MANAGING MONEY - BANKING

Unit Overview

In this unit, the student will learn about the common types of Financial Institutions and the services they offer to help better manage money.

Choosing a Financial Institution

Financial Institutions are organizations that deal in financial transactions such as investments, loans and deposits. The most common types of financial institutions are:

- ***Commercial Banks*** - places that offer services to help you manage your money. Some of these services include saving accounts, savings bonds, certificates of deposit, checking accounts, debit and credit cards, automatic teller machines and online banking.
- ***Credit Unions*** - nonprofit organizations owned and controlled by its members. They offer many of the same services as banks.
- ***Savings and Loan Associations*** (also known as thrifts) - specialize in savings and various types of loans such as mortgages for homes or businesses.
- ***Internet Banks*** – work like traditional banks except almost all transactions are done online.

Before you choose a financial institution ask yourself the following questions:

1. Is there a minimum amount of money needed to open an account?
2. Will I be charged any monthly fees if I don't maintain a certain balance?
3. Will there be a penalty if I don't keep my money in the account for a period of time?
4. Are there fees for services?
5. Is my account federally insured?
6. How much interest will I earn?
7. Is the interest compounded?

Answer Assessment questions 1-5.

Saving Money

Savings accounts are safe places to keep your money. Actually, the bank will even pay you to save your money in their bank. They do this because they use your money to lend to other people. The money you earn in a savings account is called ***interest***. The more money you have in a savings account, the more interest you will earn; the longer the money is in a savings account, the more interest you earn. You want to deposit as much money as possible and keep it there for as long as you can.

QuickTime Loan Terminology Basics (03:14)

Usually you can open a savings account with any amount of money. Take the money you want to save to a bank, complete an application, and open the account. When you place money in the bank, you are making a ***deposit***. The amount of money you have in the account is called the ***principal***.

Simple interest is money paid on the principal only. To figure simple interest, multiply the dollar amount of the principal by the interest rate by the length of time the money is in the account. For example: let's say you have $500 (principal) in your savings account for one year and the interest rate is 3%.

Formula for Calculating Simple Interest

$$P \times r \times t = \text{interest}$$

P = principle
r = rate
t = amount of time

$500 x 3% x 1 = $15

You have just earned $15!

Let's Practice Figuring Simple Interest

Riley opened a savings account with $600 at an interest rate of 4%. How much interest will she earn in one year? Two years? Three Years?

Using the formula for calculating simple interest:

One Year $600 x 4% x 1 = $24
Two Years $600 x 4% x 2 = $48
Three Years $600 x 4% x 2 = $72

Compound Interest

Savings accounts typically earn compound interest. ***Compound interest*** is earning additional interest on the interest you have already earned. Once your first interest payment is deposited in your account by the bank, it is added to the principal.

Using the example above, instead of earning 3% on $500, Riley would now be earning 3% on $515. **$515** x **3% = $15.45**. Her second interest payment will now be $15.45. This new interest payment is added to $515 for a total of $530.45. Now she will earn 3% on $530.45.

In other words, compound interest is calculated each period on the original principal and all interest accumulated during past periods. How much money you earn in interest is also determined by how often the interest is compounded or how often interest is paid. The more often interest is compounded, the more money you will earn.

Study the table below. It shows the result of making a one-time deposit of $1,000 at 5% interest for a period of 10 years. Simple interest earned is $50.00 a year for a 10 year total of $500. If the interest is compounded yearly, the interest earned is $628.89; if compounded quarterly (4 times a year), the interest earned is $643.63.

Type of Interest	Interest Earned	Principal Plus Interest Earned
Simple	$500	$1,500
Compounded Yearly	$628.89	$1,628.89
Compounded Quarterly	$643.63	$1,643.63

If you want to figure compound interest there are a couple ways to do so. You can use the formula below or you can use a compound interest calculator provided by Discovery Education: http://www.webmath.com/compinterest.html

Formula for Calculating Compound Interest

$$\text{Total Balance} = P\left(1+\frac{r}{n}\right)^{nt}$$

P = principle

r = annual rate

n = number of times interest is compounded per year

t = time in years

total balance – starting balance = interest earned

Let's Practice Figuring Compound Interest

Riley opened a savings account with $600 at an interest rate of 4% that will compound monthly. How much interest will she earn in one year? Two years? Three Years?

