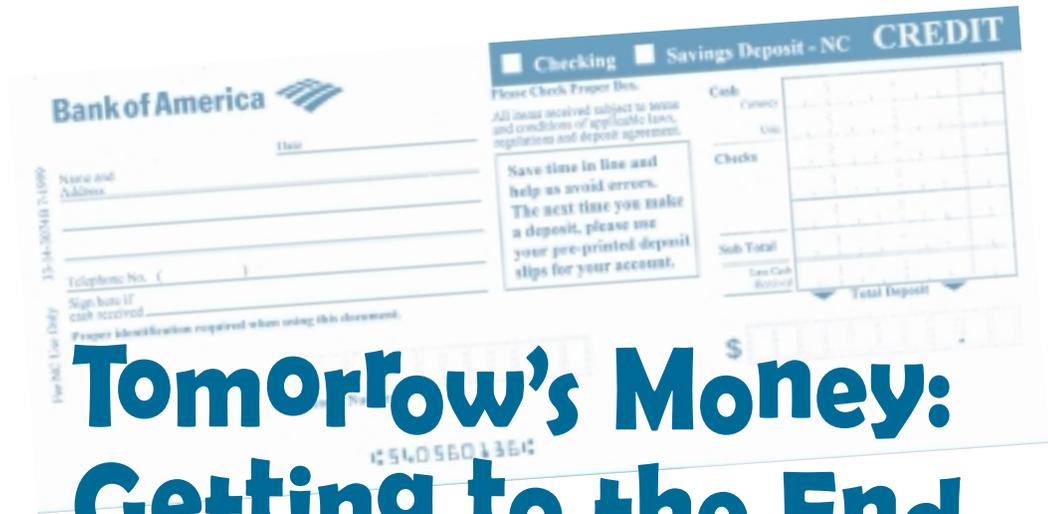


THEME

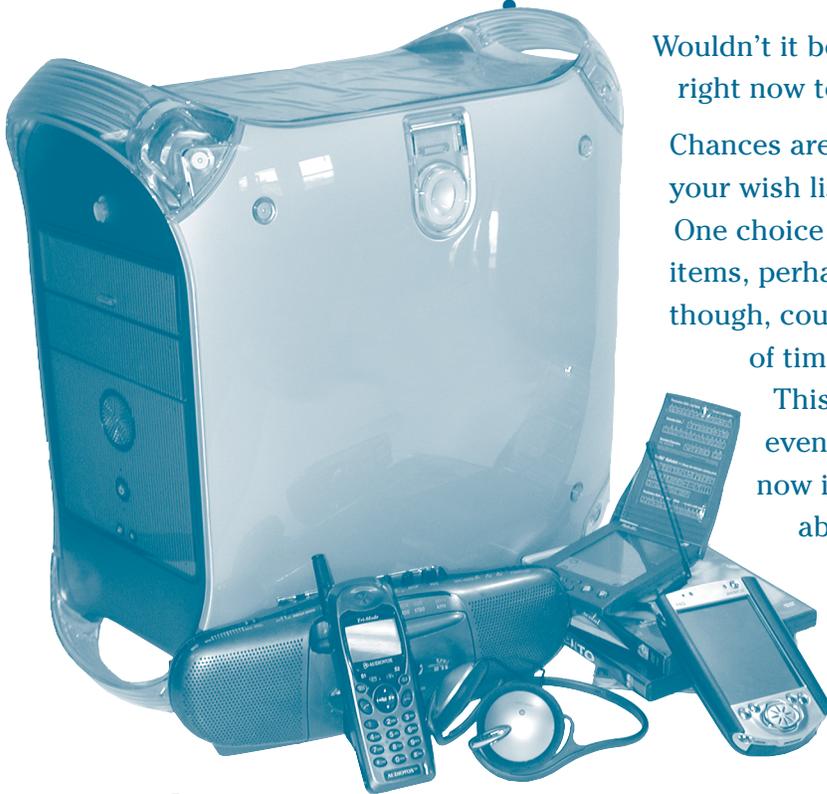
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Tomorrow's Money: Getting to the End of the Rainbow (Saving)

● Introduction

**If you could have a wish list, what would it include?
A mega stereo system? A new wardrobe? A computer?
All of the above?**



Wouldn't it be great to have all the money you needed right now to buy all the things you want?

Chances are, though, you can't afford all the things on your wish list. That's why you have to make choices.

One choice might be simply to do without one of the items, perhaps the stereo system. Another choice, though, could be to save part of your income for a period of time until you have enough to pay for the stereo.

This might take a few weeks or months, or maybe even a year, but by choosing to give up spending now in order to save for the future, you would be able to buy that stereo eventually.

LESSON 6

Why Save?



Warm-Up

In order to be successful at saving so that they can buy the things they want most, people usually set goals. Those who stick with their goals find satisfaction in two ways. They get more of the goods and services they want most. They also feel a lot of self-satisfaction and a sense of accomplishment—like the feeling a sprinter gets who wins a big race, or like a student who gets an A on a difficult test.

This lesson introduces you to the importance of setting saving goals and investing for the future. Some goals may be achieved quickly; others will take longer. The good news is: if you consider your options carefully, you'll probably make the right decisions, decisions that can help you reach the goals you have set.



MUSCLE DEVELOPERS

Learn these ideas, practice them, and develop your financial fitness muscles.

- ✓ Saving can help you get the things you want most.
- ✓ Saving goals can be short-, medium- or long-term, depending on what you're saving for and how much you can save each period (week, month or year).
- ✓ When you save for the future, you give up the chance to spend now.
- ✓ The best spending alternative you give up when you save is your opportunity cost.
- ✓ Because resources are scarce, you have to make choices.
- ✓ People choose to save and invest so that they can have the things they want in the future.

- No matter how little or how much money you want to save, you'll have to give up buying something now in order to save and invest for the future. The thing you give up is your *opportunity cost*.
- If you save your loose change until you have a dollar to buy a large candy bar, you might be giving up the opportunity to buy gum from the gum ball machine now and then. In that case, the gum balls are your opportunity cost.
- If you save \$10 a month for six months until you have \$60 for a concert ticket, you might give up the chance to spend money at an amusement park one month, buy a music CD the next month, or treat your brother to a pizza the third month. In every case, the best spending alternative you give up when you decide to save is your opportunity cost.
- You may find it difficult to imagine saving for five or six years to buy something you really want. That's a long time when you're 12 or 13. In fact, it's nearly half your life! But lots of people set long-term goals for themselves. They plan for things that are three, five, or even ten years in the future.

FITNESS VOCABULARY

Short-term goals – Goals you plan to achieve in fewer than two months.

Medium-term goals – Goals you plan to achieve in two months to three years.

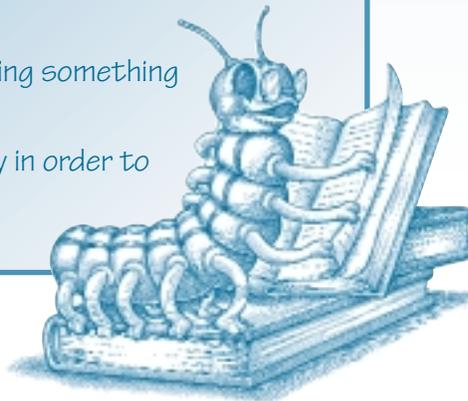
Long-term goals – Goals you plan to achieve in more than three years.

Opportunity cost – The value of the next-best alternative given up when a choice is made.

Scarcity – The economic problem that exists because of unlimited wants and limited resources.

Saving – The act of putting something aside for later use.

Investing – Saving money in order to earn a financial return.



Showing Your Strength



If you know the answers to these questions, you are developing some financial muscle.

1

Why is it important to set goals? *(Goals are end points that act as incentives. They help you stay focused on saving so you can buy the things you want most.)*

2

When should you set short-, medium-, or long-term savings goals? *(Set a short-term savings goal if you think it will take you fewer than two months to save enough money. Set a medium-term saving goal for one between two months and three years. If you need to save for more than three years, set a long-term goal.)*

3

What is the opportunity cost of saving? *(Saving for some future goal means giving up the chance to spend now. Postponing consumption allows people to save for the purchase of future goods and services.)*

4

What is the difference between saving and investing? *(Saving is the act of setting something aside. You can save sea shells, rocks, pennies or even dollar bills in a jar at home. Investing means earning a financial return. Putting money in a bank savings account, bond, or stock is investing. Your intent is to earn a return on your money.)*

EXERCISE
6.1

How To Reach a Goal

Read the stories below and calculate whether students at Elm Valley Middle School can reach their goals. Identify whether the goals are short- (up to two months), medium- (two months to three years), or long-term (more than three years). If any of the students in the stories cannot reach his or her goal, suggest some ways he or she could reach the saving goal.

