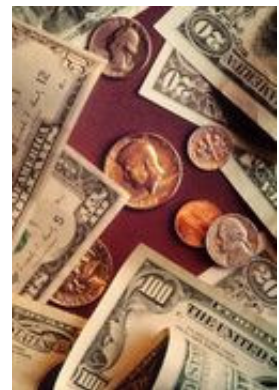


Saving and Investing

Chapter 2 helps you start building a savings plan.

We all have a limited amount of money. As a result, we all have to make decisions about what we should buy now, what we should wait to buy, and what we can do without. We also make decisions about saving money for future needs and goals. In this chapter, you'll learn how to develop a savings plan to help you achieve your goals.



Why Should You Save?

Saving – putting money aside for future needs and goals.

An important part of financial security is saving money. **Saving** refers to putting aside money for future needs and goals. Saving money over time can help you meet unexpected needs as well as build the financial assets that you need to achieve your goals for the future.

- **Future Needs**— What happens in the future is uncertain. For example, people lose their jobs or have unexpected medical expenses. Savings provide a “safety net” against such unexpected events, allowing you to meet your basic needs in spite of a temporary decrease in income or increase in expenses.
- **Future Goals**—Saving is also important for achieving your financial goals. Short-term goals are goals that you hope to achieve in less than a year. Examples of short-term goals may be purchasing a stereo or a bicycle. Long-term goals refer to goals that you hope to achieve more than a year from now. Examples of long-term goals may be enrolling in training or education courses, buying a car or renting an apartment. Achieving these goals is likely to cost more money than you can afford to spend from your current earnings. Therefore, in order to achieve these goals, you must save money.



Saving and Investing

You can do four things with money as soon as you earn it: you can spend it, you can put it in your debit account, you can put it in your savings account, or you can invest your money in a CD, IDA, IRA and other types of investments.

- **Spending it**—When you earn money, you probably want to keep some of it handy to cover expenses, such as food and transportation, which you are likely to have within a week or so. Therefore, you will probably want to keep a little of your earnings in cash.
- **Checking Account**—Money that you are planning on spending within the next few weeks or months should be deposited into your checking account. You should deposit money in your checking account to cover your monthly expenses, such as rent and utilities, and a small “cushion” for other small expenses you might have. You may also want to set aside additional money for emergencies.
- **Savings Account**—The difference between the money that you earn and the amount that you think you will spend should be saved in your savings account for medium to long term goals. Money in your savings account can earn you interest or additional money.
- **Investing** — refers to putting aside money for long-term goals, with the expectation that you will make additional money, or a “return on your investment.” There are many types of investment accounts which include a savings account, a Certificate of Deposit (CD), Individual Retirement Account (IRA), Individual Development Account (IDA), or investing in stocks, bonds, and mutual funds.



Investing - putting aside money for long-term goals.

What is Interest and How Does it Work?

Interest - the amount you earn on money you save.

Compound Interest - when you earn interest, not just on the amount you invest, but also on any interest that you've earned.

Principal - the amount of money invested; the unpaid balance on a loan, not including interest.

Money that is saved grows over time. That's because savings earn interest. **Interest** is what you earn on your savings - the price someone pays you to borrow your money. When you save money in a bank account, you are, in fact, lending that bank money. Therefore, the bank pays you interest.

For example, suppose you invest \$100 at an annual interest rate of 2%. After a year, you will make \$2 in interest from this investment, since $\$100 \times 2\% = \2 . When you put money into your savings account, your money will grow even faster because of compound interest. **Compound interest** is when the interest rate is applied not just to the original amount or **principal** you invested, but also to all previous interest that you have earned—you earn interest on your interest! Therefore, at the end of two years, the \$100 you invested at an annual interest rate of 2% will become \$104.04.

Here's how:

The first year of the investment, you will make \$2 in interest from your investment, since $\$100 \times 2\% = \2 . So, at the end of the first year, you will have the original \$100 that you invested, plus \$2 in interest, for a total of \$102. Now, during the second year of the investment, you will receive 2% interest, not just on the original \$100 that you invested, but on the entire \$102 that you currently have. Therefore, the second year, your investment will make \$2.04 in interest ($\$102 \times 2\%$). At the end of the year you will have a total of $\$102 + \2.04 or \$104.04. This is how compound interest makes your money grow faster!



Suppose Elena has \$500 and decides to save this money for when she goes away to college. She puts the money in a savings account that earns 2% in interest each year. By leaving her money in the account, at the end of five years her money would have grown so that she ends up with \$552. This may not seem like a lot of money but remember that Elena's money is just sitting in her bank account—she is making money without having to do anything!

