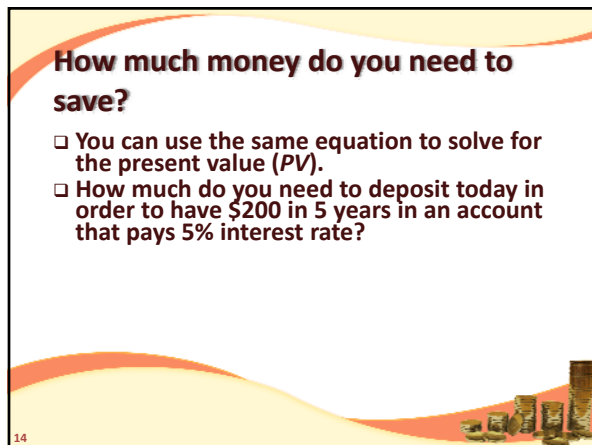
---

---

---

**How much money do you need to save?**

- You can use the same equation to solve for the present value (*PV*).
- How much do you need to deposit today in order to have \$200 in 5 years in an account that pays 5% interest rate?



14

---

---

---

---

---

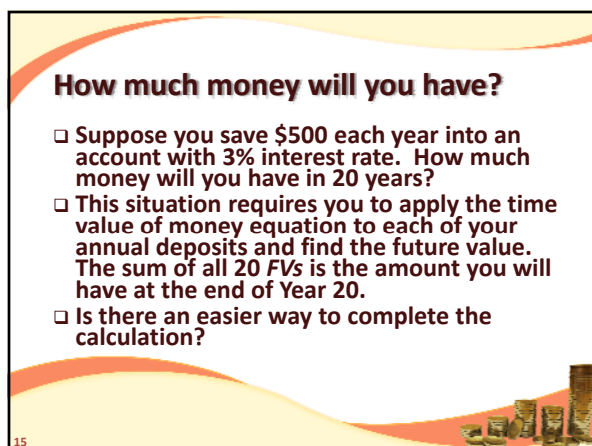
---

---

---

**How much money will you have?**

- Suppose you save \$500 each year into an account with 3% interest rate. How much money will you have in 20 years?
- This situation requires you to apply the time value of money equation to each of your annual deposits and find the future value. The sum of all 20 *FVs* is the amount you will have at the end of Year 20.
- Is there an easier way to complete the calculation?



15

---

---

---

---

---

---


---

---



### How much money do you need to save?

- ❑ Suppose you want to have \$1 million in the account when you retire in 40 years. How much do you need to save each year?
- ❑ In this case, you need to solve for *PMT*.



16

---

---

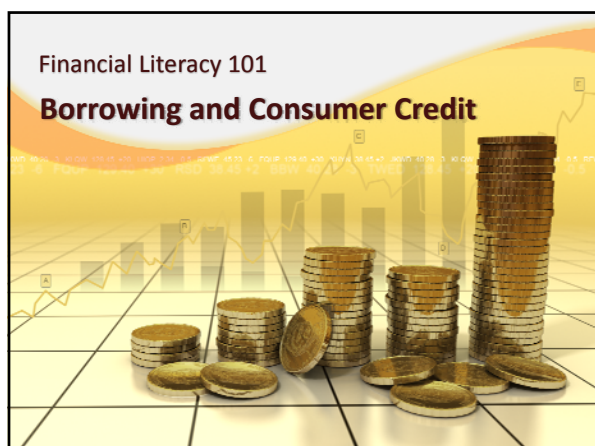
---

---

---

---

---



---

---

---

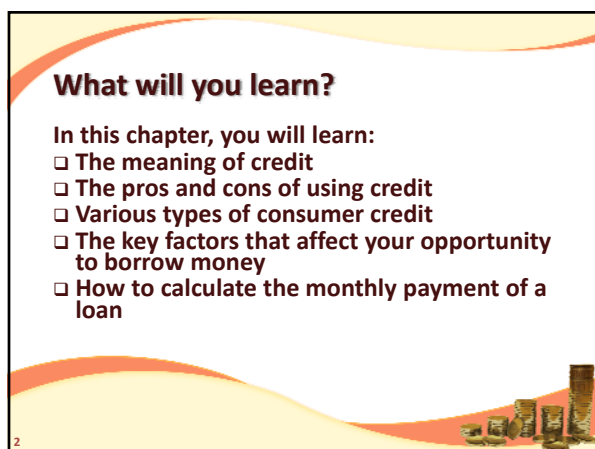
---

---

---

---

---



---

---

---

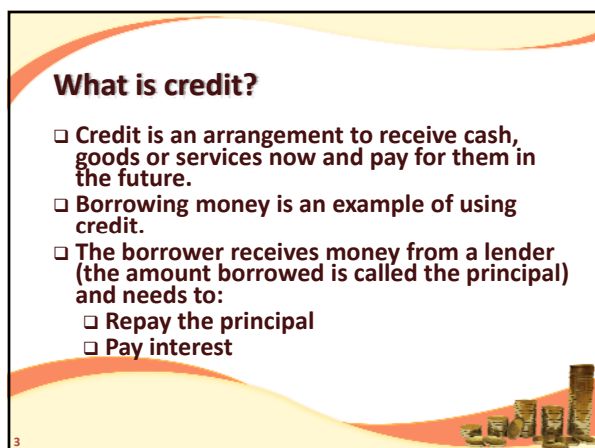
---

---

---

---

---



---

---

---

---

---

---

---

---

### What is consumer credit?

- Consumer credit is the use of credit for personal needs by individuals and families, in contrast to credit used by businesses and governments.
- Examples include:
  - Borrowing an auto loan for the purchase of a car
  - Borrowing a student loan to pay for an education
  - Using a credit card to pay for groceries

---

---

---

---

---

---

---

---

### Should you use consumer credit?

- Advantages of using consumer credit:
  - Immediate enjoyment of goods and services
  - Convenience
  - Safety
- Disadvantages of using consumer credit:
  - Overspending
  - Cost

---

---

---

---

---

---

---

---

### What types of consumer credit are available?

- Closed-end credit involves borrowing that has a specified loan amount and is for a specific purpose.
- Examples include:
  - Home mortgage loans
  - Auto loans
  - Student loans

---

---

---

---

---

---

---

---

### What types of consumer credit are available?

- ❑ Open-end credit (revolving credit) is typically not used for a single purpose.
- ❑ It has a maximum amount that is approved by the creditor (the line of credit) but not delivered to the borrower at once.
- ❑ Over time, the borrower can get money from the lender, or pay back a portion or the entire amount of the principal.
- ❑ Examples include:
  - ❑ Credit cards
  - ❑ Home equity loans

---

---

---

---

---

---

---

---

### What factors do lenders consider?

- ❑ When making a loan, the lender is making an investment and the interest rate is the rate of return on the investment.
- ❑ The main consideration is how risky the investment is.
- ❑ The riskiness of a loan is reflected in two factors:
  - ❑ The probability of incurring losses
  - ❑ The severity of potential loss

---

---

---

---

---

---

---

---

### What factors do lenders consider?

- ❑ In general, lenders of consumer loans consider four key factors, the 4 Cs, when deciding whether a loan application should be approved:
  - ❑ Capacity
  - ❑ Capital
  - ❑ Collateral
  - ❑ Character

---

---

---

---

---


---

---

---

### What are the 4Cs?

- ❑ Capacity is your financial ability—mainly your income—to meet the loan obligations.
- ❑ Capital is the assets owned by the borrower.
- ❑ Collateral is a valuable asset that is pledged to the loan.
- ❑ Character refers to one’s attitude toward financial obligations.



10

---

---

---

---

---


---

---

---

### How do lenders measure character?

- ❑ Because attitude is very subjective and difficult to measure, creditors typically use credit score as a substitute for the borrower’s character.
- ❑ Your credit score is a number that summarizes your history of using credit.
- ❑ The most commonly used credit score is called a FICO score.



