Unit 6
Saving

Lesson 6A:
Time Preference—Why It Is Hard to Save

Rule 6: Pay yourself first.

Saving is making the decision to buy goods and services in the future rather than today. It can be difficult to save because people naturally prefer to enjoy things now and incur costs later. Banks offer interest as an incentive for people to save. These lessons look at why it is hard to save and why it pays to save (the opportunity to earn compound interest).

Lesson Description

Students investigate the decision to save as a choice between spending now or spending later and how people's natural preference to enjoy goods and services now affects this decision.

Standards and Benchmarks (see page 128)

Grade Level

9-12

Concepts

Income

Interest

Net income

Saving

Compelling Question

How do costs and benefits influence saving?

Objectives

Students will be able to describe how the timing of benefits and costs can affect the choice to save or spend.

Materials

- Visual 6A.1: Personal Saving Rate (1959-2016)
- Visual 6A.2: The Timing of Benefits and Costs
- Handout 6A.1: Assessment, one copy for each student

Time Required

20 minutes

Procedure

1. Remind students that the main reason people work is to earn **income** to buy the goods and services they want. Income is the payment people receive for providing resources in the marketplace. When people work, they provide human resources (labor) and in exchange receive income in the form of wages or salaries. People can also earn income in the forms of rent, profit, and interest. Discuss the following:
    - Once people receive income, what are the three basic things they end up allocating it to? (*Spending, paying taxes, and saving*)

2. Explain the following:
    - Spending, paying taxes, and saving are all different ways of buying goods and services to satisfy your wants.
    - Obviously, when you spend income, you receive goods and services now.
    - When you pay taxes, you receive goods and services provided by the government, such as national defense, the legal system, highways, education, police and fire protection, libraries, parks, and many other goods and services provided by federal, state, and local governments.
    - When you decide to save some of your income, you are choosing to buy goods and services later.
    - All income is fundamentally allocated to the purchase of goods and services because that is what gives people satisfaction and provides the incentive to work.

3. Define **net income** as gross income minus taxes. Explain that people have only a limited amount of control over how much they pay in taxes (to the extent they can vote

for different candidates), so the basic question people face is how much of their net income they will spend now and how much they will save to spend later.

4. Define **saving** as keeping some income to buy goods and services in the future.

5. Tell the students that the U.S. personal saving rate has fluctuated over time. Display *Visual 6A.1: Personal Saving Rate (1959-2016)* (or show students the current data on FRED® at https://fred.stlouisfed.org/graph/?g=3YaA.) Discuss the following:
   - What has been the trend in personal saving over time? (*Generally speaking, the personal saving rate has decreased over time.*)
   - What is the current personal saving rate? (See current data on FRED® at https://fred.stlouisfed.org/graph/?g=3YaA. Mouse over the end of the trend line to see a pop-up of the most recent rate.)

6. Explain that some households have negative savings, which means that they are not only not saving but spending more than they earn.
   - How is it possible for people to spend more than they earn? (*They can spend savings or borrow money.*)
   - Why do you think people save so little of their income? (*Answers will vary.*)

7. Write "Option 1: $100 today" and "Option 2: $100 one year from today" on the board. Tell the students they may choose either option. Ask them to raise their hands if they would prefer Option 2. (None are likely to choose this option.)

8. Change Option 2 to "$102 a year from today" and repeat the question. (None are likely to choose this option either.)

9. Continue raising the amount of Option 2 ($105, $110, $120, $150, $200, $500, etc.) and repeat the question until everyone (or almost everyone) chooses Option 2. (Some students may never choose Option 2. However, if pressed, most would admit they would wait for $1 million a year from today if it were a serious offer.)

10. Explain that what is being demonstrated is people's natural preference for when they prefer to receive benefits. Basically, people prefer to receive benefits sooner rather than later. To persuade them to wait requires offering a benefit.

11. Return to the board and change Option 2 to the original option—"$100 one year from today." (Option 1 remains the same.) Tell the students that these now refer to a payment they must make. Ask them to raise their hands if they would prefer Option 2. (Most of the students will likely choose Option 2).

12. Explain that people's preference for costs is the opposite of benefits. They prefer to pay (incur) costs later rather than sooner.