YEAR	ELENA		
	PRINCIPAL	INTEREST	ENDING BALANCE
1	\$500.00	\$10.00	\$510.00
2	\$510.00	\$10.20	\$520.20
3	\$520.20	\$10.40	\$530.60
4	\$530.60	\$10.61	\$541.21
5	\$541.21	\$10.82	\$552.03

The Time Value of Money

Another way to make your money grow even faster is to start saving earlier. In other words, because of the interest that you earn when you save and invest, the earlier you start saving and investing, the more money you will have!

Time Equals Money: On her 15th birthday, Elena decides that she will start saving \$20 a month (\$5 a week). She puts this money into a savings account that has an annual compound interest rate of 2%. At the end of the first year when she turns 16, Elena will have saved \$240 just by putting away \$20 each month. But, her money has also earned interest. She actually has \$248.80 at the end of the first year. Elena will continue to put away \$20 each month and by the end of ten years, when she turns 25, she will have \$2,680.47 in her savings account!!

AGE	ELENA			
	BEGINNING BALANCE	TOTAL DEPOSIT AT END OF YEAR (\$20/MONTH)	INTEREST AT END OF YEAR	ENDING BALANCE
15		\$240.00	\$4.80	\$244.80
16	\$244.80	\$240.00	\$9.69	\$494.49
17	\$494.49	\$240.00	\$14.69	\$749.18
18	\$749.18	\$240.00	\$19.78	\$1,008.96
19	\$1,008.96	\$240.00	\$24.98	\$1,273.94
20	\$1,273.94	\$240.00	\$30.28	\$1,544.22
21	\$1,544.22	\$240.00	\$35.68	\$1,819.90
22	\$1,819.90	\$240.00	\$41.19	\$2,101.09
23	\$2,101.09	\$240.00	\$46.82	\$2,387.91
24	\$2,387.91	\$240.00	\$52.56	\$2,680.47

Saving a little each week over time can turn into a big investment! Can you imagine how much money Elena would have if she continued to save \$20 a month for ten more years?

How the Money in Your Savings Grows

The money in your debit account is available to you at anytime and is easily accessible. However, this money does not earn interest—at any point in time, the amount in your debit account will equal the amount you have deposited minus the amount you have taken out.

The money in your Savings, on the other hand, will grow as time goes on. This is true for two reasons: contributions and interest.



- **Contributions**– First, your savings will grow because each month you will deposit, or put new money, into it. These regular deposits are called your savings contributions. You'll make these contributions according to the plan you develop to reach your savings goal.
- **Interest**– All of money that you put into your savings account will be invested and will earn an interest rate of about 2 percent per year. Importantly, this money will earn compound interest, which means your money will grow even faster!

Applying the "Rule of 72"

To see how fast your money can grow in different savings and investing products use the "Rule of 72". To determine how many years a sum of money will need to double, divide 72 by the assumed interest rate. That will tell you the number of years it will take for your money to double using that interest rate (for example $72 \div 8\%$ interest rate = 9 years). If you divide the 72 by the number of years you would like to double your money in, you will get the interest rate required (for example $72 \div 12 \text{ years} = 6\%$ interest rate). THEREFORE, REMEMBER THAT ALL OF THE MONEY IN YOUR SAVINGS WILL GROW, BECAUSE IT ALL WILL EARN INTEREST!



Financial Analyst Game

Elena and Joe both deposit **\$500** in two different types of savings accounts: one is a regular savings account at a local bank; the other is a regular checking account at a local bank. In the first year, Joe earns **2% interest** on this money in his savings account, and Elena earns **0% interest** in her checking account. At the end of the year, who will have earned more money?

	ELENA	JOE
	CHECKING DEPOSIT	SAVINGS ACCOUNT
Principal (\$)		
Interest (%)		
TOTAL MONEY		

1. What is the difference between the types of savings Elena and Joe are using?

2. How much interest did Elena receive?



3. How much interest did Joe receive?
4. How much money does Elena now have in her checking account? How much does Joe have in his savings account?

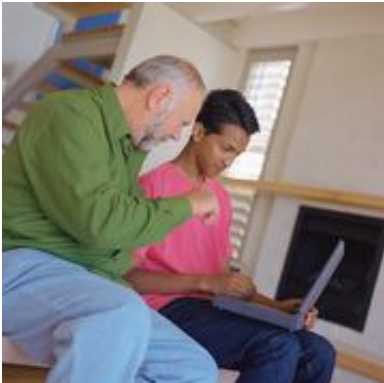
Making Your Savings Work for You

To create a savings plan, you'll need to follow the following three steps.