11

---

---

---

---

---


---

---

---

### What is a FICO score?

- ❑ The FICO score was developed by Fair Isaac Corporation (FICO) to measure credit risk.
- ❑ This score has a range of 300 to 850; the higher the score, the lower the risk.
- ❑ When computing the score, FICO uses information from your credit report, which describes the types of credit you have, the length of time you have used credit, and whether you’ve paid your bills on time.



12

---

---

---

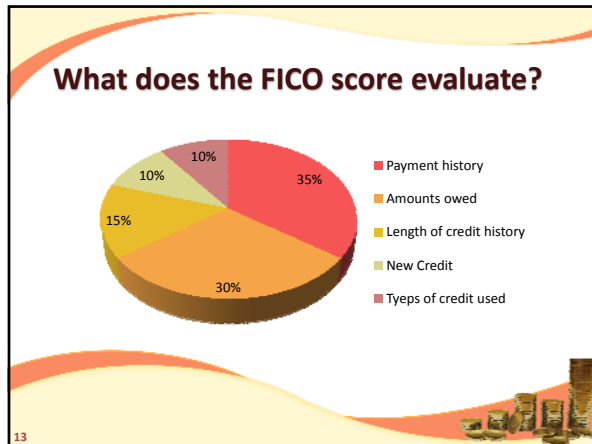
---

---

---

---

---



---

---

---

---

---

---

---

### Why is credit score important?

- ❑ Annual percentage rate (APR) is the cost of credit expressed in a yearly rate; it includes the interest rate as well as other lender fees the borrower is required to pay.
- ❑ The better your credit score, the lower the APR you will be charged.
- ❑ Having good credit can save you a lot of money.

14

---

---

---

---

---

---

---

### What is good credit?

- ❑ No single standard that is agreed upon by all lenders exists; therefore, there is no single definition of "excellent" or "good" credit.
- ❑ As a general guideline, a FICO score above 770 is excellent; a score between 700 and 770 is good; and a score between 650 and 700 is average.
- ❑ If your FICO score is below the mid-600s, you may have difficulty obtaining a loan.

15

---

---

---

---

---

---

---

### What is your loan payment?

- Consider a \$12,000, five-year auto loan with a 4.80% APR. How much is the monthly payment?
- This type of loan calls for equal monthly payments. Each payment includes principal repayment and interest payment.
- The gradual repayment of principal over time is called amortization.

16

---

---

---

---

---

---

---

---

### What is your loan payment?

- Using the formula from Chapter 3, you can calculate the monthly payment. In this case, the monthly payment is \$225.36.
- The payment stays the same over time, but the breakdown changes month by month.
- As the principal balance declines, the interest charged on the loan each month decreases.
- Given the constant monthly payment, the principal portion rises.

17

---

---

---

---

---

---

---

---

### What is your loan payment?

- The breakdown is:

Month	Interest Payment	Principal Repayment	Principal Balance
1	\$48.00	\$177.36	\$11,822.64
2	47.29	178.07	11,644.58
3	46.58	178.78	11,465.80
⋮	⋮	⋮	⋮
58	2.68	222.67	448.02
59	1.79	223.56	224.46
60	0.90	224.46	0.00

18

---

---

---

---

---

---

---


---

### How does good credit help you save money?

☐ Let's consider the same auto loan with five different interest rates:

Interest Rate	0.00%	2.40%	4.80%	7.20%	9.60%
Monthly Payment	\$200.00	\$212.44	\$225.36	\$238.75	\$252.61
Total Interest	\$0.00	\$746.38	\$1,521.41	\$2,324.90	\$3,156.55

19



---

---

---

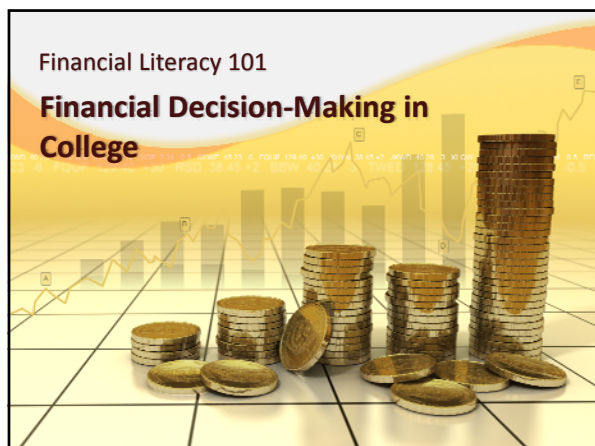
---

---

---

---






---

---

---

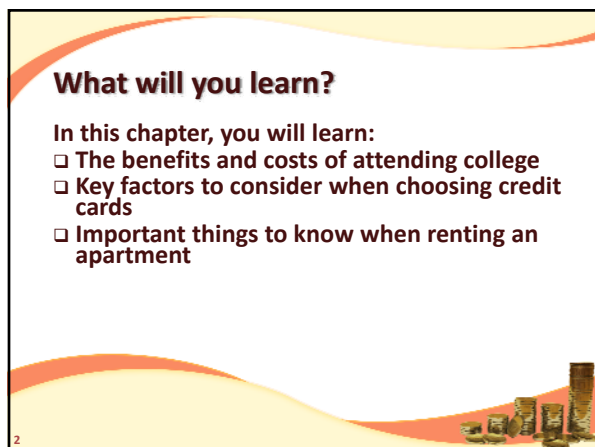
---

---

---

---

---




---

---

---

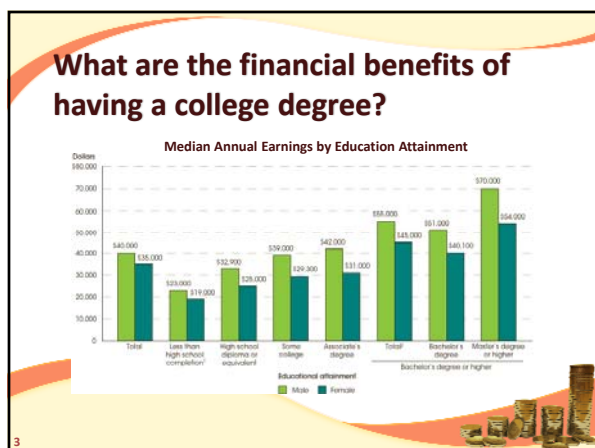
---

---

---

---

---




---

---

---

---

---

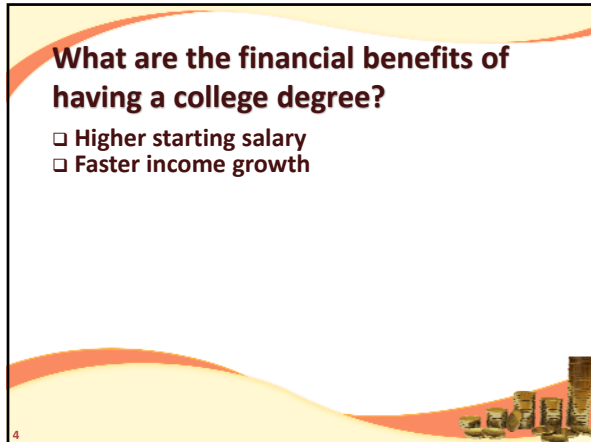
---

---

---

**What are the financial benefits of having a college degree?**

- ☐ Higher starting salary
- ☐ Faster income growth



4

---

---

---

---

---

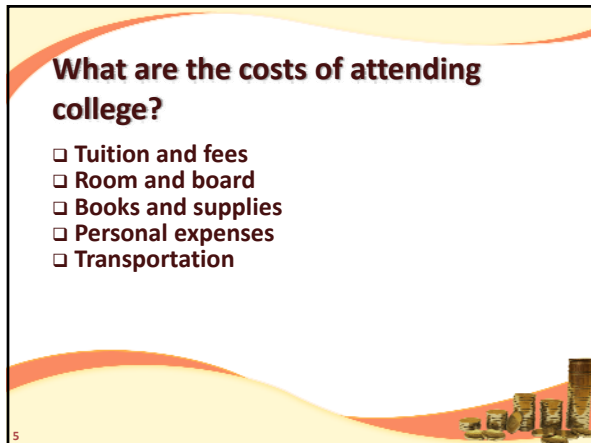
---

---

---

**What are the costs of attending college?**

- ☐ Tuition and fees
- ☐ Room and board
- ☐ Books and supplies
- ☐ Personal expenses
- ☐ Transportation