13. Display *Visual 6A.2: The Timing of Benefits and Costs*. Discuss with the students the timing of the benefits and costs of each activity noted on the visual.

Activity	Now or later?	
	Benefits	**Costs**
Eating junk food	Now	Later
Exercising	Later	Now
Staying up late	Now	Later
Smoking	Now	Later
Practicing a musical instrument	Later	Now
Studying	Later	Now
Borrowing money	Now	Later
Saving	Later	Now

14. Explain that although people prefer benefits now and costs later, this natural preference can be overcome if there is some extra reward or incentive to wait.

15. Define **interest** as the price of using someone else's money. When people place their money in a bank, the bank uses the money to make loans to other people. In return, the bank pays interest to the account holder. Interest payments are based on the amount you save and how long you save. Interest is an incentive to save money.

Closure

16. Discuss the following questions to review the important content in the lesson:
    - What is income? (*The payment people receive for providing resources in the marketplace*)

- What type of income do most people earn? (*Wages or salaries for providing their human resource [labor]*)
- What other types of income can people earn? (*Rent, profit, or interest*)
- What is net income? (*Gross income minus taxes*)
- What is spending? (*Buying goods and services now*)
- What is saving? (*Keeping some income to buy goods and services in the future*)
- What has been the trend in the personal saving rate over time in the United States? (*It is decreasing: People have tended to save at a lower rate over time.*)
- How do costs and benefits influence saving? (*People prefer to enjoy things now [benefits] and pay costs later. This preference makes it difficult for people to save—to save they have to give up something [a cost] and buy goods and services in the future [a benefit].*)
- What is interest? (*Interest is the price of using someone else's money.*)
- What does "the price of using someone else's money mean? (*People prefer to enjoy the benefits of having money now. If you use [borrow] someone's money, you must compensate them with interest for making them wait to use it. Likewise, when you deposit money at a bank rather than spending it, the bank pays you interest for the use of your money.*) Point out that when banks pay interest they are providing an incentive—a benefit—that might encourage people to save (that is, outweigh the cost of giving something up now.)

Assessment

17. Distribute a copy of *Handout 6A.1: Assessment* to each student and allow time for students to work (or assign as homework).

    Handout 6A.1: Assessment—Answer Key

    Directions: Use the knowledge you have learned in this lesson to write a paragraph for each numbered item below.

    1. Explain people's natural preferences for costs and benefits when receiving (buying) something. (*People prefer to receive benefits now and incur costs in the future.*)
        - Describe how this natural reference plays out when a consumer decides whether to buy something with cash or with a credit card? (*Credit cards allow consumers to have the benefit of the good now and pay the cost in the future.*)
        - If a credit card company increases the interest rate it charges, how might consumers with that card change how they use that credit card? (*A higher credit card interest rate will increase the future cost of goods or services*

