

Investing For Your Future

LESSON DESCRIPTION (Background for the Instructor)

In this lesson, students will learn about the difference between saving and investing, the advantages and potential returns of investing, especially over long time periods, and common types of investment products such as stocks, bonds, and mutual funds. They will also learn about various types of investment risks (e.g., market risk, business failure risk, interest rate risk) and self-assess their personal investment risk tolerance.

The lesson includes five activities that instructors can select from. In these activities, students will:

- ◆ View the YouTube video *Saving vs. Investing* and complete a Venn Diagram debriefing activity
- ◆ Calculate the potential return of investment products using the *Investment Calculator Activity*
- ◆ Complete a *Web Quest* to identify the risks associated with investing and how to reduce them
- ◆ Complete an *Investment Risk Tolerance Quiz* to assess their personal feelings about taking risks
- ◆ Play a 14-Question *Investment BINGO Game* to reinforce key class concepts

The lesson also contains 10 assessment questions (5 multiple choice and 5 True-False), learning extensions (i.e., suggested learning activities beyond the scope of the lesson plan), and references and resources.

INTRODUCTION (Background for the Instructor)

While the words “saving” and “investing” are often used interchangeably (e.g., saying “I’m saving for retirement” when someone is really investing over an extended period of time), they are very different. Thus, investors cannot expect to have the characteristics of savings in an investment product such as a stock or growth mutual fund (i.e., investments don’t provide predictable returns like bank CDs do).

Saving provides funds for emergencies and for making specific purchases in the relatively near future (usually three years or less). Safety of the principal and liquidity of the funds (ease of converting savings to cash) are important aspects of savings dollars. Money in savings products is also government-insured by the Federal Deposit Insurance Corporation (FDIC). Because of these characteristics, savings dollars generally yield a low rate of return and often do not maintain purchasing power to keep pace with inflation.

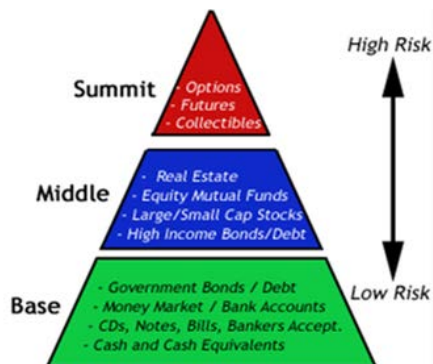
Investing, on the other hand, focuses on increasing net worth and achieving long-term financial goals such as having money for a child’s college education or an adequate nest egg for retirement. Investing involves risk (of loss of principal) and should be considered only after someone has low debt, adequate savings for emergencies, adequate insurance, and clearly-defined goals (to know what they are investing for). Investors also need an “investor’s mindset” (i.e., a willingness to accept the uncertainty that accompanies investing).

In summary: *Saving* = Low Risk, Low Reward and *Investing* = High Risk, High POTENTIAL Reward

A typical economic cycle lasts 4-5 years. The economy expands, reaches a peak (high point), contracts, reaches a trough (low point), and expands again. For this reason, it is generally not wise to invest in stocks and stock mutual funds unless a financial goal is five or more years in the future. Otherwise, an investor runs the risk of incurring a capital loss by having to withdraw funds at a loss during a market downturn.

Investors can be owners and/or loaners. With *ownership* investments (e.g., stock, real estate, and collectibles), they own something of value. For example, investors might have an ownership interest in a company as a common stock shareholder, a piece of property, or a valuable antique car. With *loanership* investments, investors lend money to a government entity (e.g., Treasury and municipal bonds), a corporation (e.g., corporate bonds), or a financial institution (e.g., certificates of deposit).

A pyramid diagram is often used in personal finance textbooks to depict the relationship between investment risk and reward. The higher one goes up the pyramid (e.g., from a bank CD to a bond to stocks or a stock mutual fund to options and futures), the higher the investment risk and potential return. Thus, a pyramid diagram depicts the risk-reward trade-off that investors generally have to make. People with a very conservative risk tolerance will probably want to concentrate their investments at the base of the pyramid.