5

---

---

---

---

---

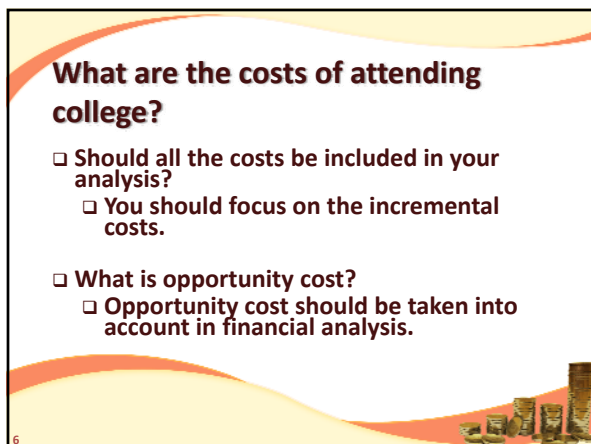
---

---

---

**What are the costs of attending college?**

- ☐ Should all the costs be included in your analysis?
  - ☐ You should focus on the incremental costs.
- ☐ What is opportunity cost?
  - ☐ Opportunity cost should be taken into account in financial analysis.



6

---

---

---

---

---

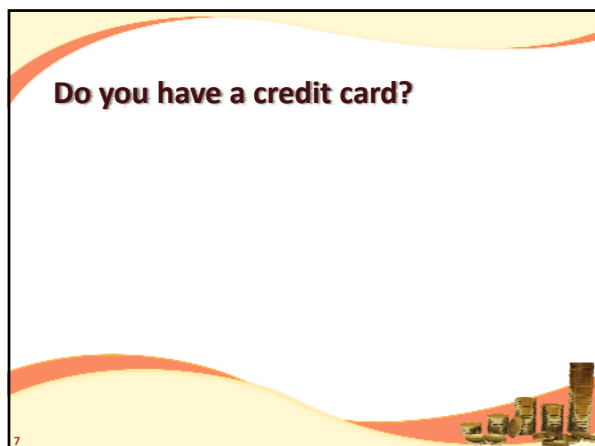
---

---

---

**Do you have a credit card?**

7



---

---

---

---

---

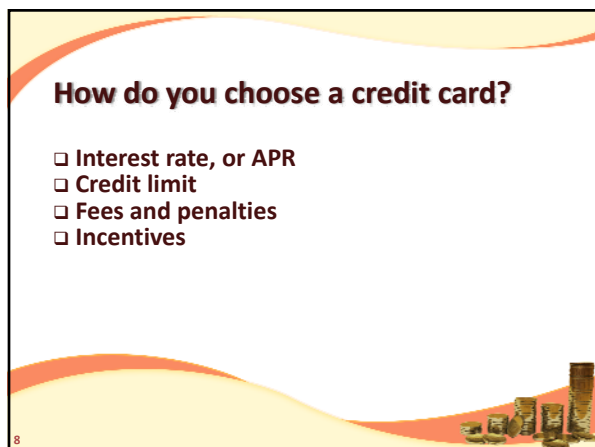
---

---

**How do you choose a credit card?**

- ☐ Interest rate, or APR
- ☐ Credit limit
- ☐ Fees and penalties
- ☐ Incentives

8



---

---

---

---

---

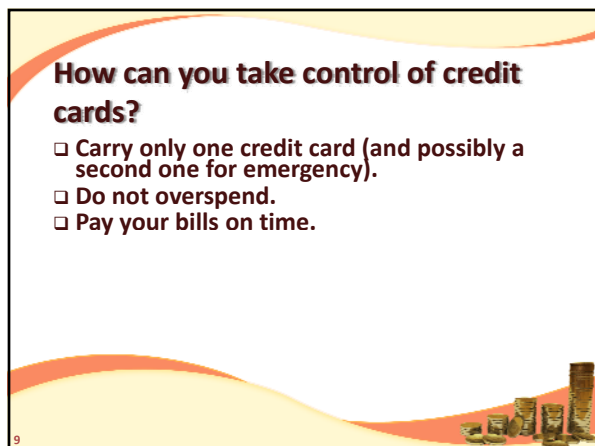
---

---

**How can you take control of credit cards?**

- ☐ Carry only one credit card (and possibly a second one for emergency).
- ☐ Do not overspend.
- ☐ Pay your bills on time.

9



---

---

---

---


---

---

---

### What is identity theft?

- ❑ Identity theft occurs when a person's identification (including name, social security number and/or any account number) is used or transferred by someone else for unlawful activities.
- ❑ It is one of the fastest growing crimes in the U.S. Federal Bureau of Investigation (FBI) estimates that more than half a million Americans become victims each year.



10

---

---

---

---


---

---

---

---

### What will happen if your identity is stolen?



11

---

---

---

---

---


---

---

---

### How do you choose an apartment?

- ❑ The Area
  - ❑ Safety
  - ❑ Distance to school
  - ❑ Transportation
- ❑ The Building
  - ❑ Quality
  - ❑ Parking
  - ❑ Amenities
- ❑ The Unit



12

---

---

---

---

---

---

---

---

### What is a lease agreement?

- ❑ A lease is a contract between a landlord and a tenant. It details your rights and responsibilities as a tenant, and specifies the financial terms.
- ❑ Lease Terms:
  - ❑ Rent
  - ❑ Length of lease (term)
  - ❑ Expenses included/excluded
  - ❑ Security deposit
  - ❑ Incentives
  - ❑ Options



13

---

---

---

---

---


---

---

---

### Why do you need renter's insurance?

- ❑ Renter's insurance is a type of home insurance that protects the holder against accidents, damages and losses that occur in a rented residence.
- ❑ With renter's insurance, if your valuables in the apartment (such as computer, video game console and furniture) are damaged/lost due to fire, earthquake, theft or other reasons, the insurance company will replace them.