1 José tutors some sixth graders in math and earns \$36 a week. He always puts \$15 in his college fund and uses the rest for everyday expenses.

At a jewelry store downtown, he spotted a bracelet that he'd like to buy for his mother's 40th birthday, three years from now. It was a real beauty, but the price was \$2,100. If José puts aside \$15 a week for college and spends \$8 a week on himself, how long will it take him to save enough to buy the bracelet? (Do not consider any interest he might be earning on his savings.) Will it be a short-, medium- or long-term goal? Explain why. If he cannot save enough according to the present schedule, suggest some ways he could reach the goal.

2 Lauren earns \$17 every Saturday baby-sitting for her neighbors. She also receives an allowance of \$10 per week for the chores she regularly does at home. Her parents have a rule that she must put half of her allowance in her college fund, a savings account from which she never withdraws any money.

Lauren plays tenor saxophone in the school band and has been renting an instrument from the music department. Last week Lauren saw a used sax at a music store in the mall. She'd really like to buy it, but it costs \$175. Her parents told her that if she saves the \$175, they'd pay the sales tax for her.

If Lauren continues to contribute to her college fund, saves every penny she earns, including her allowance, how long will it take her to save enough to buy the sax? Will it be a short-, medium-, or long-term goal? Explain why. If she cannot save enough according to the present schedule, suggest some ways she could reach the goal.

3 Darnell works in his father's office on Mondays, Wednesdays, and Fridays and earns \$75 a week. He saves \$20 a week in his college fund, gives \$5 a week to charity, and spends \$8 a week on snacks and entertainment.

Recently Darnell became interested in golf, and he wants to become a better player. Golf lessons at a local park cost \$300 and begin in six weeks. Is this a short-, medium-, or long-term goal? If Darnell continues his saving, spending and sharing habits, will he be able to save enough money in time to attend the first lesson?

Explain why. If not, what could he change?



EXERCISE

6.2

Rolling for a Goal: A Game for Two or More Players

This game involves setting a saving goal, and trying to meet it. Two or more people can play the game. Before starting the game, the teacher will provide the game cards. Shuffle them and place them in a pile. You will need two dice, pencil, paper, and the score sheet on the next page. Choose a person to go first.

1

Draw a card from the pile. This is your saving goal. Write this amount on line A of the score sheet.

2

Throw one die and multiply the number on the die by \$10. Write this amount as the amount you can save each month on line B.

3

Calculate how many months you'll have to save in order to reach your goal, and write the answer on line C. (line A \div line B)

4

Identify the goal as either short- (S), medium- (M), or long-term (L) and write on line D.

5

Roll two dice and multiply the two numbers to determine the number of months during which you will be able to save. Enter that number on line E.

6

Will you be able to reach your goal? Compare the number on line E with the one on line C. If E is greater than or equal to C, give yourself 2 points on line F; if not, give yourself 0 points on line F.

7

Play four rounds. Add the numbers in Column F. The person with the most points wins. If winning scores are tied, those players can play additional rounds until there is one winner.



Score Sheet for Rolling for a Goal

	Game #1	Game #2	Game #3	Game #4
A Saving goal				
B Amount saved each month (\$10 x roll of one die).				
C Number of months needed to meet goal ($A \div B$).				
D Short- (S), Medium- (M), or Long-term goal (L).				
E Number of months you will be able to save. (Roll of two dice multiplied together.)				
F Yes, I will be able to meet my saving goal. (Give yourself 2 points.) No, I will not be able to meet my saving goal. (0 points.)				
Totals				

ASSESSMENT



Short-, Medium-, and Long-Term Goals

The chart below shows how much money six people want to save. Each person is able to save a different amount each month. Calculate how long each person must save to reach his/her goal. Then indicate by writing S, M, or L, if it is a short-, medium-, or long-term goal.

Person	Amount to be Saved	Amount Saved Each Month	How Many Months	How Many Years	Short-, Medium-, or Long-Term
Abby	\$ 780.00	\$20.00			
Ben	25.00	15.00			
Cherise	700.00	35.00			
Danuka	800.00	70.00			
Emilio	90.00	50.00			
Festis	2,900.00	75.00			

Complete the following exercise about Cherise based on what you calculated in the above grid.

Cherise saves \$35 every month. It will take her _____ months to reach her saving goal of \$700. During those months, she could be spending her money, but instead she sticks to her saving plan. That means that every month she gives up some goods or service that she could have bought with the \$35 she is saving.

● In the blanks below, list the opportunity costs Cherise might incur during the
 ● months she saves toward her goal. (Be creative. Think of opportunity costs that
 ● could be associated with the months. For example, in April her opportunity cost
 ● might be a new raincoat for April showers).
 ●

Month	Opportunity Cost	Explanation
January	_____	_____
February	_____	_____
March	_____	_____
April	_____	_____
May	_____	_____
June	_____	_____
July	_____	_____
August	_____	_____
September	_____	_____
October	_____	_____
November	_____	_____
December	_____	_____

LESSON 7

Types of Savings Plans

Warm-Up

If you saved \$100 under your mattress, in 50 years you'd still have \$100, right?

Well, yes and no. Even though you would still have \$100 in your hand, you couldn't buy as much now as you could have bought 50 years ago, because things tend to get more expensive over time. After all, back in the 1950s you

could see a movie for a quarter, and the price of a phone call was only five cents. Now things cost more.

That's called *inflation*: a general increase in the prices of goods and services. In order to “keep up with inflation,” people don't save their money under a mattress. They have a number of different options when it comes to saving. One option is a bank or another savings institution.

Most financial institutions offer a number of ways to save and to earn interest. In this lesson you will learn about some of them: regular savings accounts, money market deposit accounts, certificates of deposit (CDs), and United States Savings Bonds. All these savings plans offer safety and liquidity for your money, and they pay you interest, too. In addition, each has its own advantages and disadvantages. It's important to understand all the pros and cons when you choose where to save your money.

FITNESS VOCABULARY

Statement savings account – an interest-bearing account that can be opened with a small amount of money; funds can easily be deposited or withdrawn.

Money market account – an interest-bearing account that may require higher minimum balances than regular accounts. Deposits can be added at any time, but withdrawals may be limited without paying a penalty.

Certificate of deposit (CD) – an interest-bearing account that requires a higher minimum deposit and a higher minimum balance than regular accounts and has a specific time limit (6 months, 1 year, 5 years, etc.). If deposits are withdrawn before the specified time, there is a penalty.

United States Savings Bond – technically, a loan to the U.S. government upon which you earn interest. There are two major types of U.S. Savings Bonds. One kind (Series EE) can be purchased for half their face value; for example, a \$100 bond costs \$50. When the bonds mature they can be redeemed at face value. Another kind (Series I) is sold at its face value, (you would pay \$100 for a \$100 bond,) and earns interest over the time it is held.

Opportunity cost – the next-best alternative that is given up when a choice is made.

Inflation – a general increase in the prices of goods and services.



Learn these ideas, practice them, and develop your financial fitness muscles.

MUSCLE DEVELOPERS



- ✓ Saving can help you get the things you want most.
- ✓ Because a savings account earns interest, it can help you keep pace with inflation.
- ✓ The U.S. government insures money in a regular savings account in most financial institutions. Your money is safe and secure, and it earns interest.
- ✓ Savers need to examine carefully the advantages and disadvantages of different savings options.
- ✓ Some options are better at different stages in your life.
- ✓ Many people make a habit of buying U.S. Savings Bonds. In fact, a lot of businesses offer a “payroll savings plan” that deducts a certain amount from every paycheck for the worker to automatically buy bonds.
- ✓ If you “cash in” a series EE bond before its maturity date, it will be worth less than its face value. You can find out how much a U.S. Savings Bond is worth by going to this web site: www.SAVINGSBONDS.GOV
- ✓ When you decide to save for the future, you have to give up some spending in the present. The thing you give up is your opportunity cost.
- ✓ Because of inflation, most goods and services cost more now than they did 50 or even 10 years ago. Inflation is usually expressed as a percentage. For example, if the inflation rate is 10% a year, a product that cost \$100 last year will cost \$110 this year. By saving money in interest-bearing accounts, the bad effects of inflation can be reduced.

Showing Your Strength



If you know the answers to these questions, you are developing some financial muscles.