There is no such thing as a “perfect investment.” *Every* type of investment has *some* type of risk. The types of risks vary for different types of investments, however, (e.g., stocks versus bonds). The causes of investment risks include inflation, political uncertainty, business failure, and interest rate changes:

- Business (Failure) Risk-** Affects company stocks and corporate bonds when a business is not profitable
- Market Risk-** The risk of investing in stock versus a risk-free asset (stock prices follow market trends)
- Interest Rate Risk-** Affects bonds when interest rates change (increasing interest rates lower bond values)
- Inflation Risk-** When investment return does not keep pace with inflation; investors lose purchasing power
- Currency Risk-** Changes in the value of foreign securities related to the value of the U.S. dollar
- Political Risk-** The risk of political instability in an interconnected global economy

Investment risk can be reduced through *diversification* and *dollar-cost averaging*. To diversify, investors should select a variety of investments within the major asset classes (e.g., stocks, bonds, cash equivalents such as CDs). For example, investors can purchase stocks in a variety of industry sectors. Another way to diversify is to purchase shares in a mutual fund that contains a diversified portfolio of securities. Dollar-cost averaging occurs when people invest regular dollar amounts at regular time intervals. An example is having 6% of a worker’s pay placed in an employer retirement savings plan every pay period.

Stock investors are part-owners of the companies that they invest in, unlike bond owners who just lend money to a company. If they are unable to attend an actual shareholder’s meeting, they can vote on company matters via a written or online proxy form. Stock investors make money through capital gains (increase in investment value) and/or dividends. Dividends are income distributions from company earnings that are authorized by a company’s board of directors.

Bond investors lend money to federal, state, and local government entities and to corporations and receive periodic (generally semi-annual) interest. The invested amount (principal) is returned at maturity. Of course, its purchasing power will be reduced due to inflation. Bonds have four primary risks: credit risk (risk of default by issuer), interest rate risk (inverse relationship between interest rates and bond prices), inflation risk (risk of loss of purchasing power), and call risk (risk that issuer might call back the bond-typically when interest rates decrease-and its attractive return will end).

Bond investors need to make three important decisions: 1. *Risk Level* (as indicated by the bond rating for the issuer of a bond), 2. *Maturity Date* (which should be timed to match the time frame for financial goals), and 3. *After-Tax Return* (how much an investor gets to keep after federal and/or state taxes).

Mutual funds are a large professionally managed portfolio of securities such as stocks and bonds. Investors open up an account with an investment company (e.g., Fidelity, Vanguard, Franklin, T.Rowe Price) and pool their money with that of other investors. Decisions about which securities the fund purchases are made by the fund manager. Many investors select mutual funds through their workplace retirement savings plans (e.g., 401(k) plans). Mutual fund investors are indirectly part owners of all the different companies that their mutual fund invests in. Mutual funds provide automatic diversification which reduces investment risk.

There are three types of distributions that mutual fund investors can receive:

- Dividends and interest when a fund receives income and makes pro-rated distributions to investors
- Capital gains when *a fund* sells appreciated securities and makes pro-rated distributions to investors
- Capital gains when *an individual* investor sells shares at a higher price per share than originally paid

Good record-keeping is necessary for all investments so the correct amount of income tax can be paid upon their sale. Investors will have a capital gain or capital loss depending upon whether they sell an investment for more or less than what they paid for it. Investing can build wealth over time and should be viewed as a long-term process. Except for high-earning sports players and rock stars, people generally don't become wealthy from their incomes alone. They need help from investments, time, and compound interest.

Even small dollar amounts put into an investment (e.g., \$50 per month) can add up over a long career. \$100 invested monthly with a 6% return will produce \$263,515 after 45 years before taxes and inflation. \$200 invested monthly (perhaps some of it coming from an employer's 401(k) match) will produce \$527,031.

OBJECTIVES

Students will be able to:

- ◆ Describe the difference between saving and investing.
- ◆ Calculate the potential return of investment products using an online calculator.
- ◆ Understand the difference between ownership and loanership investments.
- ◆ Explain risks and benefits associated with investing and how to reduce investment risks.
- ◆ Explain key features of stocks, bonds, and mutual funds.
- ◆ Understand their personal investment risk tolerance level.