14

---

---

---

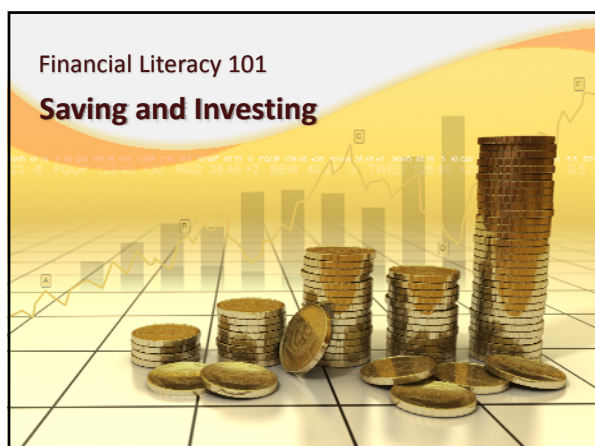
---

---

---

---

---




---

---

---

---

---

---

---

---

### What will you learn?

In this chapter, you will learn:

- ☐ The popular means to invest money for your long-term goals
- ☐ The basics of the stock and bond markets
- ☐ Various ways to invest in real estate
- ☐ How mutual funds work
- ☐ The impact of paying taxes on your rate of return

---

---

---

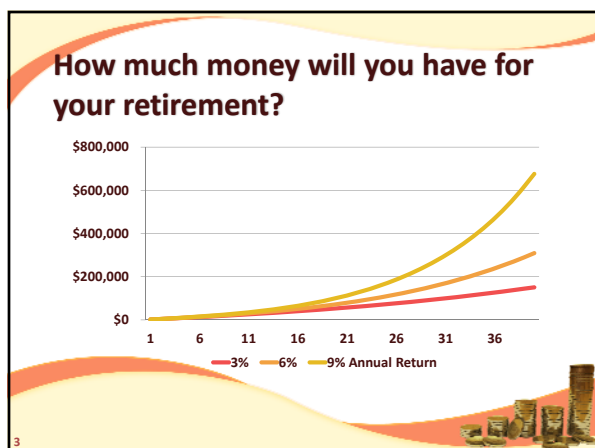
---

---

---

---

---




---

---

---

---

---

---

---

---

### How can you invest your money?

- ☐ Bank Accounts
- ☐ Bonds
- ☐ Stocks
- ☐ Real Estate
- ☐ Mutual Funds




---

---

---

---

---

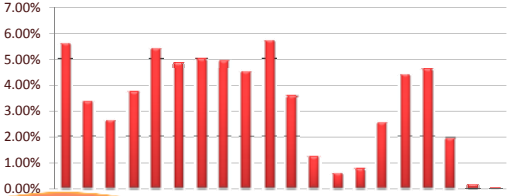
---

---

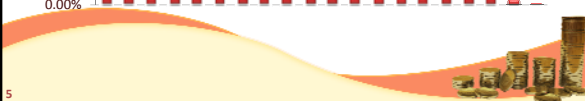
---

### What is the typical return on money market accounts?

Annual Rate of Return (1991-2010)



Year	Annual Rate of Return (%)
1991	5.5
1992	3.5
1993	2.5
1994	3.8
1995	5.2
1996	4.8
1997	5.0
1998	4.5
1999	5.5
2000	3.5
2001	1.5
2002	0.8
2003	1.2
2004	2.5
2005	4.2
2006	4.5
2007	2.0
2008	0.5
2009	0.5
2010	0.5




---

---

---

---

---


---

---

---

### What is a bond?

- ☐ A bond is a debt security.
- ☐ The issuer of a bond (which is typically a government or a company) borrows money by selling the bond to investors.
- ☐ The investors (also known as bondholders) receive interest payment from the issuer periodically, and get the principal back when the bond expires (at the maturity date).




---

---

---

---

---


---

---

---

### What is a bond?

- ❑ Prior to maturity, bondholders cannot redeem the bond back to the issuer for cash, but they can sell it in the bond market to other investors.
- ❑ The sale price could be different from the principal amount, depending on the economic conditions at the time.



7

---

---

---

---


---

---

---

### What are the types of bonds?

- ❑ Treasury bonds are issued by the U.S. federal government.
- ❑ Municipal bonds are issued by state or local governments.
- ❑ Corporate bonds are issued by corporations.



8

---

---

---

---

---

---

---

### How do you assess the riskiness of a bond?


**The Bond Rating Systems**

Moody's	S&P	Fitch
Aaa	AAA	AAA
Aa	AA	AA
A	A	A
Baa	BBB	BBB
Ba	BB	BB
B	B	B
C	C	C
D	D	D

Investment Grade

Non-Investment Grade  
(Junk Bonds)

In Default



9

---

---

---

---

---

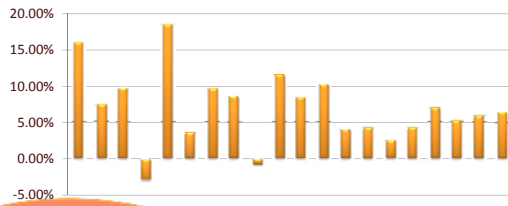
---

---



## What is the typical return on bond investments?

Annual Rate of Return (1991-2010)



10

---

---

---

---

---

---

---

---

## What is a stock?

- ❑ A stock represents ownership in a corporation and each share of the stock represents a portion of the ownership.

11

---

---

---

---

---

---

---

---

## How do you make money on stock investment?

- ❑ When you buy shares of a company, you become one of its owners (also known as shareholders).
- ❑ Periodically the company may pay a portion of its profits as dividends to its shareholders.

12

---

---

---

---

---

---

---

---

### How do you make money on stock investment?

- As the company grows, the value of the shares you own may increase. If you sell the shares at a price higher than the price you paid, you make a profit (called capital gain).
- However, it is possible that the sale price is less than the purchase price. In that case, you lose money (capital loss).

13

---

---

---

---

---

---

---

---

### How do you make money on stock investment?

- Stock investors make money by
  - Receiving dividends
  - Potentially earning a capital gain

14

---

---

---

---

---

---

---

---

### What is the typical return on stock investments?

Annual Rate of Return (1991-2010)

15

---

---

---

---

---


---

---

---

### Where is the stock market?

- There are different types of stock markets.
- New York Stock Exchange (NYSE)
  - Located at 11 Wall Street in New York City
  - The oldest and largest stock exchange in the U.S.
- NASDAQ
  - The world's first and largest electronic stock market



16

---

---

---

---

---

---

---

### What is a stock index?

- A stock index is an indicator used to measure the value changes in the stock market (or a section of the market).
- Most Recognized Stock Indexes
  - Dow Jones Industrial Average
  - NASDAQ Composite
  - S&P 500



17

---

---

---

---


---

---

---

### What is real estate?

- Real estate is land and fixed, immovable improvements (such as buildings, landscaping, etc.) on the land.
- Different Types of Real Estate
  - Residential real estate is mainly used as residence by its owner.
  - Commercial real estate, on the other hand, is mainly used for income-producing purposes.



18

---

---

---

---

---

---

---

## How do you invest in real estate?

- ❑ Buying a Home
- ❑ Investing in Commercial Real Estate

19

---

---

---

---

---

---

---

---

## What is the typical return on real estate investments?

Annual Rate of Return (1991-2010)

20

---

---

---

---

---

---

---

---

## What is a mutual fund?

- ❑ A mutual fund is an entity that pools money from many investors and uses the funds to acquire a variety of investments (such as stocks and bonds).
- ❑ How does it help small investors?
  - ❑ Low minimum investment hurdle
  - ❑ Diversification
  - ❑ Professional management

21

---

---

---

---

---


---

---

---

**Which one is the best investment?**

- ☐ It depends on your personal preferences and the stage of your life cycle.
- ☐ Life Cycle of Investing
  - ☐ Accumulation
  - ☐ Consolidation
  - ☐ Spending
  - ☐ Gifting



22

---

---

---

---

---


---

---

---

**What types of taxes do you pay?**

- ☐ Income Tax
- ☐ Sales Tax
- ☐ Property Tax
- ☐ Capital Gains Tax



23

---

---

---

---

---

---


---

---

**How do taxes affect your financial goals?**

- ☐ Before-tax rate of return is what your investment generates.
- ☐ After-tax rate of return is what you actually get after paying all relevant taxes.
- ☐ Which one should you use in planning for a financial goal?