1

What are the differences and similarities between a regular savings account and a CD? *(Both are ways to save, and the U.S. government insures both, so they are very safe and secure. However, a regular savings account allows deposits and withdrawals at any time. A CD has a higher interest rate but has a time limit; if you want to withdraw money ahead of time, you will lose some of the earned interest.)*

2

What’s the opportunity cost of buying a \$100 U.S. Savings Bond? *(A \$100 Series EE bond costs \$50, so the opportunity cost is the next best alternative you could have bought for \$50 instead of buying the bond.)*

EXERCISE

7.1

Types of Guaranteed Savings Instruments

All of the savings methods described here are guaranteed in most commercial banks, savings and loan associations, savings banks, and credit unions. This means you will not lose the money you have deposited. The U.S. federal government guarantees an individual's deposits up to \$100,000 per banking institution through the Federal Deposit Insurance Corporation (FDIC). The National Credit Union Association (NCUA) has the same type of insurance for credit unions that the FDIC has for the other three institutions. The U.S. Savings Bonds are not guaranteed by any insurance; bonds are debts of the U.S. Treasury. The federal government, though, stands behind the payment of these debts so they are quite safe.

Savings Accounts

This is a traditional way to save money in a bank. As long as you keep money in your account, the bank pays you interest and your money grows. The most common kind of savings account is a **statement savings account**. For this account, the bank sends you a statement that details all of your deposits and withdrawals and the interest you've earned either once a month or once a quarter (every three months). Interest rates are usually lower than rates for other types of savings choices, but you can open an account with very little money. You can also withdraw your money whenever you like.



Savings Account **Advantages**

- ▲ Your money is easy to access; you do not have to leave it in the bank for a specific amount of time. You can withdraw it without any penalty.
- ▲ The interest rate paid on the deposit can increase as general interest rates increase.
- ▲ You can open the account with a small amount of money.



Savings Account **Disadvantages**

- ▲ Traditional savings accounts pay lower interest rates than other saving plans.
- ▲ Interest rates can go down as general interest rates go down.
- ▲ The bank may charge a service fee if the account balance is below a certain minimum.

Certificates of Deposit

The Certificate of Deposit, also known as a CD, is a specific amount of money that you deposit in the bank for a specific amount of time. The time period may be 6 months to several years, and the interest rate you get is unchanged for that time. For example, you might put \$500 in a CD for six months or one year. Generally, the longer the time you agree to, the higher the interest rate. If you withdraw the money before the agreed time, you lose some of the interest you have earned.



CD **Advantages**

- ▲ Banks pay higher interest for money invested in CDs than they do on traditional savings accounts at the time the CD is issued. Bankers know you probably will not withdraw your money for the agreed upon amount of time because of the penalty (lost interest) if you do.
- ▲ The locked-in interest rate can be advantageous if general interest rates go down during the time period of the CD.



CD **Disadvantages**

- ▲ You will pay a substantial penalty if you withdraw your money early.
- ▲ The locked-in interest rate can be disadvantageous if interest rates increase during the time period of the CD.
- ▲ Generally, a minimum, such as \$500, is required to open a CD.

Money Market Deposit Account

Money market deposit accounts are similar to checking accounts, because you can write checks on money market deposit accounts. They are insured through the Federal Deposit Insurance Corporation, a government agency. Do not confuse money market *deposit* accounts with money market accounts (notice that the word “deposit” is missing from the latter.) Money market accounts contain investments that are not insured by the FDIC. Many of these are offered by a brokerage firm.

An increasing number of money market deposit accounts are combined with a statement checking account. The interest paid on these accounts could be less than a statement savings account, especially when there is no limitation on the number of checks written. In other cases, the interest rate may be higher than what is found on statement savings accounts. It varies from one financial institution to another.



Money Market Deposit Account **Advantages**

- ▲ Money market deposit accounts allow periodic withdrawals, just like traditional savings accounts, with no penalty. It is very convenient to be able to write a check to withdraw money from this kind of savings account.
- ▲ Interest paid on savings increases as the general interest rate for credit increases.
- ▲ Money market deposit accounts may pay a higher rate of interest than regular savings accounts.



Money Market Deposit Account **Disadvantages**

- ▲ Money market accounts require a significant minimum balance, often \$1,000 or higher.
- ▲ The number of checks you can write without extra charges may be very limited.
- ▲ The interest rate goes down as the general interest rate goes down.
- ▲ The interest rate may be lower than a savings account.

United States Savings Bonds

Savings bonds are debt instruments (loans) issued by the United States Government. The person who buys the bond is the lender and the government is the borrower. Some savings bonds (Series EE) are purchased for one-half their face value and are later cashed at face value. Others (Series I) are purchased at face value.



U.S. Savings Bonds **Advantages**

- ▲ Savings bonds can be purchased for as little as \$25 (a \$50 series EE bond).
- ▲ Savings bonds generally pay a higher rate of interest than a savings account.

- ▲ Interest rates increase as the general interest rate increases.
- ▲ Savers may not have to pay state and local income taxes on interest earned on government savings bonds.
- ▲ Parents who use savings bonds for their child’s college education also enjoy a tax advantage.



U.S. Savings Bonds **Disadvantages**

- ▲ There can be a penalty for withdrawal of money from the bonds before maturity. The penalty varies with the type of U. S. Savings Bond that is purchased and when it is redeemed. This means the saver will lose a certain amount of interest already earned.
- ▲ Interest rates of a savings bond can go down if general interest rates go down.

After you have read all about savings instruments, decide where you should put your savings in the following situations:

1

You have savings of \$100 that you may need within two months.

2

You have savings of \$1,000 that you may need within three years.

3

You have savings of \$1,000 that you may need within three months.

4

You have savings of \$10,000 but you wish to make periodic withdrawals. _____

5

You have savings of \$1,000 that you will need in three years. You believe the interest rate will be decreasing in the next couple of years. _____

6

A couple receives \$2,000 from family members on the birth of their baby. The parents want to put it toward their newborn’s college education. _____

EXERCISE
7.2

Savings Plans in My Community

Saving instrument	Minimum balance or deposit	Interest rate	Penalty for withdrawal	Fees
Statement savings account				
6-month CD				
12-month CD				
24-month CD				
Money market deposit account				
U.S. Savings Bond Series EE				
U.S. Savings Bond Series I				

Name of bank or institution _____

Where did you get this information? (For example, an interview of a bank representative, from the internet, or from a newspaper.) _____

Are any of the accounts insured or bonds insured? If so, by whom and up to what amount? _____



ASSESSMENT



Types of Savings Plans

Match the best savings plan with the situation.

Options:

- A** Savings account
- B** Certificate of deposit
- C** Money market deposit account
- D** U.S. Savings Bond

Situations:

- **1** Alfredo has \$100 and wants to be able to withdraw it at any time without penalty.
- **2** Willie is eight years old and wants to save the \$25 he received for his birthday for college.
- **3** Juanita is in college. She just inherited \$5000 from Aunt Mildred. She will need it for college expenses beginning in two months.
- **4** Garth has \$10,000 in savings that he will not need for a while. He believes interest rates will be going down in the next year.
- **5** Kari has \$2000 in savings. She wants to earn the most interest possible before she needs it for college in five years. She believes that interest rates will increase in the next few years.

LESSON 8

Who Pays and Who Receives?

Warm-Up

A wise person once said, “You can work for your money, or you can let your money work for you.” You work for your money when you get a job and begin to earn regular paychecks. Your money works for you when you save and invest it wisely.

Investing is a good idea because the money you save earns interest. Did you ever stop to think about how much interest you can earn on your savings?

In this lesson you will learn about saving, and about the effects of *simple and compound interest* on your investment. You’ll use a quick formula, called *The Rule of 72*, to calculate how long it takes to double your money. Finally, you will find out that three things affect how hard your money can work for you:

- ▲ the amount you save
- ▲ the rate of interest
- ▲ the length of time you leave money in an account

As strange as it may seem, banks are businesses—just as grocery stores, gas stations and theaters are businesses. Every business wants to please its customers and earn a profit. Without a profit, a company will lose money and have to shut down.

Banks earn profits by lending money to borrowers. The borrowers have to pay a price for the loan; that price is called *interest*.



Where do banks get the money they lend to borrowers? That's where you come in. Based in part on the amount of deposits you and others make, banks earn money by making loans of this money to borrowers. These loans are used by the borrowers to buy cars and houses, or machines and buildings for new businesses. The bank is paid interest from its borrowers, and in turn, the bank pays you interest for using your deposited money.

In order to make a profit, the bank charges more interest to borrowers than it pays to savers. For example, borrowers might pay 8% interest, and savers might earn 5% interest. The difference is the bank's *markup*. The bank uses its markup to pay its employees, buy computers, and pay other expenses of the firm. The bank's return for taking a risk—its profit—is also part of the markup. Banking, like other enterprises, can be a risky business; after all, customers might default on a loan, which means the customer does not repay the loan. An understanding of banks and interest is important; it can help you make wise saving and investing decisions now and in the future.



FITNESS VOCABULARY

Interest – The price paid for using someone else's money.

Interest rate – The price paid for using someone else's money, expressed as a percentage.