NEW JERSEY PERSONAL FINANCIAL LITERACY STANDARD

- ◆ Standard 9.1.12.D3: Summarize how investing builds wealth and assists in meeting long- and short-term financial goals.
See <http://www.state.nj.us/education/aps/cccs/career/FLFAQ.htm#gradcredit> and <http://www.state.nj.us/education/cccs/2014/career/91.pdf> for information about Standard 9.1

TIME REQUIRED

45 to 180 minutes (depending upon student progress and content depth and number of activities used)

MATERIALS

- ◆ *What Do I Already Know About Investing?* activity handout
- ◆ YouTube Video (3:04): *Saving vs. Investing*: <https://www.youtube.com/watch?v=SoHgDXLj9hY>
- ◆ *Investment Calculator Activity* handout
- ◆ *Web Quest: Investing Risks and How to Reduce Them* activity handout
- ◆ *Investment Risk Tolerance Quiz* activity handout
- ◆ *Investment BINGO Game*
- ◆ *Investment Basics Quiz* (ASSESSMENT)

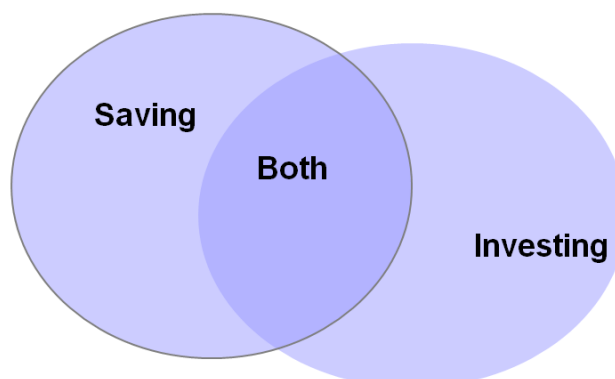
Teachers are encouraged to use as many of the student learning activities as time permits to provide a fuller understanding of investing. The activities can also be used for extra credit assignments, homework, or after-school activities.

PROCEDURE

1. To begin the class discussion about investing, distribute the *What Do I Already Know About Investing?* activity handout. Ask students to form small groups and answer the six questions. Then debrief the activity with the entire class and comment on the accuracy of students' current investing knowledge.

Answers will likely vary. Students may or may not have prior experience with, and knowledge about investing. Three key points to make at the outset are: 1. there is a positive relationship between risk and potential reward, 2. there are no guaranteed returns with many investments, and 3. there is no "right or wrong" investment risk tolerance (i.e., personal feelings about taking investment risks are personal).

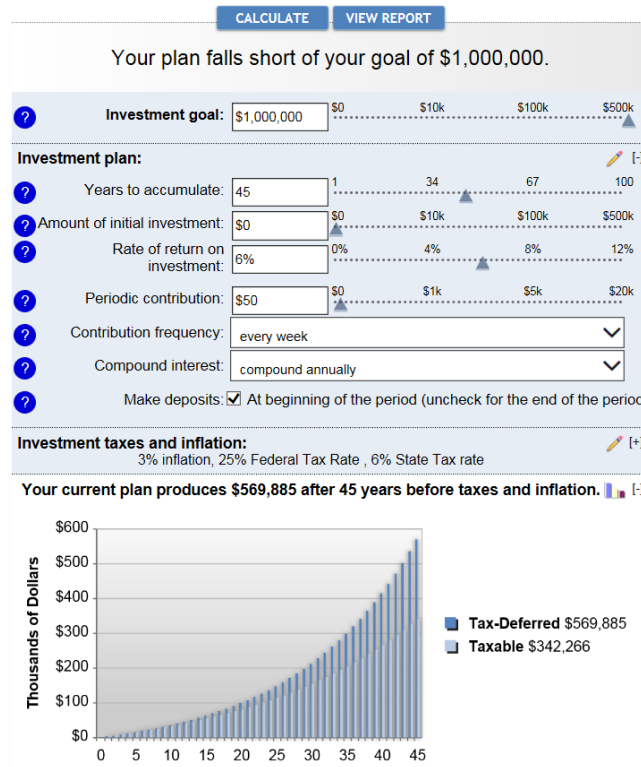
2. **Activity 1:** Draw the Venn Diagram, below, on a board or newsprint pad. Then show the YouTube video *Saving vs. Investing*: <https://www.youtube.com/watch?v=SoHgDXLj9hY>. Ask students to identify *characteristics of savings products* (e.g., money for emergencies and short-term goals, low risk, low return, safe from loss of principal, and easily accessible without loss of value/liquidity) and *characteristics of investment products* (e.g., money for building wealth and achieving mid-term and long-term financial goals, higher risk and higher potential return than savings, and some investments-like stocks- have no guaranteed rate of return and have volatile prices in short time periods). Then ask students what saving and investing (and people who save and invest) have in common. Answers might include: compound interest on saving/investing earnings, income taxes on saving/investing earnings, future-mindedness, discipline, and delayed gratification (i.e., spending less today for more tomorrow).