*After-Tax Return = Before-Tax Return × (1 – Tax Rate)*



24

---

---

---

---

---

---

---

---



---

---

---

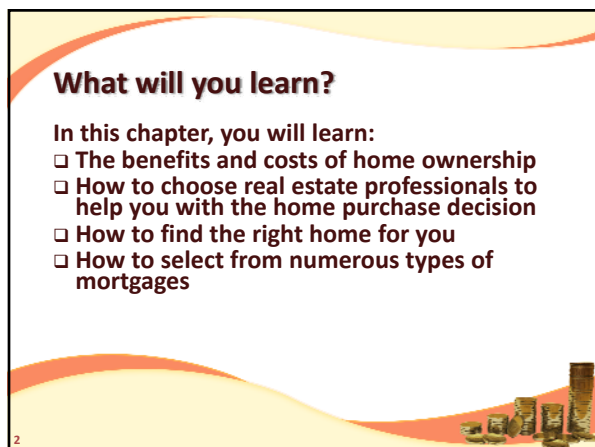
---

---

---

---

---



---

---

---

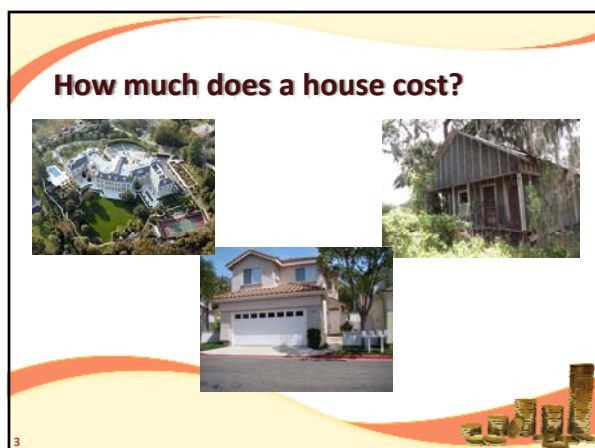
---

---

---

---

---



---

---

---

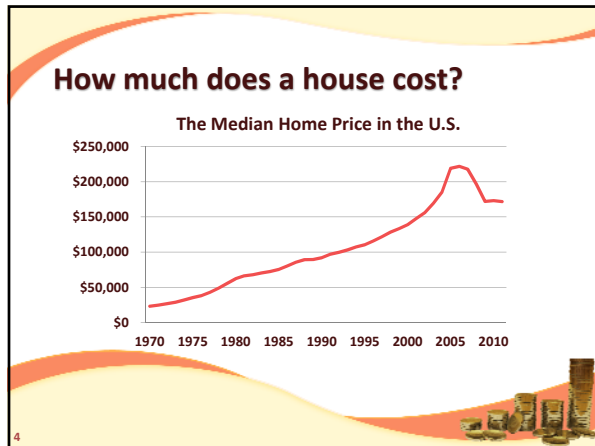
---

---

---

---

---




---

---

---

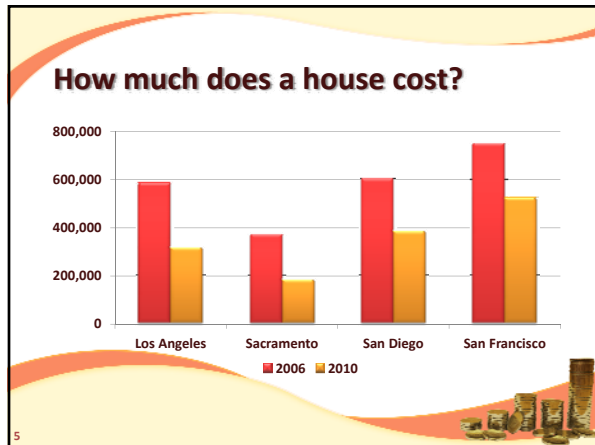
---

---

---

---

---




---

---

---

---

---

---

---

---

### Should you own a home?

- ☐ Direct Costs of Home Ownership
  - ☐ Mortgage payment
  - ☐ Other housing expenses
- ☐ Other Costs
  - ☐ Lack of mobility
  - ☐ Opportunity costs

6

---

---

---

---

---

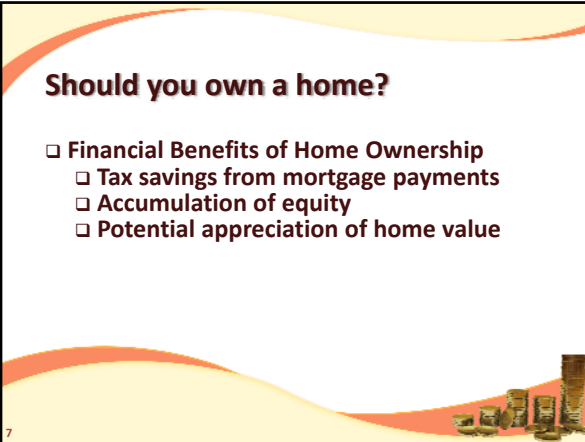
---

---

---

### Should you own a home?

- Financial Benefits of Home Ownership
  - Tax savings from mortgage payments
  - Accumulation of equity
  - Potential appreciation of home value



---

---

---

---

---

---

---

### Whose help do you need when buying a home?

- Real Estate Agent
- Mortgage Banker/Broker



---

---

---

---

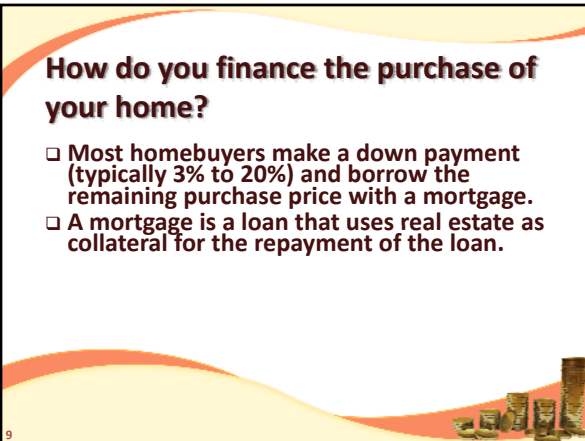
---

---

---

### How do you finance the purchase of your home?

- Most homebuyers make a down payment (typically 3% to 20%) and borrow the remaining purchase price with a mortgage.
- A mortgage is a loan that uses real estate as collateral for the repayment of the loan.



---

---

---

---

---


---

---



### What types of mortgages are available?

- Interest Rate
  - Fixed-rate mortgages (FRM)
  - Adjustable-rate mortgages (ARM)
  - Hybrid mortgages
- Term to Maturity
  - 30-year mortgages
  - 15-year mortgages
- Amortization
  - Interest-only mortgages



---

---

---

---

---


---

---

---

### How much do you need to pay?

- Most mortgages call for constant monthly payments. The payment can be calculated with the present value formula in Chapter 3.
- For a fixed-rate mortgage, the monthly payment depends on:
  - Loan amount ( $PV$ )
  - Interest rate ( $i$ , monthly rate)
  - Term to maturity ( $n$ , number of months)



---

---

---

---

---


---

---

---

### How much do you need to pay?

- Suppose you borrow \$200,000 with a 30-year, fixed-rate mortgage at a 6% interest rate. The monthly payment is \$1,199.10.
- Each payment include interest payment as well as principal repayment.
- At the beginning, interest represents the majority of the payment.
- Over time, the portion of principal repayment increases.