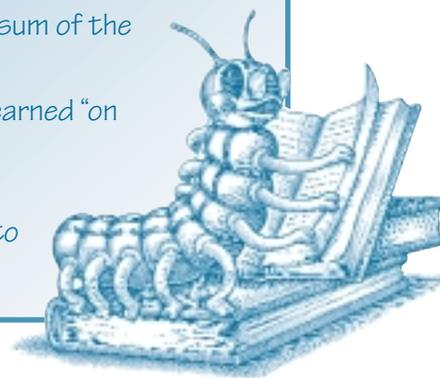
Principal – Amount deposited in savings without including interest earned.

Simple interest – Interest earned on the principal and paid out to a depositor.

Compound interest – Interest computed on the sum of the principal and previously earned interest.

Compounding – The practice of leaving interest earned "on deposit" so that it too earns interest.

Rule of 72 – A formula that can be used to calculate how long it takes for invested money to double.





MUSCLE DEVELOPERS

Learn these ideas, practice them, and develop your financial fitness muscles.

- ✓ Banks and other financial institutions bring savers and borrowers together.
- ✓ Savers provide money for borrowers, and some of the interest that borrowers pay is used to pay interest to savers.
- ✓ Banks and other financial institutions earn profits by charging higher interest to borrowers than they pay to savers.
- ✓ Interest can be simple or compound.
- ✓ Money grows more rapidly if interest is compounded.
- ✓ Understanding the effects of compound interest can help people make wise decisions about saving.

Showing Your Strength



If you know the answers to these questions, you are developing some financial muscle.

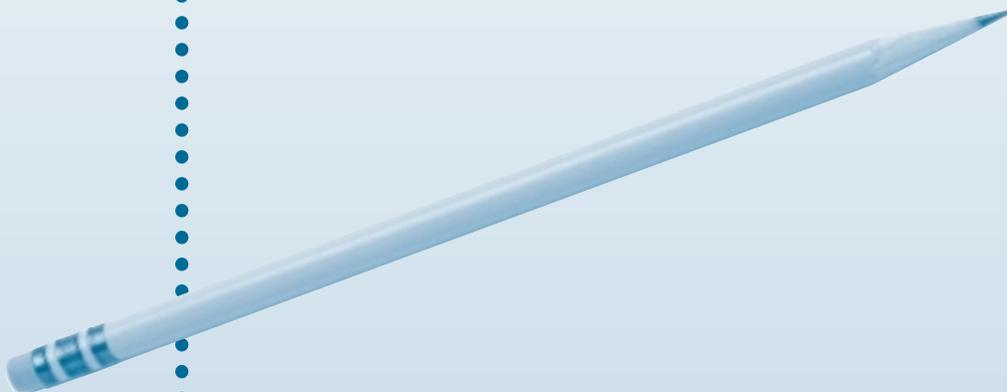
- 1** **Why do banks and other financial institutions charge higher interest rates to borrowers than they pay to savers?** *(Banks are businesses that have expenses and want to make a profit. The difference between the interest earned by loaning money to borrowers, and interest paid to depositors, pays the expenses and provides profit.)*
- 2** **What is the difference between simple and compound interest?** *(Simple interest is paid to a depositor when it is earned. Compound interest is left on deposit with the principal so that it too earns interest. With compound interest, the saver is earning interest on the principal plus interest on the interest.)*
- 3** **What factors, other than compounding, affect the extent to which money grows in a savings account?** *(Three factors are involved: the amount of money saved, the interest rate, and the length of time savings are left on deposit.)*
- 4** **What is the Rule of 72?** *(The Rule of 72 is a formula that can be used to calculate how long it takes for invested money to double. Divide 72 by the interest rate to find out how many years it will take for your money to double.)*

EXERCISE
8.1A

Simple Interest

The Simple Interest Group will use this form. Your teacher will demonstrate how to complete the form.

A	B	C	D	E	F	G
Deposit Cycle	Beginning Balance (G) from previous line	Deposited Amount	New Balance (B) + (C)	Rate of Interest	Interest earned and paid out (D) x (E)	Ending Balance (Same as D)
1	0	10	10	20%	2	10
2		10		20%		
3		10		20%		
4		10		20%		
5		10		20%		
6		10		20%		
Total						



EXERCISE
8.1B

Compound Interest

The Compound Interest Group will use this form. Your teacher will demonstrate how to complete the form.

Round decimals to the next closest whole number.

A	B	C	D	E	F	G
Deposit Cycle	Beginning Balance (G) from previous line	Deposited Amount	New Balance (B) + (C)	Rate of Interest	Interest earned and left in acct. (D) x (E)	Ending Balance (D) + (F)
1	0	10	10	20%	2	12
2		10		20%		
3		10		20%		
4		10		20%		
5		10		20%		
6		10		20%		
Total						

EXERCISE
8.2

Simple Interest: When and Why Would People Choose It?

Ms. Wirtz is a magazine editor who retired at the age of 55. She has \$60,000 in an account that earns 6 percent interest annually. Because she needs the interest for some of her living expenses, Ms. Wirtz has arranged to receive an interest check from the bank every quarter (four times a year). In this way, she has money to live on, and her \$60,000 principal doesn't decrease. What is the amount Ms. Wirtz receives every quarter?

The formula below shows how to calculate her simple interest and quarterly interest payments.

$$\text{Principal} \times \text{Annual Interest Rate} \times \text{Time} = \text{Simple Interest} \div 4 = \text{Quarterly Payment}$$

Ms. Wirtz' annual interest and quarterly payment are shown in the first line of the grid on this page. Use the formula to help you calculate simple interest, interest rate, principal, and quarterly payments in the rest of the grid and fill in the blank spaces.

Principal	×	Interest Rate	×	Time	=	Simple Interest	÷ 4 =	Quarterly Payment
\$60,000	×	6%	×	1 Year	=	\$3,600	÷ 4 =	\$900
\$20,000	×	5%	×	1 Year	=		÷ 4 =	
	×	10%	×	1 Year	=	\$1,000	÷ 4 =	
\$80,000	×		×	1 Year	=	\$5,600	÷ 4 =	
\$75,000	×	9%	×	1 Year	=		÷ 4 =	
\$125,000	×	8%	×	1 Year	=		÷ 4 =	
\$200,000	×		×	1 Year	=	\$14,000	÷ 4 =	
\$40,000	×		×	1 Year	=		÷ 4 =	\$500
	×	4%	×	1 Year	=		÷ 4 =	\$1,000
\$100,000	×		×	1 Year	=		÷ 4 =	\$2,500

NOTE: People who hold certain kinds of interest-earning accounts, such as certificates of deposit, can have payments sent to them quarterly. That way they can use their interest for daily living expenses, travel, or other purchases. Even though they spend the interest, they maintain the principal.

EXERCISE
8.3

Racing Toward a Goal

Eight members of the Slug Hill Stock Car Team have challenged each other to begin a saving plan. They know that by making annual deposits and not withdrawing any money, their interest will compound and they will reach their goals. They also know that three things affect how their savings will grow:

- ▲ How much they deposit
- ▲ What the interest rate is
- ▲ How long the money remains on deposit

Even though they will all reach their goals, they will not do so at the same time. Select one of the drivers and figure out how long it will take the driver to reach the goal. Compare your results with those of other team (class) members to determine the order in which the drivers reach the finish line. Use the following charts to calculate how long it will take your driver to reach his/her goal.

Enter your results in the list below:

1st Place _____

2nd Place _____

3rd Place _____

4th Place _____

5th Place _____

6th Place _____

7th Place _____

8th Place _____

- Calculate how long it will take your driver to reach the finish line and reach his or her goal.
- Fill in the box at the bottom of this page.

DRIVER
A Annual Deposit = \$2,000
 Rate of Return = 6%
 Goal = \$40,000

DRIVER
B Annual Deposit = \$2,000
 Rate of Return = 10%
 Goal = \$29,000

DRIVER
C Annual Deposit = \$3,000
 Rate of Return = 6%
 Goal = \$41,000

DRIVER
D Annual Deposit = \$3,000
 Rate of Return = 10%
 Goal = \$61,000

DRIVER
E Annual Deposit = \$4,000
 Rate of Return = 6%
 Goal = \$35,000

DRIVER
F Annual Deposit = \$4,000
 Rate of Return = 10%
 Goal = \$26,000

DRIVER
G Annual Deposit = \$5,000
 Rate of Return = 6%
 Goal = \$52,000

DRIVER
H Annual Deposit = \$5,000
 Rate of Return = 10%
 Goal = \$42,000



Driver _____ **wants to save \$** _____
 (insert letter)

It will take _____ **years**
to achieve the goal.