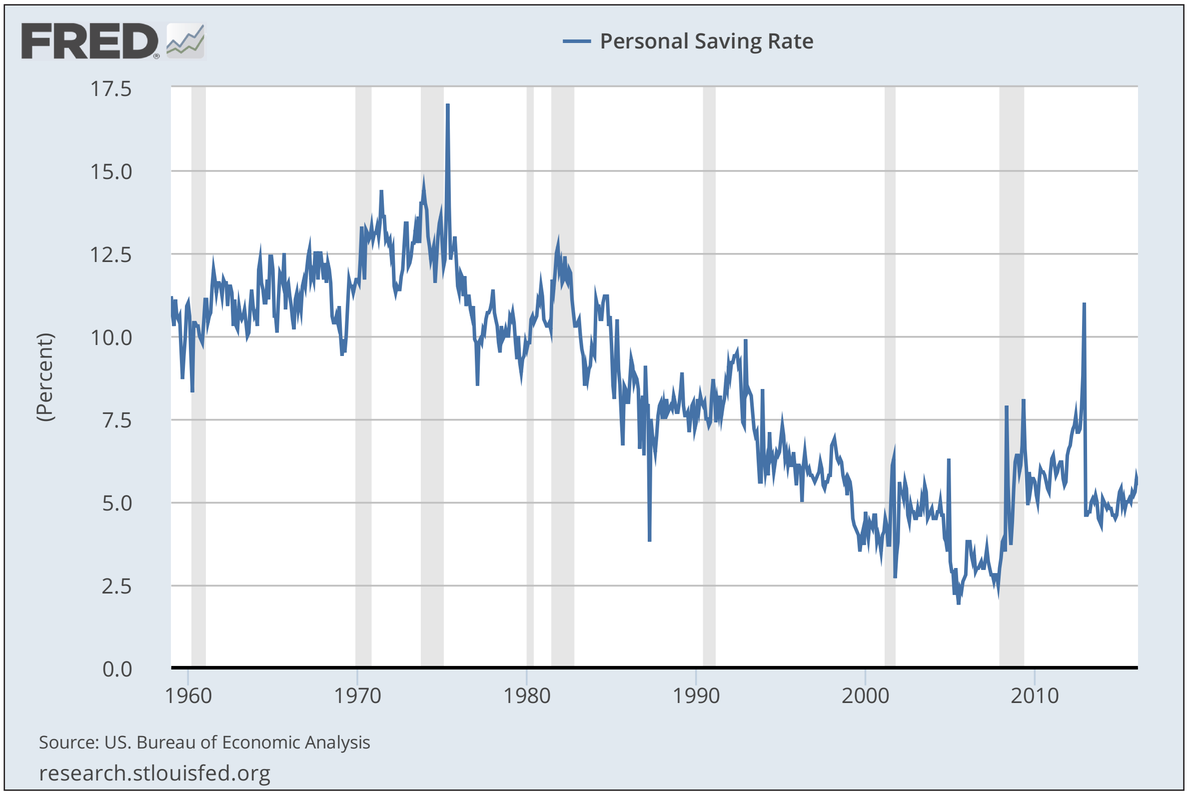
purchased, so consumers with that card are more likely to pay with cash or find a card with a lower rate.)

2. Explain how interest is the price of using some else's money. (*People prefer to enjoy the benefits of having their money now. If you use [borrow] someone's money, you must compensate them with interest for making them wait to use it. Likewise, when you deposit money at a bank rather than spending it, the bank pays you interest for the use of your money.*)

    - Describe how interest acts an incentive for people to save. (*People do not naturally postpone spending, but interest acts as an incentive to overcome that natural tendency.*)

    - What happens to the incentive to save as interest rates increase? (*The higher the interest rate, the greater the incentive to save.*)

Visual 6A.1: Personal Saving Rate (1959-2016)



NOTE: Gray bars indicate recessions as determined by the National Bureau of Economic Research. For the most recent data, go to https://fred.stlouisfed.org/series/PSAVERT.

SOURCE: FRED®, Federal Reserve Bank of St. Louis.

Visual 6A.2: The Timing of Benefits and Costs

Activity	Now or later?	
	Benefits	Costs
Eating junk food		
Exercising		
Staying up late		
Smoking		
Practicing a musical instrument		
Studying		
Borrowing money		
Saving		

Handout 6A.1: Assessment

Name:___________________________________

Directions: Use the knowledge you have learned in this lesson to write a paragraph for each numbered item below.

1. Explain people's natural preferences for costs and benefits when receiving (buying) something.
    - Describe how this natural reference plays out when a consumer decides whether to buy something with cash or with a credit card?
    - If a credit card company increases the interest rate it charges, how might consumers with that card change how they use that credit card?

2. Explain how interest is the price of using some else's money.
    - Describe how interest acts an incentive for people to save.
    - What happens to the incentive to save as interest rates increase?

Standards and Benchmarks

National Standards for Financial Literacy

Standard 3: Saving. Saving is the part of income that people choose to set aside for future use. People save for different reasons during the course of their lives. People make different choices about how they save and how much they save. Time, interest rates, and inflation affect the value of savings.

- Benchmark: Grade 4
    1. Income is saved, spent on goods and services, or used to pay taxes.
    2. When people save money, they give up the opportunity to spend that money to buy things now in order to buy things later.
- Benchmark: Grade 8
    4. When interest rates increase, people earn more on their savings and their savings grow more quickly.
- Benchmark: Grade 12
    1. People choose between immediate spending and saving for future consumption. Some people have a tendency to be impatient, choosing immediate spending over saving for the future.