---

---

---

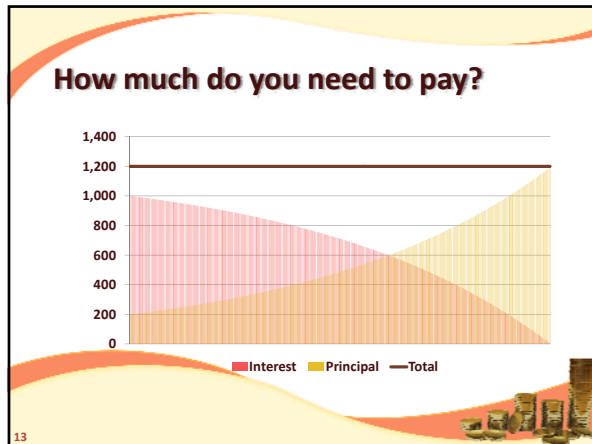
---

---

---

---

---




---

---

---

---

---

---

---

---

---

---




---

---

---

---

---

---

---

---

---

---

- ### What is the cost of borrowing a mortgage?
- ☐ Interest Rate
  - ☐ Discount Points
  - ☐ Other Fees
    - ☐ Application
    - ☐ Underwriting
    - ☐ Origination...
  - ☐ The APR of a mortgage includes the interest rate, the discount points, as well as other lender fees the borrower is required to pay.
- 15

---

---

---

---

---

---

---

---

---

---

## **PART 3**

## **GLOSSARY**

# Glossary

---

**15-Year Mortgage** A mortgage that will be repaid over 15 years, with 180 monthly payments.

**30-Year Mortgage** A mortgage that will be repaid over 30 years, with 360 monthly payments.

**4Cs** The four key factors lenders of consumer credit consider when they assess the riskiness of a loan. They are: capacity, capital, collateral and character.

**Adjustable-Rate Mortgage (ARM)** A mortgage whose interest rate changes periodically based on a predetermined formula.

**After-Tax Rate of Return** The rate of return an investor gets to keep after paying taxes to the government.

**Amortization** The gradual repayment of loan principal over time.

**Annual Percentage Rate (APR)** The cost of credit expressed in a yearly rate; it includes the interest rate as well as other lender fees the borrower is required to pay, such as discount points, origination fee, broker fee, etc.

**Annual Percentage Yield (APY)** The APY is the interest rate actually earned or paid in one year, taking into account the effect of compounding. The APY is calculated by taking one plus the periodic rate and raising it to the number of periods in a year.

**Automated Teller Machine (ATM)** A machine at a bank branch or other location which enables a customer to perform basic banking activities (checking one's balance, withdrawing or transferring funds) even when the bank is closed.

**Balance Transfer** The transfer of all outstanding balances from one credit card to a new credit card. Credit card balance transfers are typically used by consumers who want to move their debt to a credit card with a lower interest rate, fewer penalties or other benefits, such as reward points or travel miles.

**Bank** An organization, usually a corporation, chartered by a state or federal government, which does most or all of the following: receives demand deposits and time deposits, honors instruments drawn on them, and pays interest on them; discounts notes, makes loans, and invests in securities; collects checks, drafts, and notes; certifies depositor's checks; and issues drafts and cashier's checks.

**Bank Account** An account held by an investor at a financial institution. The financial institution holds the money for the investor. Unlike a brokerage account, which allows an investor to buy and sell securities, a bank account is used for savings. Types of bank accounts include savings accounts and checking accounts.

**Banking** In general terms, the business activity of accepting and safeguarding money owned by other individuals and entities, and then lending out this money in order to earn a profit.

**Bankruptcy** A legal proceeding involving a person or business that is unable to repay outstanding debts.

**Before-Tax Rate of Return** The rate of return generated by an investment before its owner pays taxes on the earnings.

**Board of Governors** The governing body of the Federal Reserve System, which is responsible for U.S. monetary policy. Of the seven members, five are appointed by the President of the United States and confirmed by the Senate to serve a 14 year term, while the Chairman and Vice Chairman are appointed by the President and confirmed by the Senate to serve four year terms.

**Bond** A debt instrument issued for a period of more than one year with the purpose of raising capital by borrowing. The Federal government, states, cities, corporations, and many other types of institutions sell bonds. Generally, a bond is a promise to repay the principal along with interest (coupons) on a specified date (maturity).

**Bond Issuer** The entity that borrows money by issuing a bond.

**Bond Market** The market in which the issuance and trading of debt securities occurs.

**Bond Rating** A system that evaluates the possibility of default by a bond issuer. The higher a bond's rating, the safer it is.

**Bondholder:** An investor who purchases a bond. Bondholders are creditors to the issuer.

**Bonds:** Bonds are contracts through which governments and corporations (the issuer) borrow money from investors (the bondholders).

**Bonus** Gratuity given as gift, or compensation earned as reward upon achieving a goal or milestone.

**Brokerage Fee** A fee charged by an agent, or agent's company to facilitate transactions between buyers and sellers.

**Budget** A detailed schedule of financial activity that includes a government, company or individual's income and expenses expected during certain period in the future.

**Budgeting** Process of expressing quantified resource requirements (amount of capital, amount of material, number of people) into time-phased goals and milestones.

**Capital** Financial resources available for use.

**Capital Gain** The amount by which the sale price of an investment exceeds its initial purchase price.

**Capital Gain Tax** The tax levied on profits from the sale of capital assets.

**Capital Loss** The difference between the net cost of a security and the net sales price, if the security is sold at a loss.

**Cash Advance** A loan taken out against a line of credit or credit card, typically imposing higher-than-normal interest charges.

**Cash Rebate** Partial refund for a purchase that is paid in actual currency.

**Cash Flow** Incomings and outgoings of cash, representing the operating activities of an organization.

**Certificate Of Deposit (CD)** A savings account that pays high interest as a set rate for a set period of time.

**Check** A negotiable instrument drawn against deposited funds, to pay a specified amount of money to a specific person upon demand. Examples include bills of exchange and drafts.

**Checking Account** A deposit account at a financial institution that allows the holder to write checks against deposited funds.

**Closed-End Credit** A one-time borrowing that has a specified loan amount and is for a specific purpose. Closed-end credit that is repaid with equal periodic payments is also referred to as installment credit.

**Closing Costs** Expenses that are related to completing a real estate transaction but separate from the actual price of the property.

**Commercial Bank** Banks that offer a broad range of deposit accounts, including checking, savings and time deposits, and extends loans to individuals and businesses.

**Commercial Real Estate** Real estate that is purchased for income-producing purposes. Owners of commercial real estate lease space in their properties to tenants and collect rent.

**Compounding** The process of accumulating the time value of money forward in time. For example, interest earned in one period earns additional interest during each subsequent time period.

**Condominium (Condo)** A form of collective ownership of real property. In a condominium, the individual property owners typically own the airspace within their own walls. The structures themselves, the land, and the amenities built on the land, are owned in common with the other members of the association.

**Conglomerates** A corporation consisting of several companies in different businesses. Such a structure allows for diversification of business risks, but the lack of focus can make managing the diverse businesses more difficult.

**Consumer Credit** The use of credit for personal needs by individuals and families, in contrast to credit used by businesses and governments.

**Corporate Bond** Debt obligations issued by corporations.

**Credit** An arrangement to receive cash, goods or services now but pay for them later.

**Credit Bureau** An agency that researches and collects individual credit information and sells it for a fee to creditors so they can make a decision on granting loans. Typical clients include banks, mortgage lenders, credit card companies and other financing companies. Also commonly referred to as consumer reporting agency or credit reporting agency.

**Credit Card** Any card that may be used repeatedly to borrow money or buy products and services on credit. Issued by banks, savings and loans, retail stores, and other businesses.

**Credit Limit** The maximum amount a credit card company will allow someone to borrow on a single card.

**Credit Risk** The possibility that a bond issuer will default, by failing to repay principal and interest in a timely manner. Bonds issued by the federal government, for the most part, are immune from default. Bonds issued by corporations are more likely to be defaulted on, since companies often go bankrupt. Municipalities occasionally default as well, although it is much less common.

**Credit Score** A statistically derived numeric expression of a person's creditworthiness that is used by lenders to assess the likelihood that a person will repay his or her debts. A credit score is based on, among other things, a person's past credit history. It is a number between 300 and 850 - the higher the number, the more creditworthy the person is deemed to be.

**Credit Union:** A not-for-profit institution that offers financial services, similar to those offered by a commercial bank, to its members.

**Creditor** An entity (person or institution) that extends credit by giving another entity permission to borrow money if it is paid back at a later date.