3. **Activity 2:** Direct students to <http://www.bankrate.com/calculators/retirement/investment-goal-calculator.aspx>, the online *Investment Calculator* from Bankrate.com. The calculator has fillable textboxes, sliders, and drop-down menus. Then distribute the *Investment Calculator Activity* handout and ask students to work in pairs on a computer or mobile device to answer the following questions:

You want to save \$1 million by age 67 (the current full retirement age for Social Security). You are now 22. Assuming that you have nothing currently saved, earn a 6% average annual return on your investments compounded annually, save \$50 per week, and use the defaults built into the calculator for inflation and tax rates, will you reach your goal?

No. This scenario would produce \$569,885 in tax-deferred retirement savings accounts (e.g., a 401(k) or Traditional IRA) and \$342,266 in taxable accounts as shown below.



If you save \$100 per week, and use the defaults built into the calculator for inflation and taxes, will you reach your goal?

Yes, if you invest in tax-deferred retirement savings accounts. This scenario would produce \$1,139,770 after 45 years before taxes and inflation. A taxable account investment would grow to \$684,533.

Create your own investment scenario and solve it using the *Investment Calculator*.

Answers will vary with each group of students. Ask for a few volunteers to describe their scenarios.

What would happen if the inflation and/or income tax rates were higher than the default rates?

People would need to invest more money to overcome the wealth-eroding effects of higher inflation and tax rates. Inflation reduces the purchasing power of money and higher tax rates leave less investment earnings for investors to enjoy. Nobody can predict future inflation and tax rates. Thus, the best investors can do is use current inflation and tax rates or, in the case of inflation, historical average rates.

Why does someone have more money in a tax-deferred account than a taxable account?

With a tax-deferred investment, taxes on investment earnings are paid at a future date, typically in retirement. Thus, the return is higher than that of a taxable investment where taxes are owed each year on investment earnings. Over time, the gap between the return on taxable and tax-deferred investments widens due to the effects of compound interest (earning interest on previously earned interest).

How can people “find” money to invest when their income is limited or they have many expenses?

Answers will vary with each group of students. Answers might include specific examples of reducing expenses, getting matching savings from an employer, and moonlighting to earn additional income.

- Activity 3:** Distribute the *Investment Risks and How to Reduce Them* activity handout and ask students to use an online search engine (e.g., Google, Bing, etc.) and search for the terms “investment risks,” “risks of investing,” and “reducing investment risk.” Explain that risk involves uncertainty about future investment performance (i.e., an investment can make money or lose money). It involves the probability of a loss in value and all investments have some type of risk. Generally, the higher an investment’s risk, the higher its *potential* return, especially over long time periods. Investment risks can be reduced but cannot be totally eliminated. They are part of the investing process. Give students about 15-20 minutes to find, read, and summarize articles from reliable sources that are not selling financial products. Then call the entire class back together and debrief the activity and what they learned.

The information that students find will vary. They will probably find lists of specific types of risk such as concentration risk (lack of diversification), liquidity risk (for real estate), interest rate risk, credit risk, call risk, and reinvestment risk (for bonds), inflation/purchasing power risk for cash assets, business risk and market risk (for stocks), and currency risk (for foreign securities). For a tutorial on types of investment risk, see <http://www.investopedia.com/exam-guide/finra-series-6/evaluation-customers/types-investment-risks.asp>. Investment risk can be reduced by owning different asset classes such as stock, bonds, real estate, and cash equivalent products like bank CDs (asset allocation), diversifying investments within each asset class (e.g., owning stock in different industry sectors), and dollar-cost averaging (making regular deposits at regular time intervals, such as \$50 per month). For a good tutorial about risk reduction strategies, see <http://www.wikihow.com/Reduce-Financial-Risk>.

- Activity 4:** Make print copies of the *Investment Risk Tolerance Quiz* found on the Rutgers Cooperative Extension Web site: <http://njaes.rutgers.edu/money/riskquiz/> (or use the online quiz). This tool has been tested in empirical research and found to be a reliable indicator of risk tolerance. Give students about 15-20 minutes to answer the 13 questions and score themselves using the scoring grid. Debrief the activity by asking students to discuss their scores and their feelings about taking investment risks.
- Activity 5:** Distribute a copy of the *Investment BINGO Game* and explain that it will serve as a review of basic investment terminology. The game card has 15 spaces, including a free space in the middle. Have students write each one of the 14 terms under the game board *in any order of their choosing* in the 14 open spaces. Read only the definitions of the 14 terms below and have students determine the correct answer. Once students identify the correct answer, have them mark it on their game card. When the students get three markers across or five down, they will say “BINGO.” Prizes for the game winners are optional but can add to students’ enthusiasm and level of participation.

