

# Tools for Teaching the Arkansas High School Economics with Personal Finance Course

Session 18:

## Saving and Investing

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### Session Description

Students will investigate different forms of credit, compare credit card offers, and determine the costs and benefits of credit.

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### Standards and Benchmarks (see page 18.5)

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### Talking Points

#### Saving

1. Saving is allocating part of one's current income toward the purchase of goods and services in the future (i.e., it is spending on future goods and services).
2. Saving is hard to do because it goes against people's natural time preference to enjoy benefits now and pay costs later.
3. Saving is good to do because there is a monetary reward: interest (a payment typically based on a percentage of the amount saved).
4. The simple interest formula shows how much interest ( $I$ ) an initial amount of savings (the principal,  $P$ ) will earn at a fixed interest rate ( $r$ ) over a specific amount of time ( $t$ , usually years):  
 $I = prt$ .
5. The compound interest formula shows how much an initial amount of savings ( $P$ ) will be worth ( $A$ ) at the end of some number of years ( $t$ ) if the annual interest rate is  $r$  and  $n$  is the number of times interest is compounded during the year:  $A = P(1 + \frac{r}{n})^{nt}$ .
6. Based on compounding, one can determine the number of years it would take an initial amount of savings to double. This doubling can be approximated by the Rule of 72: Time to double =  $72/r$ , where  $r$  is the interest rate expressed as a whole number.
7. Because of compounding, the earlier a person starts to save, the greater the impact on the amount saved.

## Investing

1. The rate of return on an investment, or asset, over a year is the return (any income generated plus any change in the market value of the asset over the year) divided by the market value of the asset at the beginning of the year.
2. The rate of return on an asset can vary from period to period.
3. The expected rate of return is an average of the actual rates of return over several periods and is typically expressed as an annual rate of return.
4. The greater the variability of the actual rate of return from the expected rate of return, the greater the risk associated with the asset.
5. Because people tend to be risk averse (i.e., they wish to avoid risk), they usually must be paid a higher expected rate of return on riskier assets.
6. Risk can be reduced by
  - choosing assets with lower variability,
  - time, and/or
  - diversification (holding several different types of assets).
7. The PACED decision-making model can be applied to the investment decision:
  - **Problem:** The need to choose investments for a portfolio.
  - **Alternatives:** Identify investment alternatives (choices), e.g., stocks, bonds, mutual funds, savings accounts, and real estate.
  - **Criteria:** Determine which factors to use to evaluate alternatives, e.g., risk, rate of return, liquidity, costs, and diversification.
  - **Evaluation:** Evaluate the alternatives based on the criteria. Evaluation will vary depending on a person's age, risk preferences, time horizon, and so on.
  - **Decision:** Choose the highest-ranked alternative given the criteria.

## Resources

NOTE: See p. v for instructions on how to set up an [Econ Lowdown](#) account and assign resources found in the Resource Gallery to your students.

### *Saving*

#### Online Modules

Allow time for students to complete the modules:

- *Cards, Cars, and Currency*
  - Lesson 5: A Penny Saved (30:00)  
[https://www.econlowdown.org/resource-gallery/cards\\_cars\\_currency\\_5](https://www.econlowdown.org/resource-gallery/cards_cars_currency_5)
- *It's Your Paycheck!*
  - Lesson 5: Savvy Savers (30:00)  
[https://www.econlowdown.org/resource-gallery/its\\_your\\_paycheck\\_5](https://www.econlowdown.org/resource-gallery/its_your_paycheck_5)
- Soar to Savings (90:00)  
[https://www.econlowdown.org/resource-gallery/soar\\_to\\_savings](https://www.econlowdown.org/resource-gallery/soar_to_savings)

#### Video Q&A

Allow time for students to view the videos and answer the questions:

- No-Frills Money Skills Video Series—Growing Money (15:00)  
<https://www.econlowdown.org/resource-gallery/no-frills-money-skills-episode-1-growing-money>
- No-Frills Money Skills Video Series—Ways to Save (20:00)  
<https://www.econlowdown.org/resource-gallery/no-frills-money-skills-episode-2-ways-to-save>

#### Reading Q&A

Allow time for students to read the essays and answer the questions:

- *Page One Economics*®—Banking Basics  
<https://www.econlowdown.org/resource-gallery/focus-on-finance-banking-basics>
- *Page One Economics*®—Stock Market Strategies: Are You an Active or Passive Investor?  
<https://www.econlowdown.org/resource-gallery/stock-market-strategies-are-you-an-active-or-passive-investor>