Calculation Sheet for Racing Toward a Goal*



A	B	C	D	E	F	G
Year	Beginning Balance (column G of previous year)	Annual Deposit (from box)	New Balance (B + C)	Interest Rate (from box)	Interest Earned (D X E)	Ending Balance (D + F)
1	\$0.00					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

* Round cents to the closest whole number.

EXERCISE

8.4

Checking Out the Rule of 72: Does It Work?

The Rule of 72 is a way of calculating how long it takes for money to double. Test how accurate the Rule of 72 is by completing the following exercise.

The formula for the Rule of 72 is to divide 72 by the interest rate. This gives you the number of years it takes to double an investment earning that interest rate.

Begin with \$100,000. With a partner and an on-line calculator, figure out when money doubles at these interest rates: 2%, 3%, 4%, 6%, 8%, 9% and 12%.

Use this web site, or a similar one:

<http://www.1728.com/compint.htm>

Then follow these procedures:

Solve for YEARS

Input *principal*: 100,000
 Input *total*: 200,000 (double the principal)
 Input *rate*: (do NOT use decimals)
 Click on CALCULATE

You will get an answer in years.

Does the number of years multiplied by the interest rate equal about 72?

Complete this form using the calculator on the web site.

A	B	C	D	E
Principal	Double the Principal	Interest Rate Percentage	No. of Years for money to double (from Web Calculator)	Does Column C \times Column D = approximately 72?
\$100,000	\$200,000	2		
\$100,000	\$200,000	3		
\$100,000	\$200,000	4		
\$100,000	\$200,000	6		
\$100,000	\$200,000	8		
\$100,000	\$200,000	9		
\$100,000	\$200,000	12		

ASSESSMENT



Factors That Affect How Money Grows

Three factors affect how money grows in an account:

- ▲ Amount of deposit
- ▲ Interest rate
- ▲ Length of time the money remains on deposit

Demonstrate these three factors by completing the grid. When you finish, make a generalization about the three factors that affect how money grows.

Beginning values:

Amount..... \$5,000
 Interest rate..... 5%
 Time..... 5 years

Change only the amount:

Amount..... \$10,000
 Interest rate..... 5%
 Time..... 5 years

Change only the interest rate:

Amount..... \$5,000
 Interest rate..... 10%
 Time..... 5 years

Change only the time:

Amount..... \$5,000
 Interest rate..... 5%
 Time..... 10 years

Year	Year Start Balance	Interest Rate	Interest Earned	Year End Balance
1	\$5,000	5%		
2		5%		
3		5%		
4		5%		
5		5%		
<hr/>				
1	\$10,000	5%		
2		5%		
3		5%		
4		5%		
5		5%		
<hr/>				
1	\$5,000	10%		
2		10%		
3		10%		
4		10%		
5		5%		
<hr/>				
1	\$5,000	5%		
2		5%		
3		5%		
4		5%		
5		5%		
6		5%		
7		5%		
8		5%		
9		5%		
10		5%		

LESSON 9

Stocks and Mutual Funds

Warm-Up

One characteristic of a market economy is private ownership of property. Property is not just land and real estate; it is anything of economic value that belongs to you. Your stereo is your property, a baseball card collection is your property, and shares of stock in a corporation are property, too. If you own shares of stock, you have equity in the corporation. Equity means ownership.

By owning stock in a corporation, you become part owner of that company. You can earn dividends, which are profits of the company. You can also earn a capital gain when you buy shares of stock at a low price and sell at a higher price. Your shares of stock are called *equities*.

The shares that you and other people own are generally not purchased directly from the corporation issuing them. The corporation sells a large amount of its shares to an investment banking firm in what is called an *initial public offering (IPO)*. This exchange takes place in the *primary market*. The investment firm then sells those shares to its best customers (“friends and family”) in the *secondary market*.

FITNESS VOCABULARY

Capital gain – Gain from selling stocks or other investments for more than what was paid for them.

Capital loss – Loss from selling stocks or other investments for less than what was paid for them.

Dividend – Periodic payment of profit of a corporation to its stockholders or owners.

Equity – The value of property that is owned, including shares of stocks in a corporation.

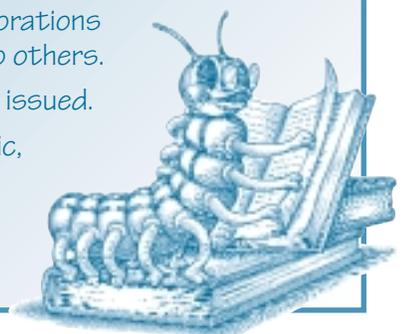
Stock – A share of ownership in a company.

Primary market – Investment banks buy shares of stock directly from corporations that issue them. The stocks, in turn, are sold by the investment bankers to others.

Secondary market – Markets where stocks are bought and sold after being issued.

Stock market – Where shares of stocks are bought or sold (can be a specific, physical place or on the Internet).

Corporate bond – A loan by an investor to the corporation; the means used by corporations to raise needed money.



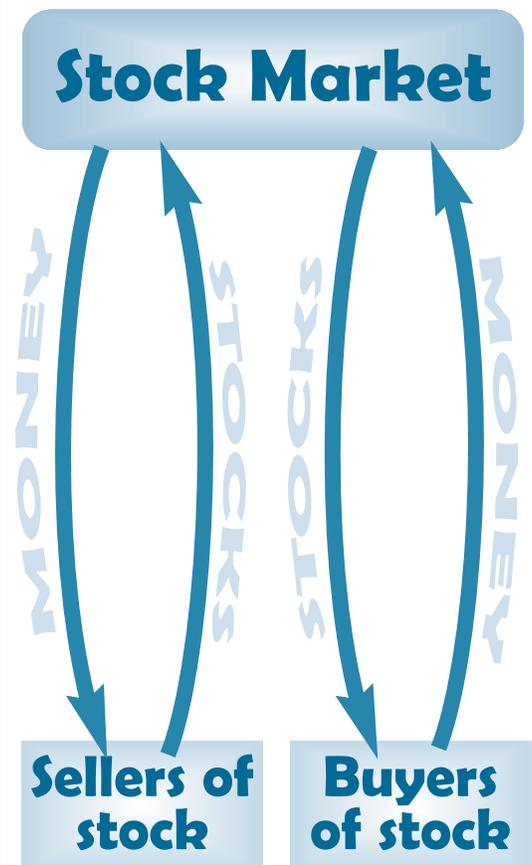
HOW AN IPO WORKS



Notice that the corporation issuing stock receives money for its *initial public offering (IPO)* from the investment banking firm. This is the *Primary Market*. The sale of this stock to its best customers takes place in the *secondary market*

- Stock exchanges provide a service. The service is to bring together people who want to buy or sell stocks. Stock exchanges “make a market” in specific stocks, just as a grocery market sells only certain brands of a good. This is also part of the secondary market.
- There is no guarantee that your investment will be successful. As an owner of stocks, you have some say about how the corporation should be run. You also get to share in the profits that are made. But there is no guarantee that the corporation in which you are an owner will be successful. If the corporation does not make a profit, there is no built-in safety net or insurance to reimburse you for your losses.
- Then why do so many people—now more than 50% of Americans—invest in the stock market? Many people choose to invest more of their money in the stock market rather than putting it into CDs, money market deposit accounts, statement savings accounts or U.S. Savings Bonds. People invest in the stock market because of the possibility of earning a better return.

MOST STOCK TRADES IN THE SECONDARY MARKET AFTER AN IPO



Notice that the money flow goes from the buyer to the seller of the stock, not to the business that offered the stock in the primary market.

- To reduce the risk of loss, many investors follow a plan to *diversify* their holdings.
- Investors put their saving dollars into different kinds of investments so that possible losses in one kind are balanced by gains in another. For example, an investor might hold a combination of technology, health care and service industry stocks.
- They might also choose “blue chip” stocks as well as unproven, new, growth industry stocks. *Mutual funds* are based on the idea of diversification. A mutual fund company uses investor money to buy a variety of stocks. Small investors can thus invest in a greater number and kinds of stock than if they were to buy individually.
- The investor gains or loses based on the total fund’s performance—the gains and losses of the individual stocks in the fund.
- Someday, you will probably invest some of your income in the stock market.
- Maybe, you already do. When you invest in stock, you will be part owner of a corporation. The equity, or ownership, in the company will grow if the firm is successful. Your investment will increase in value as you share in the profits of the firm.



MUSCLE DEVELOPERS

Learn these ideas, practice them, and develop your financial fitness muscles.