**Currency** Any form of money that is in public circulation. Currency includes both hard money (coins) and soft money (paper money).

**Debit** An accounting entry which results in either an increase in assets or a decrease in liabilities on a company's balance sheet or in your bank account.

**Debit Card** Bank card used in cash transactions, but which is not a credit card. In a debit card transaction, the amount of a purchase is withdrawn from the available balance in the cardholder's account. If the available funds are insufficient, the transaction is not completed.

**Debt** An amount owed to a person or organization for funds borrowed. Debt can be represented by a loan note, bond, mortgage or other form stating repayment terms and, if applicable, interest requirements.

**Default** The situation where a borrower fails to make timely payment of interest and/or principal on a loan.

**Deficit** The amount by which a government, company or individual's spending exceeds its income over a period of time.

**Deposit** This type of deposit is identical to the money an investor transfers into a bank's savings or checking accounts.

**Depository Institution** Bank, building society, credit union, or other financial institution that solicits and accepts savings of the general public as demand deposits or time deposits, and pays a fixed or variable rate of interest.

**Derivative** A financial contract whose value is based on, or "derived" from, a traditional security (such as a stock or bond), an asset (such as a commodity), or a market index.

**Direct Deposit** Automatic transfer of salaries, wages, rents, benefits, or other such sums, directly to the account of an employee or beneficiary.

**Discount Points** A one-time fee paid by the borrower to reduce the interest rate on a mortgage. Each point is one percent of the amount borrowed.

**Dividends** Periodic payments of a company's earnings to its shareholders.

**Dow Jones Industrial Average** A stock index that is based on the prices of 30 large companies. It is the oldest and most quoted stock market indicator.

**Down Payment** A type of payment made in cash during the onset of the purchase of a house. The payment typically represents only a percentage of the full purchase price.

**Economic** Pertaining to the economy.

**Economy** Activities related to the production and distribution of goods and services in a particular geographic region.

**Effective Rate of Return** A measure of the time value of money that fully reflects the effects of compounding.

**Equity** Ownership interest in a corporation in the form of common stock or preferred stock.

**Expense** A particular payment of money.

**Expenditure** A payment, or the promise of a future payment.

**Federal Deposit Insurance Corporation (FDIC)** The U.S. corporation insuring deposits in the U.S. against bank failure. The FDIC was created in 1933 to maintain public confidence and encourage stability in the financial system through the promotion of sound banking practices.

**Federal Reserve System** The central bank of the US, established in 1913. It is governed by the Board of Governors located in Washington, D.C. and includes 12 regional Federal Reserve Banks. The system is authorized to implement the government's economic and financial policy as well as to regulate the banking industry.

**FICO Score** A number that summarizes an individual's history of using credit. It was developed by Fair Isaac Corporation (FICO) and has a range of 300 to 850.

**Finance** A subject concerned with determining value and making decisions. The finance function allocates resources, including the acquiring, investing and managing of resources.

**Financial Adviser** A professional offering financial advice to clients for a fee and/or commission.

**Financial Crisis** An economic recession or depression caused by a lack of necessary liquidity in financial institutions. A financial crisis may be caused by natural disasters, negative economic news, or some other event with a significant financial impact. Financial crises tend to cause decreases in business activities, leading to a self-reinforcing intensification of the crisis.

**Financial Institution** Institution which collects funds from the public and places them in financial assets, such as deposits, loans, and bonds, rather than tangible property.

**Financial Literacy** Possessing the knowledge necessary to understand concepts related to finance. These ideas may include balancing a checkbook, understanding interest rates, employee benefits, or how the stock market works.



**Financial System** The financial system is the system that enables lenders and borrowers to exchange funds.

**Financing** The act of providing funds for business activities, making purchases or investing. Financial institutions and banks are in the business of financing as they provide capital to businesses, consumers and investors to help them achieve their goals.

**Fiscal** Pertaining to money, especially government taxation and spending policies.

**Fiscal Policy** Decisions by the President and Congress, usually relating to taxation and government spending, with the goals of full employment, price stability, and economic growth.

**Fiscal Year** Accounting period that can start on any day of a calendar year but has twelve consecutive months (52 consecutive weeks) at the end of which account books are closed, profit or loss is computed, and financial reports are prepared for filing. It may or may not match a calendar year.

**Fixed-Rate Mortgage (FRM)** A mortgage whose interest rate remains constant over the entire life of the loan.

**Future Value (FV)** The value of an asset at a specific date. It measures the nominal future sum of money that a given sum of money is "worth" at a specified time in the future assuming a certain interest rate, or more generally, rate of return; it is the present value multiplied by the accumulation function. The value does not include corrections for inflation or other factors that affect the true value of money in the future.

**Hazard Insurance** Insurance coverage on real estate that compensates the owner for damage to a property caused by fire, wind or other hazards.

**Home-Equity Loan** A consumer loan secured by a second mortgage, allowing home owners to borrow against their equity in the home.

**Hybrid Fund** Mutual fund that invests in both stocks and bonds. A hybrid fund offers investors the opportunity to diversify their portfolio with a single investment vehicle. The ratio of stocks and bonds may remain fixed or vary over time.

**Hybrid Mortgage** A mortgage whose interest rate stays the same for a number of years and then changes periodically. For example, the interest rate on a 7/1 mortgage stays constant for seven years and then changes every year.

**Identity Theft** The situation where a person's identification (including name, social security number and/or any account number) is used or transferred by someone else for unlawful activities.

**Income** Money earned through employment or investments.

**Income Tax** A state or federal government's levy on individuals as personal income tax and on the earnings of corporations as corporate income tax.

**Incremental Cost** The cost associated with one additional unit of production, or a specific decision.

**Individual Retirement Account (IRA)** A special investment account that allows the owner to defer paying taxes on money saved for retirement.

**Industry** A classification that refers to a group of companies that are related in terms of their primary business activities.

**Insurance** A promise of compensation for specific potential future losses in exchange for a periodic payment. Insurance is designed to protect the financial well-being of an individual, company or other entity in the case of unexpected loss.

**Interest** The price paid for borrowing money. It is expressed as a percentage rate over a period of time and reflects the rate of exchange of present consumption for future consumption.

**Interest-Only Mortgage** A mortgage whose monthly payments do not include principal repayment. As a result, the mortgage balance stays constant.

**Introductory Rate** An interest rate that's usually below-market and is offered for the initial billing cycle(s) of the credit card. Introductory rates commonly apply only to balance transfers and cash advances, but they can also apply to purchases. The introductory rate expires after a certain period of time; however Federal law requires introductory rates to last at least six months.

**Investment** The creation of more money through the use of capital.

**Investment Banking** Division of banking encompassing business entities dealing with creation of capital for other companies. In addition to acting as agents or underwriters for companies in the process of issuing securities, investment banks also advise companies on matters related to the issue and placement of stock.

**Investment Grade Bonds** Bonds that are assigned a rating in the top four categories by commercial credit rating companies.

**Investment Income** Income coming from interest payments, dividends, capital gains collected upon the sale of a security or other assets.

**Junk Bonds** Bonds whose ratings are below investment grade (typically BB and below). Junk bonds have much higher risk than investment-grade bonds.

**Lease** A written agreement under which a property owner (the landlord) allows someone else (the tenant) to use the property for a specified period of time in exchange for a monetary benefit (the rent).

**Lend** To provide money temporarily on the condition that it or its equivalent will be returned, often with an interest fee.

**Line of Credit** The maximum amount you can borrow using a specific open-end credit.

**Loan** The act of giving money, property or other material goods to another party in exchange for future repayment of the principal amount along with interest or other finance charges.

**Loss** A reduction in the value of an investment.

**Maturity** The date on which a debt becomes due for payment.

**Median Home Price** The midpoint of an ordered array of actual transaction prices of homes. This is a commonly used market indicator of housing value.