A template for Bingo game markers to cover the CEO Bingo Game card can be found at <http://fffl.councilforeconed.org/documents/978-1-56183-696-3-activity-lesson-22.pdf>. Cut each of the 14 words and definitions, below, into strips to pull out of a container (e.g., can, jar, or hat) on a random basis to play the game. The definitions for the 14 *Investment BINGO Game* questions are as follows:

Bond- A debt security (IOU) issued by a government or corporation that pays periodic interest to investors.

Capital Gain- Profit made when an investor sells an investment for more than the amount paid to buy it.

Compound Interest- Earning interest on previously-earned interest to build investment wealth over time.

Diversification- The process of reducing investment risk by selecting a variety of investments.

Dollar-Cost Averaging- Investing a set amount at set time intervals; e.g., \$50 on the first of every month.

Emergency Fund- Ideally, 3 to 6 months of cash equivalent assets set aside for unexpected events.

Inflation Risk- Risk of low investment returns that causes investors to lose purchasing power over time.

Investing- Setting aside money to grow your net worth and to achieve long-term financial goals.

Investment Pyramid- A graphic depiction of risks and rewards of investment products using a triangle.

Mutual Fund- A large professionally managed portfolio of securities such as stocks and/or bonds.

Risk Tolerance- Personal feelings of individuals about how much investment risk they want to take.

Saving- Setting aside money for emergencies, upcoming expenses, and short-term financial goals.

Stock- Unit of ownership of a corporation represented by shares owned by individual investors.

Tax-Deferred Investment- An investment where taxes are paid at a later date, typically at retirement.

CLOSURE

Ask students if they have any remaining questions about investments. Remind them that investing is generally a long-term proposition and that it can be very risky and costly (short-term capital gains taxes) to try to “time the market.” You have to be right twice (i.e., about when to get out of the stock market and when to get back in) and even experienced professionals have trouble doing this consistently.

Caution students that research has shown young adults to be very cautious investors. For background, see <http://www.cnbc.com/2015/08/12/are-millennials-more-risk-averse-than-other-investors.html> and <http://www.fa-mag.com/news/study--millennials-ignorant-on-risk--diversification-27337.html>. However, money won't grow very fast in cash assets. Also, they have many decades to ride out market volatility.

GLOSSARY

See the 14 items on the *Investment BINGO Game* (above) for key investing terms and their definitions.

LEARNING EXTENSIONS

If time permits, the following activities can be used to extend the depth of this lesson:

- ◆ Invite a certified financial planner® as a guest speaker to discuss investment terminology, products, and strategies and share stories about successful and unsuccessful investors.
- ◆ Have students view additional videos about investing:
 - Saving, Investing, and Speculating* (Pinnacle Advisory Group): <https://www.youtube.com/watch?v=blnxbftme0>
 - The Power of Compounding* (Investools): <https://www.youtube.com/watch?v=immQX0RKfY0&t=4s>
 - Investing 101* (Smart Investing Trends) (6:37): <https://www.youtube.com/watch?v=14TzfPFLMB4>
 - Risks Involved With Investing* (Zions TV): <https://www.youtube.com/watch?v=ziyJShgA8p8>
 - Investing and Risk* (Fidelity): <https://www.youtube.com/watch?v=Y2ZJOuA6nXk>
 - What's Diversification* (Fidelity): https://www.youtube.com/watch?v=LU8tubkz_Fg
 - Investing Myths* (Investools): <https://www.youtube.com/watch?v=7fBjXaGjQ0>
 - How to Define Your Investing Personality* (Fidelity): <https://www.youtube.com/watch?v=Uydc7wfcce>
- ◆ Have students test out different investment calculators:
 - Investment Calculator* [Includes a Bar Graph and Pie Chart to Illustrate the Results] (Smart Asset): <https://smartasset.com/investing/investment-calculator#a8ckPOiQ2v>
 - Investment Calculator* [Includes Interactive Bar Growth to Illustrate Balance Accumulation Over Time] (Calculator.net): <http://www.calculator.net/investment-calculator.html>
 - Investment Performance Calculator* [Compares Starting and Ending Balance Adjusted for Additions and Withdrawals] (MoneyChimp): http://www.moneychimp.com/features/portfolio_performance_calculator.htm
 - Savings Calculator* (FINRA): <http://apps.finra.org/Calcs/1/Savings>
- ◆ Incorporate content and activities from the following lesson plans:
 - There is No Free Lunch in Investing* Lesson Plan (*Financial Fitness for Life*, Council for Economic Education): <http://fffl.councilforeconed.org/lessons.php?gradeLevel=9-12&lid=68307>
 - Saving and Investing* Lesson Plan (Practical Money Skills for Life): http://practicalmoneyskills.com/foreducators/lesson_plans/lev_3/L3TeachersGuide12.pdf
 - Diversification and Risk* Lesson Plan (Federal Reserve Bank of St. Louis): <https://www.stlouisfed.org/~media/Education/Lessons/pdf/Diversification-and-Risk.pdf>
 - Seven Things I've Learned About Investing* Lesson Plan (Canadian Foundation for Economic Education): <http://classroomedition.ca/seven-things-ive-learned-about-investing-2/>
 - Investment Basics* Lesson Plan (Next Gen Personal Finance): https://docs.google.com/document/d/1kImlOgn7fpOFakIVkT_m8awjDMAqU4tc3siWNENvrrU/edit
 - Investment Strategies* Lesson Plan (Next Gen Personal Finance): <https://docs.google.com/document/d/1McTu4rzZ40LiG0j4lbHK4KCfLPJWI2dvaA7f1shg7go/edit>
- ◆ Have students take the *FINRA Investor Knowledge Quiz*: <http://apps.finra.org/quiz/1/investorquiz.aspx>.
- ◆ Have students write a summary of what they learned about investing for the school newspaper.
- ◆ Have students discuss the take-away message from this infographic about two investors, David and Bruce: *Why You Should Start Investing Early* Infographic (LifeHack): <http://www.lifehack.org/325117/why-you-should-start-investing-early-possible-infographic>

ASSESSMENT: *Investment Basics Quiz*

Instructors are encouraged to use the questions below for content review or as a pre-and/or post-test to determine gains in student knowledge about investing after teaching this lesson.

Correct answers to the multiple choice and True-False questions are shown in boldface type.

Multiple Choice Questions

- Investments that produce income that will be taxed at a future date (usually after retirement) are
 - Non-taxable
 - Tax-deferred**
 - Taxable
 - Tax-exempt
- Making a regular investment deposit at regular time intervals is called
 - Dollar-cost averaging**
 - Market timing
 - The buy and hold technique
 - Leveraging
- Which investment has historically earned the highest average annual return?
 - Treasury bills
 - Corporate bonds
 - Common Stock**
 - Municipal bonds
- If you buy a company's bond,
 - You own a part of the company
 - You are liable for the company's unpaid debts
 - You have lent money to the company**
 - You can vote at the company's annual business meeting
- The process of owning many stocks in a variety of industries is called
 - Leverage
 - Dollar-cost averaging
 - Compounding
 - Diversification**

True-False Questions

- When interest rates increase, the value of existing bonds sold prior to maturity decreases (**TRUE: There is an inverse relationship between interest rates and the value of bonds. When one goes up, the other goes down, like a see-saw. Bond prices go down when interest rates rise because investors have to sell them at a discount to entice investors to buy bonds with a below-market interest rate**)

2. Common stock owners can potentially make money on stocks by receiving interest and stock splits **(FALSE: Stocks do not pay interest and stock splits may not always produce a profit. The two ways that stock investors can make money are dividends and capital gains)**
3. Savings products have low risk and high potential reward **(FALSE: Savings products have a low risk and a low reward; i.e., rate of return. In fact the return on savings products may be so low that savers lose purchasing power when their rate of return is lower than the Consumer Price Index, which is used to measure inflation)**
4. A typical economic cycle lasts 4-5 years **(TRUE: For this reason, stocks are generally not recommended for investment goals that are less than five years away. By following this guideline, someone is less likely to have to take money out of an investment during a market downturn)**
5. Bonds are an example of an ownership investment **(FALSE: Bonds are an example of a loanership investment. Bond owners lend money to a corporation or government entity in exchange for periodic interest and the promise of the return of their principal upon the bond's maturity. Stocks, stock mutual funds, real estate, and collectibles are examples of ownership investments)**