- ✓ Stocks are riskier investments than bonds or other saving plans, such as certificate of deposits and savings accounts.
- ✓ Higher risk investments are not guaranteed but might produce big profits if the corporation does well.
- ✓ Stocks of corporations with a long history of success and a strong potential for continued growth are called “blue chip” stocks.
- ✓ A stock exchange makes it easy to buy and sell stock by bringing buyers and sellers together (either by phone or via the Internet).
- ✓ A corporation ‘goes public’ when it sells shares of its own stock in the primary market. The corporation raises money through this offering.
- ✓ After the initial public offering (IPO) of stock, those same stocks are bought and sold by investors in the secondary market. The corporation gets no money from sales in the secondary market.
- ✓ Investors in stock earn a return on their investment through dividends (distribution of profits) as well as capital gains (selling stocks for more than the purchase price).
- ✓ Diversification is a big word that means that a lot of different kinds of investments or stocks are held. Investors diversify to reduce their risk of loss.
- ✓ One reason that investors buy mutual funds is to gain more diversification of their portfolio.

Showing Your Strength



If you know the answers to these questions, you are developing some financial muscle.

- 1 **What are equities?** *(Most people refer to shares of stocks as equities, but people can also own equity through real estate or through owning their own business.)*
- 2 **What is meant by “buy low; sell high”?** *(When people buy stock, they hope to make a profit. In order to do this, they have to sell the stock at a higher price than the price at which they bought it. For example, if you buy 10 shares of ABC Corporation at \$100 a share, and you sell it at \$200 a share, you’ll make a profit of a little less than a \$1,000 after the deduction of a commission or fee.)*
- 3 **When investors buy shares of XYZ stock, do they buy it from the XYZ Corporation?** *(No. When XYZ Corporation decides to sell shares of its stock to the public, it sells those shares in the primary market — only to investment bankers.)*
- 4 **What is the secondary market?** *(It is where stocks are bought and sold by the public after being issued. The New York Stock Exchange, the American Stock Exchange and the NASDAQ are secondary markets.)*
- 5 **Why is investing in companies important?** *(When people invest in shares of a corporation, they are demonstrating their confidence in the corporation’s future success. When corporations are successful, they are able to generate profits, expand operations, hire more workers, pay more taxes, disburse more dividends to the corporation’s shareholders and improve the standard of living.)*
- 6 **What are some differences between stocks and bonds and other savings instruments offered by financial institutions?** *(Stocks show ownership; bonds and savings plans show debt. Dividends are paid to owners; interest is paid to bondholders and to those with savings plans.)*
- 7 **How do stockholders earn a return on their investment?** *(Through dividends and through capital gains, which is the difference between the sale and purchase price of the stocks.)*
- 8 **How can stockholders cut down on their risk in their stock investment?** *(Buy blue-chip stocks that carry less risk; diversify one’s portfolio to include various stocks and a combination of equities and debt instruments; buy mutual funds.)*

EXERCISE

9.1

An Interview with Mr. Stock

Role-play this interview with Mr. Stock. After hearing the interview, answer the questions that follow.

Interviewer: Hey, where are you going, Mr. Stock?

Mr. Stock: I'm on my way to a new owner. I've just been sold.

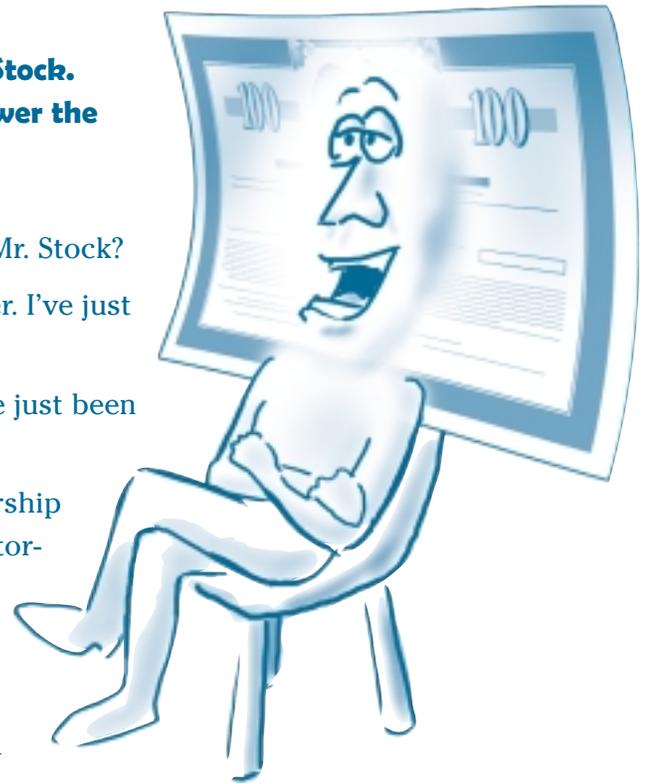
Interviewer: What do you mean—you've just been sold?

Mr. Stock: Well, you see I indicate ownership in a *corporation*—not a sole proprietorship or a partnership. A corporation is a legal entity—like a person—permitted by government. Each corporation issues stocks initially to raise money in order to pay for the things the corporation needs to make a profit—like equipment, buildings, and money to start the business. Each investor who owns one or more shares in a business is one of the owners. Some large companies have millions of owners because they have a lot of stocks and there are many investors that own those stocks.

Interviewer: Where are you bought and sold?

Mr. Stock: It depends. When I was initially issued, my corporation sold me to an investment brokerage firm. This is a place that specializes in issuing new stock. The investment brokerage paid money to my firm for me. Then the investment brokerage firm sold me to investors. I have been sold many times since I was born—mainly through the New York Stock Exchange. I am a stock of a major corporation listed on that exchange so I can be bought and sold in that place on Wall Street in New York City. Every stock cannot be traded there—only those that are listed on the exchange.

Interviewer: When you were sold on the New York Stock Exchange, your corporation must have made a lot more money.



Mr. Stock: Oh no, that money went to the investors who owned the stock and wanted to sell it. The money from the sale of stock goes to the firm only when it is initially sold. After that, the sales of stock involve transferring money from the buyer of the stock to the seller.

Interviewer: You mentioned that only stocks listed on the stock exchange may be traded. Does that mean that owners of stocks not listed on that exchange have no place where they can sell their stocks?

Mr. Stock: No. There are other exchanges, such as the American Stock Exchange, where stocks are bought and sold. There are also computer exchanges where the buy-and-sell orders for stocks are processed electronically. And with some stocks, there are several places where the stocks of any company are traded.

One of these is the NASDAQ market. Now, this gets confusing, so listen carefully. The NASDAQ market is really one or more brokerage houses who *make a market* in a particular stock. Making a market means that the brokerage house is the contact point for buyers and sellers who want to trade a particular stock. Each of these brokerage houses, which makes a market in a particular stock, indicates to a centralized location through its computers, the price and number of shares traded so that other people know what is going on. So the NASDAQ is not just one stock exchange like the New York or American, but lots of places all over—all keeping those computer lines humming.

And then with very small corporations, owners sell their shares to others by advertising in some way that they are for sale.

Interviewer: That sounds very complicated. Why do individuals buy you and other stocks?

Mr. Stock: The process is really quite easy. Besides, investors think I can be *very* handsome, not in the way that you might think. Many people want to become handsomely rich through buying stocks. When people buy stocks, they become owners and can share in the profits. If the firm is very profitable, it can make the owners rich. But keep in mind that there is a downside to buying stocks—there is considerable risk. If the business does not do well, the stockholders may not get any profit. They may also lose all of their investment if the corporation goes under.

Interviewer: Isn't that a bit iffy and scary?

Mr. Stock: Sure is. But many individuals are willing to do it because they have a greater opportunity to earn higher returns than they could with some other kinds of investments, such as savings accounts, certificates of deposits, money market deposit accounts and even U.S. Savings Bonds. It's a matter of how much risk you want to take.

Interviewer: So what's the difference between you and those other types of investments that you mentioned?

Mr. Stock: Stock is equity or ownership in a corporation. Bonds and savings plans are debt, not ownership. With debt, there is generally more security with your investment. The investor or saver is promised interest at certain times and a return of the loan. If the promises are not kept, the investor or saver can take legal action against the debtor to get the money. Remember, people who own me are not promised an annual return or that their investment will be returned.

Interviewer: Have any of your stock friends died?

Mr. Stock: Oh, yes. When a corporation folds, stocks die too. This could happen if they are taken over by another company or if they go out of business.

Interviewer: What is the average life of a stock?

Mr. Stock: Hard to say. Some of us live on for a very long period of time... many 'people' lifetimes. If an owner of stock dies, the stock does not die and it can be sold to someone else or inherited because the corporation still exists. Well, I must be going to my new owner. I hope I can get some rest with this new owner. This moving around is very tiring.

Interviewer: Before you go, I would like to ask one more question. Why don't your owners keep you a long time?