1. Set your savings goal;
2. Determine how much money you need to achieve your goal; and
3. Figure out how far in the future you want to achieve your goal and how much you need to save each month.

These three steps are described in more detail below.

Step 1. Set Your Savings Goal



In Chapter 1, you began thinking about your savings goal and listed some goals that interested you. After completing your homework—thinking about your goals in more detail and talking to adults or mentors in your life—it's time to choose your goal. Because achieving these goals takes time, only work toward one goal at a time. List your goal in Worksheet 1.

Worksheet 1: My Savings goal

Step 2. How Much Do You Need to Save to Achieve Your Goal?

The next step is figuring out how much money you will need to save to achieve your goal. This depends on two things:

1. The **cost of the goal**;
2. The **cost of other things** that you will need when you purchase the goal.

When figuring out how much money you need to achieve your goal, don't forget the **extra costs** that you'll have when you purchase your asset.

For example, suppose you want to buy a \$1500 used car. You know that you will need to have \$1500 in your savings at the time you withdraw it to make the purchase. Does that mean that all you need to save is \$1500? No. In addition to the price of the car, you'll need to save for things like your driver's license, car insurance, and car license or registration. It is important to figure out all of the additional costs.¹



The following table helps you to think about some of the related costs associated with your savings goal. You need to consider these and others costs in order to determine the total cost of your goal.

Now, use Worksheet 2 to figure the costs of achieving your goal.

¹ In addition the upfront costs of purchasing your asset, you will also need money each month to maintain your asset. For example, if you purchase a car you will need money for gas, oil changes, and perhaps parking. For an apartment, you will need money for utilities such as heat and gas. Monthly educational expenses may include the cost of transportation to your classes. Therefore, in addition to saving for your asset, make sure that you'll be able to cover monthly expenses you will incur once you have the asset. We'll talk about these ongoing expenses in Chapter 3.

Worksheet 2: Cost of my savings goal

MY SAVINGS GOAL:			
GOAL	HOW MUCH DOES IT COST?	HOW MUCH SAVINGS WILL I NEED TO HAVE IN MY ACCOUNT WHEN I WITHDRAW THE MONEY?	
OTHER UPFRONT COSTS			
TOTAL COST OF ACHIEVING GOAL=		TOTAL SAVINGS NEEDED IN MY ACCOUNT=	

Step 3. What's Your Timeline for Achieving Your Goal?

Now that you know how much you need in your account, the next step is deciding **when** you want to purchase your goal. How long you are willing to wait will determine how much you have to save each month. As a general rule, each month you should save the amount of money that you will need to achieve your goal divided by the number of months in which you are going to save.

$$\text{Savings Needed Each Month} = \frac{\text{Total Amount Needed}}{\text{\# of Months}}$$

Renting an Apartment: How much does Elena need to save each month?

Elena decides she wants to have her apartment in one year. Below, she calculates how much she will have to save in her savings each month to achieve her goal.

Elena's Needed Monthly Savings: \$600 needed in 12 Months

(A) Total Savings Needed To Achieve Goal	\$ 6 0 0
(B) Total Number Of Months To Achieve Goal	12
(C) Amount To Save Each Month (A Divided by B)	$\$600/12 = \50

Therefore, Elena needs to save \$50 each month in order to rent her apartment in one year. However, if Elena decides to give herself two years to achieve her goal, how much money will she need to save each month?



Elena's Needed Monthly Savings: \$600 needed in 24 months

(A) Total Savings Needed To Achieve Goal	\$ 6 0 0
(B) Total Number Of Months To Achieve Goal	
(C) Amount To Save Each Month (A Divided by B)	

Now, decide when you want to achieve your goal. Use Worksheet 3 and your calculations from Worksheet 2 to estimate how much you need to save each month.

Worksheet 3: How much do I need to save each month?

Your Needed Monthly Savings

(A) Total Savings Needed To Achieve Goal (from Worksheet 2)	
(B) Total Number Of Months To Achieve Goal	
(C) Amount To Save Each Month (A Divided By B)	

As you can see, how quickly you will be able to meet your goal is dependent on many things. First, it depends on the cost of purchasing your goal and its related upfront expenses. Second, it depends on how much money you plan to save each month and how dedicated you are to saving that amount. If it's very important to you to get more education, rent an apartment, or buy a car, then you will try very hard to save the necessary money each month. The next chapter will help you create a budget so that you can figure out how to save for your goal.