Using the formula for calculating compound interest:

One Year	One Year	One Year	One Year
Total Balance	$\$600\left(1+\frac{.04}{12}\right)^{12\times1}$	$\$600\left(1+\frac{.04}{12}\right)^{12\times2}$	$\$600\left(1+\frac{.04}{12}\right)^{12\times3}$
Total Balance	$\$600\,(1+.00333)^{12}$	$\$600\,(1+.00333)^{24}$	$\$600\,(1+.00333)^{36}$
Total Balance	$\$600\,(1.00333)^{12}$	$\$600\,(1.00333)^{24}$	$\$600\,(1.00333)^{36}$
Total Balance	$\$600\,(1.0407)$	$\$600\,(1.0831)$	$\$600\,(1.127)$
Total Balance	$624.44	$649.89	$676.36
Interest Earned	$624.44 – $600 = **$24.44**	$649.89 – $600 = **$49.89**	$676.36 – $600 = **$76.36**

Now visit http://www.webmath.com/compinterest.html and calculate Riley's compound interest after one, two and three years.

The Rule of 72

You can use "*The Rule of 72*" to get an idea of how long it will take to double your money at a specific interest rate.

This is how it works: divide the number 72 by the interest rate.

For *example*, if you're earning 5% interest, divide 72 by 5.

$$\frac{72}{5} = 14.4$$

It will take a little under 14 ½ years for the original investment to double in value.

Let's use the ***Rule of 72*** to find out how long it will take Riley to double her money.

$$\frac{72}{4} = 18.5$$

It will take Riley 18.5 years to double her money.

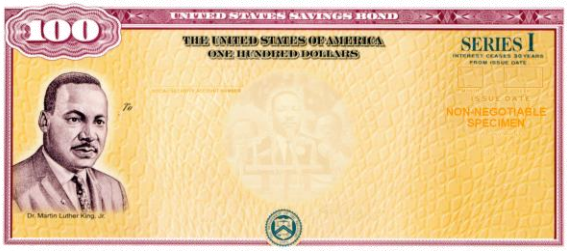
Answer Assessment questions 6-15.

Savings Bonds

A second method of savings is to buy ***savings bonds***. You actually buy savings bonds from the Federal Government, although you can purchase them at banks. There are two ways bonds work.

1) You can buy a ***savings bond (series EE)*** for $25 and in 20 years you can cash in the bond and get $50. In other words, you buy the bond for half of its ***face value*** ($25) and cash it in after 20 years for full face value ($50).

2) You can also purchase ***bonds (series I)*** for their face value – buy a $50 bond for $50 and earn interest. When you cash in this bond it will be worth more than $50. How much depends on the interest rate. Like a savings account, the longer you wait the more money you'll earn.



Savings Bond	Cost	Cash In Value	Example
Series EE	½ face value	face value or twice what you paid for it – in 20 years	A $200 bond would cost $100 and be worth $200 in 20 years.
Series I	face value	more than face value	A $200 bond would cost $200, but would be worth ***more*** than $200 when cashed in because you earn interest.

FYI: If you have savings bonds and would like to know what they are worth, visit the web site posted below and use the savings bond calculator provided by the U.S. Department of Treasury.

http://www.treasurydirect.gov/BC/SBCPrice

Certificate of Deposit

A third method of savings is to buy ***Certificates of Deposit (CD)***. CDs are a bank's form of savings bonds. You buy a CD for an amount of time like 6 months or 1 year. You agree not to cash in the CD for that period of time. If you do cash in the CD early, you lose money. The CD will earn interest, so it will be worth more money when you cash it in than the amount you bought if for. For *example*, if you buy a CD for $500 for one year, when you cash in the CD after a year, it could be worth $512.50 or $12.50 more than what you bought it for. Exactly how much more a CD is worth depends on what the interest rate is.

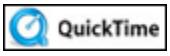
The advantages and disadvantages of each method of saving money are summarized in the table below.

Method	Advantages	Disadvantages
Saving Account	Earns interest Easy access to money Can save any amount of money	Earns the least amount of interest
Saving Bond	Earns more interest than a savings account	Have to wait for a period of time before you can access your money.
Certificate of Deposit	Earns more interest than a savings account	Have to have a certain amount of money to buy a CD Have to wait for a period of time before you can access your money. May lose money if you cash it in too soon.

Money Market Accounts

Money market accounts are a type of savings account in that you earn interest on your money, but you can also write checks on the account. Usually you are limited in the number of checks you can write each month. You earn more interest with a money market account than a regular savings account; however they also require larger initial deposits.

No matter what type of account you choose, saving money is a good thing. Shop around for an account that offers you compound rather than simple interest.

 Places to Save (02:44)

Answer Assessment questions 16-22.

Banking Basics

Read pp 1-21 of the Federal Reserve Education PDF document Banking Basics.

*Based on the information presented in **Banking Basics** pp 1-21, answer Assessment questions 23-28.*