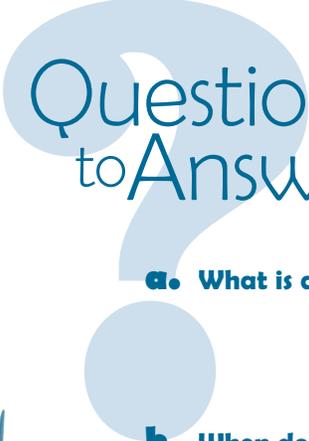
Mr. Stock: Some of them do. They keep me for years. I get to know them pretty well. Others get rid of me because they think they can get a better return on their money with some other type of investment. They sell me and buy something else. Others need the money to buy something like a car, house, etc. They particularly like to sell me when they have made some money on me.

Interviewer: How do stockholders make money on their stocks?

Mr. Stock: One important way is to sell the stock for more than they paid for it. Another way is when they receive dividends, which may be paid by the corporation. Dividends are the sharing of profit. Some corporations share some of their profit; others put the profits back into the business—the stocks generally increase in value because of that.

Oh, I must go before my owner gets annoyed. If you have any other questions about stock, ask your teacher.





Questions to Answer

- 
- a.** What is a stock?
 - b.** When do firms receive money from a stock?
 - c.** Where are stocks traded?
 - d.** What are the advantages and disadvantages of owning stocks?
 - e.** How do stockholders gain a return?
 - f.** What is the difference between owning stocks and owning bonds or savings accounts?
 - g.** Why are stocks generally riskier than bonds?
 - h.** Considering that there is generally more risk in stocks than bonds or savings instruments, why do investors still put money into stocks?

EXERCISE

9.2

Juanita's Decisions

Read the following case problem and answer the questions that follow.

Juanita was very impressed with the design of the clothes manufactured by the Trendy Design Company. At the beginning of the year, she bought \$3,000 worth of stock in the firm as well as a \$10,000 bond of the same corporation that paid an 8 percent interest.

During the year, she was paid \$200 in interest on the bond, which is about 83 percent of the amount she should have received. She did not receive any dividends on her stock investment in the firm. She was surprised to learn at the end of the year that the firm was having so much difficulty making money that they needed to liquidate the business. This means the corporation must sell their possessions in order to pay back its creditors and owners.

After the liquidation, Juanita received \$2,500 for her bonds, which was her share of the proceeds. She received nothing for her stocks and no dividends.

Please answer the following questions:

1 As shown through this case, who gets paid first—owners or creditors—when the firm is liquidated? _____

2 Which investment was more risky for Juanita?

3 Do you think that all stocks are riskier than all bonds? Why or why not?

LESSON 10

Let Lenders and Borrowers Be

Warm-Up

Buying a gallon of milk is a pretty straightforward exchange. You walk into a store, grab a plastic jug, pay the cashier, and you're on your way. Saving, borrowing—and even investing—are a bit like buying products at a grocery store.

A bank, credit union, or other financial institution can be thought of as a supermarket. It brings a number of products together in one place so that buyers don't have to shop all over town for what they want. At a bank, consumers can cash a check, deposit money, apply for a loan, purchase a certificate of deposit, or get investment advice. Many goods and services are provided by banks and other financial institutions.

One of the most important roles of a financial institution is to act as an intermediary. Intermediaries bring together those who are in need of funds and those who wish to invest. For example, when a new company is just getting off the ground, it needs funding—for materials, equipment and supplies, maybe even to hire more workers.

FITNESS VOCABULARY

Financial intermediaries – Banks, credit unions, pension funds, insurance companies, mutual funds and other financial institutions acting to bring together savers and borrowers as well as buyers and sellers of stock.

Institutional investors – A type of financial intermediary, such as a pension fund or mutual fund, who buys stocks and other investments for clients with the goal of making money.

Opportunity cost – The next-best alternative that is given up when a choice is made.

Mutual Fund – A group that pools investor money to purchase a variety of stocks.



Somewhere out there are investors looking for an opportunity. Often it is through a financial institution that the start-up company and the investor are brought together. The company finds its funder, and the investor finds an opportunity.

In this lesson, you will learn how banks, credit unions, mutual funds and other financial institutions act as intermediaries, bringing together savers, borrowers, and investors. This information will give you food for thought as you begin to make investment decisions on your own.

Learn these ideas, practice them, and develop your financial fitness muscles.

MUSCLE DEVELOPERS



- ✓ Banks, credit unions, stock exchanges, and other financial institutions act as intermediaries, bringing together savers and borrowers, as well as buyers and sellers of equities.
- ✓ Investors help businesses grow. Financial institutions help investors find the right investment opportunities.
- ✓ Interest rates paid on loans and deposits are established by supply and demand.
- ✓ Financial intermediaries can provide a number of investment options.
- ✓ People save their money in low or non-risk investments for several reasons: they don't know enough about other forms of investing; they prefer the liquidity of a savings account; they don't want to pay the cost of a broker; they may not have enough available income to purchase the minimum denomination of stocks or bonds.
- ✓ Mutual funds bring together money from investors that the mutual fund company then invests in a diversified portfolio.
- ✓ Insurance companies and pension funds are financial intermediaries: they collect premiums and invest them in diversified portfolios.

Showing Your Strength



If you know the answers to these questions, you are developing some financial muscle.

- 1** **How do banks, credit unions, mutual funds, and other financial institutions act as intermediaries?** *(They provide different types of accounts for savers and investors. They attract borrowers, savers, buyers, and sellers and thus these institutions bring together those who have funds and those who want them.)*
- 2** **Why is a stock mutual fund considered a financial intermediary?** *(Mutual funds provide a means by which investors can own portions of the stock of many different companies. The fund brings together investors and investment opportunities.)*
- 3** **Why are intermediaries important to the economy?** *(Without intermediaries, investors would find it difficult to locate opportunities for investment. And without intermediaries, those in need of funds might be unable to access them.)*

EXERCISE
10.1

Calamity in Cow Town

Read the story below and answer the questions that follow.

Every town has at least one grocery store. In Cow Town, there are three large supermarkets. For the most part, all three markets get their groceries from the same food brokers and pay similar prices for the items they sell. This includes the milk that each market sells.

In the summer of 1982, Mrs. Jones created a new drink to serve her bridge club. She mixed milk, bananas, and pineapple juice together and called it banana milk. The ladies in the club couldn't get enough of the banana milk, and the eight ladies went through five gallons of milk, six pounds of bananas, and two gallons of pineapple juice that day. They each asked for the recipe and, on the way home from Mrs. Jones's house, they each bought two gallons of milk, along with the other ingredients.

The next day each lady made up a batch of banana milk and served it to her children, grandchildren, the neighbors, and anyone else who happened by. Everyone loved the stuff and headed for the grocery stores to get milk. Day after day, more people came to know and love banana milk, and, day after day, people bought more milk than they ever had bought before.

The grocers in Cow Town would place the usual amount of milk on the shelves in the morning, and it would be gone by midafternoon. Then it was gone by noon. Then it was gone by midmorning. Finally, the grocers were simply handing the milk to the awaiting hordes early in the morning. The grocers tried to get more milk, but there were only so many cows in Cow Town.

What could the grocers do to reduce the frenzy? There was only one answer. Each grocer raised the price on the milk. First, they raised their prices by ten cents a gallon. Then 20 cents. Then 30 cents. As they raised the price,



they sold fewer and fewer gallons until, one day, the milk was actually on the shelf the whole day before the last gallon was grabbed.

Yes, in the summer of 1982, the people of Cow Town learned a lesson in supply and demand. What happened to the people of Cow Town who cut their milk consumption because of the higher price? They drank orange juice instead.



Questions to Answer

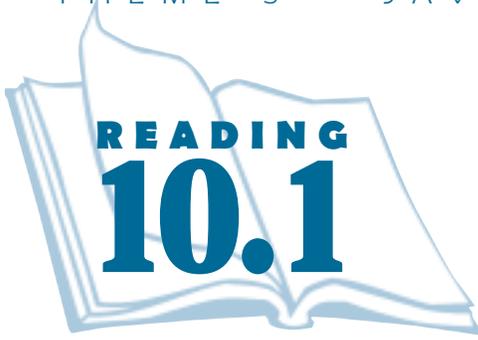
1. What happened with the demand for milk in the story? Why?

2. What happened with the supply of milk in the story? Why?

3. What happened to the price of milk in the story? Why?

4. What do you think happened to the prices of bananas and pineapple juice?

5. If you were one of the dairy farmers in Cow Town, and the price of milk went up, what changes might you have made on your farm?



Meet Me at the Stock Market

The stock market operates through financial intermediaries, such as the stock markets and stock brokers. Institutional investors are another type of financial intermediary. Examples of institutional investors are brokerage firms, pension funds, and mutual funds. They buy stocks and other investments for their clients, and their goal is to help their clients make money.