**Monetary Policy** The actions of a central bank, currency board or other regulatory committee that determine the size and rate of growth of the money supply, which in turn affects interest rates. Monetary policy is maintained through actions such as increasing the interest rate, or changing the amount of money banks need to keep in the vault (bank reserves).

**Monetary System** Set of mechanisms by which a government provides money (cash) in a country's economy. It usually consists of a mint, central bank, and commercial banks.

**Money Market Account** A savings account that offers the competitive rate of interest (real rate) in exchange for larger-than-normal deposits.

**Money Supply** The entire quantity of bills, coins, loans, credit and other liquid instruments in a country's economy.

**Mortgage** A loan that uses real estate as collateral for the repayment of the loan.

**Mortgage Bank** A bank specializes in facilitating real estate transactions by bringing borrowers and lenders together.

**Mortgage Banking** The packaging of mortgage loans for sale to investors.

**Mortgage Broker** A firm or individual who solicits and takes a mortgage application, and later sells it to a lender for a commission.

**Municipal Bond** Debt obligations of State or local governments to pay for special projects such as highways or sewers.

**Mutual Funds** An entity that pools money from many investors and invests it in various investment opportunities.

**Mutual Savings Banks** A savings bank that is owned by, and operated for the benefit of, its depositors.

**National Association of Securities Dealers Automatic Quotation System (NASDAQ)** An electronic quotation system that provides price quotations to market participants about the more actively traded common stock issues in the OTC market. About 4000 common stock issues are included in the Nasdaq system.

**NASDAQ Composite Index** A stock index that is based on the prices of all stocks traded on the NASDAQ system.

**Needs** Things you must have in order to survive or meet the minimum living standards.

**New York Stock Exchange (NYSE)** The largest stock exchange in the U.S., located on Wall Street in New York City. The NYSE is responsible for setting policy, supervising member activities, listing securities, overseeing the transfer of member seats, and evaluating applicants.

**Nominal Interest Rate** Published or stated interest rate on deposits, expressed in current dollars and unadjusted for compounding and the effects of inflation. After such adjustments it is called real rate of interest. Also called nominal rate of return.

**Online Banking** Computerized service that allows a bank's customers to get online with the bank via telephone lines to view the status of their account(s) and transaction history. It usually also allows them to transfer funds, pay bills, request check books, etc.

**Open-End Credit** A loan whose maximum amount is approved by the creditor but not delivered to the borrower at once. Over time, the borrower can get money from the lender (up to the maximum amount), or pay back a portion or the entire amount of the principal.

**Opportunity Cost** The cost of an activity that is measured in terms of the value of the best alternative that is not chosen.

**Origination Fee** An up-front fee charged by a lender for processing a new loan application, used as compensation for putting the loan in place.

**Pension** Post-retirement benefits that an employee might receive from some employers. A pension is essentially compensation received by the employee after he/she has retired.

**Portfolio** A grouping of financial assets such as stocks, bonds and cash.

**Present Value (PV)** The current worth of a future sum of money or stream of cash flows given a specified rate of return. Future cash flows are discounted at the discount rate, and the higher the discount rate, the lower the present value of the future cash flows. Determining the appropriate discount rate is the key to properly valuing future cash flows, whether they are earnings or obligations.

**Principal** The amount borrowed or the amount still owed on a loan, separate from interest.

**Processing Fee** Assembling and managing a mortgage transaction's records and information, including the appraisal, credit report, and employment and asset confirmation.

**Profit** The positive gain from an investment or business operation after subtracting for all expenses.

**Profitability** The ability to earn a profit.

**Property Tax** A tax levied on real property based on its use and its assessed value.

**Rate of Return** The money you earn on an investment, stated as a percentage. Calculated as the (Value Now minus the Value at the Time of Purchase) divided by the Value at the Time of Purchase.

**Real Estate** Land plus anything permanently fixed to it, including buildings, sheds and other items attached to the structure.

**Real Estate Agent** A licensed individual who provides real estate services such as showing homes, making offers and counteroffers, negotiating prices, and assisting in the closing.

**Real Estate Tax** A tax assessed by state or local governments on real estate according to its value.

**Recession** A significant decline in activity across the economy, lasting longer than a few months. It is visible in industrial production, employment, real income and wholesale-retail trade.

**Renter's Insurance** A type of home insurance that protects the holder against accidents, damages and losses that occur in a rented residence.

**Retirement Planning** The process of determining retirement income goals and the actions and decisions necessary to achieve those goals. Retirement planning includes identifying sources of income, estimating expenses, implementing a savings program and managing assets. Future cash flows are estimated to determine if the retirement income goal will be achieved.

**Revenue** For a company, this is the total amount of money received by the company for goods sold or services provided during a certain time period.

**Risk** The chance that an investment's actual return will be different than expected. Risk includes the possibility of losing some or all of the original investment.

**S&P 500** A stock index that is based on the prices of 500 large corporations.

**Sales Tax** A percentage tax on the selling price of goods and services.

**Saving Account** A deposit account at a financial institution that pays interest, but cannot be withdrawn by check writing.

**Savings and Loan Association** A financial institution that accepts savings deposits and invests the bulk of the funds received into mortgages.

**Securities** Paper certificates (definitive securities) or electronic records (book-entry securities) evidencing ownership of equity (stocks) or debt obligations (bonds).

**Shareholder** An investor who owns shares of a corporation. Shareholders are owners of the corporation.

**Single-Family Detached House** A structure constructed to accommodate living space for one family per vertical unit. In other words, no other living units will be above or below.

**Stock Market** The market in which shares are issued and traded either through exchanges or over-the-counter markets.

**Stocks** Ownership of a corporation represented by shares that are a claim on the corporation's earnings and assets.

**Surplus** The amount of a government, company or individual's income that remains after subtracting all expenses.

**Tax** A fee charged by a government on a product, income, or activity. If tax is levied directly on personal or corporate income, then it is a direct tax. If tax is levied on the price of a good or service, then it is called an indirect tax. The purpose of taxation is to finance government expenditure.

**Tax Deduction** An expense subtracted from income when calculating tax liability. With a 30% tax rate, each dollar of tax deduction reduces taxable income by one dollar and, thus, tax liability by 30 cents.

**The Great Recession** The recession that started on December 2007. Generally, the Great Recession lasted longer and was more severe than prior recessions.

**Time Value of Money** The idea that a dollar today is worth more than a dollar in the future.

**Townhome** A dwelling characterized by two-story construction with a common wall or walls bordering neighboring dwellings. Townhome ownership sometimes differs from condominium ownership in that the townhome owner owns the physical structure rather than just the airspace between the walls, floor, and ceiling.

**Transaction Costs** Costs incurred when buying or selling assets, such as commissions and the spread.

**Treasury Bonds** Debt obligations of the US Treasury that have maturities of 10 years or more.

**U.S. Mint** The primary producer of the coin currency of the United States. The mint has the consent of the government to manufacture coins to be used as legal tender. Along with production, the mint is also responsible for the distribution of the currency, protection of the mint's gold and silver assets, and overseeing its various production facilities.

**Underwriting Fee** Underwriting fees are monies collected by underwriters for performing underwriting mortgage services.

**U.S. Bureau Of Engraving And Printing (BEP)** A U.S. government agency responsible for printing the paper currency, Treasury securities and specialty documents for the United States. The Bureau of Engraving and Printing (BEP) is part of the U.S. Department of the Treasury. The BEP designs all paper currency, which it sends to the Federal Reserve for use in the money supply.

**U.S. Treasury** The department of the U.S. government that issues Treasury securities.

**Volatility** A measure of the dispersion of returns for a given security or market index. Commonly, the higher the volatility, the riskier the security.

**Wants** Discretionary expenses that may be delayed or substituted without affecting your ability to survive.