REFERENCES AND RESOURCES

Introduction to Investing (U.S. Securities and Exchange Commission):

<https://www.investor.gov/introduction-investing>

Investing for Your Future (2017). Cooperative Extension investing home study course:

<http://articles.extension.org/pages/10984/investing-for-your-future>

Investor Education Modules (2017). FINRA Investor Education Foundation:

<http://www.finrafoundation.org/resources/education/modules/>

Investing 101 (2017) Investopedia: <http://www.investopedia.com/university/beginner/>

Investment Risk Tolerance Quiz (Rutgers Cooperative Extension): <http://njaes.rutgers.edu/money/riskquiz/>

Investopedia (2017): <http://www.investopedia.com/> and <http://www.investopedia.com/investing-education/>

Investor Education (Merrill Edge): <https://www.merrilledge.com/investor-education>

Investor Education (North American Securities Administrators Association):

<http://www.nasaa.org/investor-education/>

Investor Education (360 Degrees of Financial Literacy):

<http://www.360financialliteracy.org/Topics/Investor-Education>

Investor Education (Vanguard): <https://investor.vanguard.com/investing/investor-education>

Investor Words Glossary (2017): <http://www.investorwords.com/>

Saving and Investing (University of Delaware Extension):

<http://extension.udel.edu/factsheets/saving-and-investing/>

What is Risk? (U.S. Securities and Exchange Commission):

<https://www.investor.gov/introduction-investing/basics/what-risk>

What Do I Already Know About Investing? Activity

Directions: Read the questions below and write down a response based upon your knowledge of and/or experience with investing. Be prepared to discuss your responses with fellow class members.

What personal experience have you had with investing?

What have you heard about investing from others (parents, peers, relatives, teachers, etc.)?

What television shows or movies relate to investing?

What questions do you have about investing?

How can you personally relate to the topic of investing?

Investment Calculator Activity

Go to <http://www.bankrate.com/calculators/retirement/investment-goal-calculator.aspx>, the online *Investment Calculator* from Bankrate.com. The calculator has fillable textboxes, sliders, and drop-down menus. Pair up with another student to answer the following questions:

You want to save \$1 million by age 67 (the current full retirement age for Social Security). You are now 22. Assuming that you have nothing currently saved, earn a 6% average annual return on your investments compounded annually, save \$50 per week, and use the defaults built into the calculator for inflation and tax rates, will you reach your goal?

If you save \$100 per week, and use the defaults built into the calculator for inflation and taxes, will you reach your goal?

Create your own investment scenario and solve it using the *Investment Calculator*.

What would happen if the inflation and/or income tax rates were higher than the default rates?

Why does someone have more money in a tax-deferred account than a taxable account?

How can people “find” money to invest when their income is limited or they have many expenses?

Web Quest: Investing Risks and How to Reduce Them

In this activity, you will conduct an online search to identify investment risks and how to reduce them.

Instructions:

1. Go to an online search engine (e.g., Google, Bing) and search for terms such as “investment risks,” “risks of investing,” and “reducing investment risk.”
2. Read three articles (not paid advertisements) that describe investment risks.
3. When you are done reading, complete the table below by listing three key pieces of information that you found.
4. Be prepared to discuss the information that you found with the entire class.

Information Source	Information About Investment Risks

Risk Tolerance Quiz¹ with Scoring Grid

Want to improve your personal finances? Start by taking this quiz to get an idea of your investment risk tolerance – one of the fundamental issues to consider when planning your investment strategy, either alone or in consultation with a financial services professional. The *Investment Risk Tolerance Quiz* is also available online at <http://njaes.rutgers.edu/money/riskquiz/>.

Choose the response that best describes you – there are no “right” or “wrong” answers. Just have fun!

When you're done, click on the "View Results" button to see how you're doing.

Note: By taking this quiz you will be contributing to a study on measuring financial risk tolerance. Your results will be recorded anonymously. We are not collecting any identifying information.