Institutional investment firms have workers who investigate corporations. They look at all of the company's business documents and check all the important financial information of the corporation, such as its income, expenses, and how it invests to make future growth possible. When institutional investors find a corporation that looks like it's going to be more profitable in the future, they buy stock in the corporation.

Brokerage firms buy stocks and bonds for their clients. Pension funds buy stocks, bonds, and mutual funds to hold for their clients' retirements. Mutual funds put together packages of stocks and bonds, organizing them into different funds. Clients can choose to buy shares in the different funds depending on their goals. If clients want to have a steady stream of money coming in without a lot of risk, they will want to invest in

an income mutual fund. There is never a guarantee of no loss, but the mutual fund managers who design the income fund will do their very best to choose a package of stocks that is likely to steadily provide income.

Some clients may be willing to risk losing some of their money in exchange for the possibility of earning a higher return. In this case, the mutual fund managers put together a package containing stocks in new companies or companies with new products. This kind of fund is called a "growth fund." If these companies become very successful, the rewards for owning shares in this fund will be great. On the other hand, if the companies go out of business, or if there is very little demand for the new products, the price of shares in the fund will go down, and the client will either lose or have very little growth in the investment.



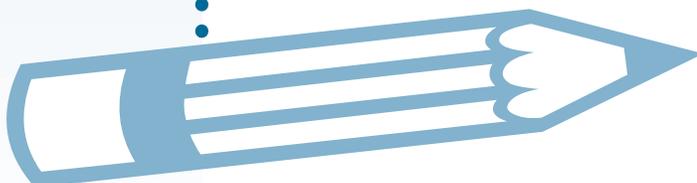
ASSESSMENT



Financial Terms

Match the terms with their descriptions.

1. The party who brings together those who need funds with those who have funds.
 2. The next-best alternative when a decision is made.
 3. The group who buys stocks, bonds, and mutual funds for the clients' retirement plans.
 4. The difference between revenues and costs.
 5. The costs of doing business.
 6. Group such as a mutual fund.
 7. The supplier of funds for loans.
 8. The demander of loans.
 9. The price of money.
- a. saver
 - b. profit
 - c. institutional investor
 - d. opportunity cost
 - e. interest
 - f. pension fund
 - g. borrower
 - h. financial intermediary
 - i. operating costs



LESSON 11

Saving and Investing Are Risky Business

Warm-Up

Sir Edmund Hillary, when asked why he climbed Mount Everest, is said to have responded, “Because it is there.” Hillary was a risktaker who enjoyed the good feeling he got from reaching an exciting, difficult goal.

Maybe you’re a risktaker, too. Do you enjoy riding down steep hills on a snow board? Does the thought of skydiving or riding a bucking bronco make your pulse race?

Would you invest all your savings to buy a rare stamp?

Risk is an important thing to keep in mind as you begin to think about investing your hard-earned income.

How much are you willing to risk?
How much can you afford to lose?

Because most investments involve risk, investors must examine carefully their own attitudes toward risk. They must also realize that there are different kinds of risk.

In this lesson, you will learn about several kinds of risk that accompany the act of investing. By recognizing your own attitude and tolerance of risk, you’ll be better able to make responsible decisions about how to invest your income.

FITNESS VOCABULARY

Interest rate risk – The risk that interest rates will rise while you have your income locked in to a lower interest rate investment.

Inflation risk – The risk that the rate of inflation will exceed the interest rate you are earning on an investment.

Risk of loss – The risk that the value of your investment will decrease.

Opportunity cost – The next best alternative given up when a choice is made.



MUSCLE DEVELOPERS

Learn these ideas, practice them, and develop your financial fitness muscles.

- ✓ Investments that carry the greatest risk usually have the potential for the greatest reward (or the greatest loss).
- ✓ Every investment involves risks.
- ✓ Different investments have varying degrees of risk. The investor should determine how much risk she or he can tolerate when putting his or her savings to work in stocks, bonds, or savings instruments.
- ✓ If you commit your income to a long-term investment (such as a long-term CD or a 30-year bond), you must be prepared to accept the agreed-upon interest rate for as long as you hold that investment, even if other investment options offer higher rates of return.
- ✓ Figuring your rate of return on an investment is very important for comparing one investment with another.
- ✓ With a savings account, the principal is not at risk. Stocks, on the other hand, offer no guarantees. You might pay \$50 a share for XYZ stock, and a month later, the share price could be \$5. If you sell, you'll have less money than you had at the beginning.

Showing Your Strength



If you know the answers to these questions, you are developing some financial muscle.

1

What risk is involved in a statement savings account? *(Although a statement savings account is insured up to \$100,000, there is risk. For example, while your savings earn 3% interest in the account, the inflation rate might be 4%, which means that your savings lose its purchasing power.)*

2

What risk is involved in the stock market? *(Even though blue chip stocks have traditionally returned more than 10% annually, there is no guarantee that they always will. The price of a stock can go up—or down. If the price goes down, investors can lose part of their original investment.)*

3

Interest-rate risk primarily hurts what kind of investor? *(Those who lock in their investment for a period and have difficulty getting their money out without substantial penalty.)*

4

Why is knowing the rate of return important to the investor? *(By figuring out rate of return, the investor can compare the return on various investments that he or she has).*

EXERCISE
11.1

Now or Later?

One year ago you placed \$975 in a savings account paying three percent interest. You were saving to buy one of the items listed below. The items changed in price over the year. Look at the current prices for the items. You will see that in some cases it was good that you waited. In other cases, you are worse off. Calculate the percentage change in price to discover just how much better or worse off you are. Give it a try!

Item	Last year's price	This year's price	% change
computer	\$ 997.00	\$ 897.30	
digital camcorder	\$1,005.00	\$ 954.75	
digital television	\$1,000.00	\$1,070.00	
car stereo system	\$ 995.00	\$1,074.60	
one year's wardrobe	\$ 995.00	\$1,094.50	

Amount in your savings account at the end of the year. _____
 (Principal plus interest.)



- 1** Which items could you purchase with your savings if you were to buy them in the present year?
- 2** Which items would you have been able to purchase with your savings last year?
- 3** What item had the greatest percentage increase in price?
- 4** Which item had the greatest percentage decrease in price?
- 5** For which items did you lose buying power over the year?

EXERCISE
11.2

Decisions, Decisions

Choosing the right savings method can be puzzling for savers. You have just discussed the risks of various savings plans. Apply your knowledge of interest-rate risk and inflation risk to determine what saving methods you would choose in the following situations. Be sure to explain why the method you choose is the best for the situation. Choose from a statement savings account, a U.S. Savings Bond, a money market deposit account, or a certificate of deposit (CD).

a You have savings of \$100 that you need within two months and you think interest rates will be going down in the next few years.
Savings method _____ Why? _____

b You have \$1,000 in savings that you may need within three years and you believe interest rates will be rising over that time.
Savings method _____ Why? _____

c You have \$1,000 in savings that you do not need within the next three years and you believe interest rates will be declining.
Savings method _____ Why? _____

d You have \$50 that you want to put away for your college costs in seven years. You believe interest rates will be increasing for most of those seven years.
Savings method _____ Why? _____

e You have savings of \$10,000 from which you need to make periodic withdrawals. You believe interest will be decreasing in the next few years.
Savings method _____ Why? _____

EXERCISE
11.3

Yield to the Investor

Calculate the rate of return on the following savings/investments.
 Keep in mind that the formula is:

- 1** You put \$1,000 into a statement savings account, and you do not add or take out anything during the year. You received

$$\frac{\text{Amount of Return}}{\text{Investment}} \times 100 = \% \text{ return}$$

\$30 in interest during the year. What is the rate of return?

 %

- 2** You purchased 100 shares of stock for \$50 per share a year ago. You received dividend payments of 50 cents per share four times during the year. The stock at the end of the year was worth \$53 a share. What is the rate of return if you sold the stocks at the end of the year?

 %

- 3** You purchased 100 shares of stock at \$30, and earned 90 cents per share in dividends 4 times during the year. At the end of the year, the stock was still worth \$30. What is the rate of return if you sold the stocks at the end of the year?

 %

- 4** You purchased 100 shares of stock at \$50 a share. You received a \$2 per share dividend during the year. The stock is worth \$49 at the end of the year. What is the rate of return at the end of the year if you sold the stocks?

 %

- 5** Which one of these investments yielded the best return for the year? If it is one of the stock returns that is higher than the return on the savings account (#1), explain why it *should* be higher.

ASSESSMENT



Weighing All the Risks

In this lesson, you have learned about three types of risks. For each of the following saving plans and investments, identify the major risk that you would have with each option. After naming the risk, give reasons for your response. The risks are:

- A** Inflation rate risk
- B** Interest rate risk
- C** Financial risk

1 Savings account _____

2 Certificate of deposit _____

3 U. S. savings bond _____

4 Stocks _____