## Lessons

Allow time for students to complete the lessons:

- *Making Personal Finance Decisions*
  - Unit 1: Thinking Economically—Lesson 1B: Making Choices and Identifying Costs  
<https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/making-choices>

- Unit 6: Saving—Lesson 6B: Simple and Compound Interest—Why It Is Great to Save  
<https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/simple-and-compound-interest>

## **Investing**

### **Video Q&A**

Allow time for students to view the videos and answer the questions:

- No-Frills Money Skills Video Series—Get into Stocks (15:00)  
<https://www.econlowdown.org/resource-gallery/no-frills-money-skills-episode-3-get-into-stocks>
- No-Frills Money Skills Video Series—Understanding Bonds (20:00)  
<https://www.econlowdown.org/resource-gallery/no-frills-money-skills-episode-4-understanding-bonds>
- No-Frills Money Skills Video Series—Mutual Benefit (20:00)  
<https://www.econlowdown.org/resource-gallery/no-frills-money-skills-episode-5-mutual-benefit>
- Thinking Money: Loss Aversion (5:00)  
<https://www.econlowdown.org/resource-gallery/thinking-money-loss-aversion>
- Tools for Enhancing The Stock Market Game™: Invest it Forward™ Wealth Creation for All (15:00)  
<https://www.econlowdown.org/resource-gallery/wealth-creation-for-all>
- Tools for Enhancing The Stock Market Game™: Invest it Forward™ Understanding Capital Markets (10:00)  
<https://www.econlowdown.org/resource-gallery/understanding-capital-markets-high-school-and-college>

## **Lessons**

Allow time for students to complete the lessons:

- Diversification and Risk (includes PPT)  
<https://www.stlouisfed.org/education/diversification-and-risk>
- *Making Personal Finance Decisions*
  - Unit 8: Investing—Lesson 8A: Managing Risk—Time and Diversification  
<https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/managing-risk>
  - Unit 8: Investing—Lesson 8B: Evaluating Investment Options  
<https://www.stlouisfed.org/education/making-personal-finance-decisions-curriculum-unit/evaluating-investment-options>

## Standards and Benchmarks

### Arkansas Economics with Personal Finance Standards

**Content Standard E.2:** Students will understand the impact of economic decision-making. This includes considering the marginal costs and benefits of alternatives.

- **E.2.ECON.2:** Evaluate the roles of scarcity, incentives, trade-offs, and opportunity cost in decision-making\* (e.g., PACED decision-making model, cost/benefit analysis, employment choices, the four factors of production).

### Personal Finance Alignment

- **PF.7.SI.4:** Analyze the relationship between risk and return.

**Content Standard E.4:** Students will understand the growth, stability, and interdependence within a national economy. This includes the current and future state of the economy using economic indicators and monetary and fiscal policies for a variety of economic conditions.

- **E.4.ECON.4:** Compare and contrast the roles and functions of financial institutions in the United States including banking practices and regulation of savings and investments.

### Personal Finance Alignment

- **PF.5.MM.1:** Compare types of banking institutions including products and services available.
- **PF.5.MM.2:** Explore the process of opening and managing different types of accounts (e.g., checking, savings).
- **PF.7.SI.8:** Understand the regulation of savings and investments.

**Content Standard E.6:** Students will understand the factors affecting income, wealth, and financial risk. This includes the role of credit in personal finance.

- **E.6.ECON.PF.2:** Critique components of personal money management\* in order to build short-term and long-term wealth:
  - Saving (e.g., stick to a budget, automate savings, cut out unnecessary spending) and investing (e.g., growth, shares, property)
  - Planning for retirement

### Personal Finance Alignment

- **PF.7.SI.5:** Compare the characteristics of saving tools (e.g., liquidity, interest rates, term length) to determine how to best meet a financial goal
- **PF.7.SI.7:** Research different types of investments and consider the importance of diversification
  - Annuities
  - Bonds
  - Money Market Funds

- Mutual Funds
- Real Estate
- Stocks
- **PF.5.MM.3:** Analyze the advantages and disadvantages of various retirement plans (e.g., pension, 401K, IRA, social security)
- **PF.7.SI.1:** Compare the effects of interest rates as applied to saving and borrowing money
- **PF.7.SI.4:** Analyze the relationship between risk and return