1. In general, how would your best friend describe you as a risk taker?
 - a. A real gambler
 - b. Willing to take risks after completing adequate research
 - c. Cautious
 - d. A real risk avoider

2. You are on a TV game show and can choose one of the following. Which would you take?
 - a. \$1,000 in cash
 - b. A 50% chance at winning \$5,000
 - c. A 25% chance at winning \$10,000
 - d. A 5% chance at winning \$100,000

3. You have just finished saving for a “once-in-a-lifetime” vacation. Three weeks before you plan to leave, you lose your job. You would:
 - a. Cancel the vacation
 - b. Take a much more modest vacation
 - c. Go as scheduled, reasoning that you need the time to prepare for a job search
 - d. Extend your vacation, because this might be your last chance to go first-class

4. If you unexpectedly received \$20,000 to *invest*, what would you do?
 - a. Deposit it in a bank account, money market account, or an insured CD
 - b. Invest it in safe high quality bonds or bond mutual funds
 - c. Invest it in stocks or stock mutual funds

5. In terms of experience, how comfortable are you investing in stocks or stock mutual funds?
 - a. Not at all comfortable
 - b. Somewhat comfortable
 - c. Very comfortable

6. When you think of the word “risk” which of the following words comes to mind first?
 - a. Loss
 - b. Uncertainty
 - c. Opportunity
 - d. Thrill

7. Some experts are predicting prices of assets such as gold, jewels, collectibles, and real estate (hard assets) to increase in value; bond prices may fall, however, experts tend to agree that government bonds are relatively safe. Most of your investment assets are now in high interest government bonds. What would you do?
 - a. Hold the bonds
 - b. Sell the bonds, put half the proceeds into money market accounts, and the other half into hard assets
 - c. Sell the bonds and put the total proceeds into hard assets
 - d. Sell the bonds, put all the money into hard assets, and borrow additional money to buy more

8. Given the best and worst case returns of the four investment choices below, which would you prefer?
 - a. \$200 gain best case; \$0 gain/loss worst case
 - b. \$800 gain best case; \$200 loss worst case
 - c. \$2,600 gain best case; \$800 loss worst case
 - d. \$4,800 gain best case; \$2,400 loss worst case

9. In addition to whatever you own, you have been given \$1,000. You are now asked to choose between:
 - a. A sure gain of \$500
 - b. A 50% chance to gain \$1,000 and a 50% chance to gain nothing

10. In addition to whatever you own, you have been given \$2,000. You are now asked to choose between:
 - a. A sure loss of \$500
 - b. A 50% chance to lose \$1,000 and a 50% chance to lose nothing

11. Suppose a relative left you an inheritance of \$100,000, stipulating in the will that you invest **ALL** the money in **ONE** of the following choices. Which one would you select?
 - a. A savings account or money market mutual fund
 - b. A mutual fund that owns stocks and bonds
 - c. A portfolio of 15 common stocks
 - d. Commodities like gold, silver, and oil

12. If you had to invest \$20,000, which of the following investment choices would you find most appealing?
 - a. 60% in low-risk investments 30% in medium-risk investments 10% in high-risk investments
 - b. 30% in low-risk investments 40% in medium-risk investments 30% in high-risk investments
 - c. 10% in low-risk investments 40% in medium-risk investments 50% in high-risk investments

13. Your trusted friend and neighbor, an experienced geologist, is putting together a group of investors to fund an exploratory gold mining venture. The venture could pay back 50 to 100 times the investment if successful. If the mine is a bust, the entire investment is worthless. Your friend estimates the chance of success is only 20%. If you had the money, how much would you invest?
 - a. Nothing
 - b. One month's salary
 - c. Three month's salary
 - d. Six month's salary

Risk Tolerance Quiz Scoring Grid

The scoring for the risk tolerance quiz questions is as follows:

1. a=4; b=3; c=2; d=1
2. a=1; b=2; c=3; d=4
3. a=1; b=2; c=3; d=4
4. a=1; b=2; c=3
5. a=1; b=2; c=3
6. a=1; b=2; c=3; d=4
7. a=1; b=2; c=3; d=4
8. a=1; b=2; c=3; d=4
9. a=1; b=3
10. a=1; b=3
11. a=1; b=2; c=3; d=4
12. a=1; b=2; c=3
13. a=1; b=2; c=3; d=4

In general, the score that you receive on the *Investment Risk Tolerance Quiz* can be interpreted as follows:

18 or below = Low risk tolerance (i.e., conservative investor)

19 to 22 = Below-average risk tolerance

23 to 28 = Average/moderate risk tolerance

29 to 32 = Above-average risk tolerance

33 and above = High risk tolerance (i.e., aggressive investor)

Investment BINGO Game

There are 14 terms below the *Investment BINGO Game* board. Write each word *once in any order* in the 14 blank squares. As definitions of these terms are read and confirmed, place a Bingo marker on that square. When you get three markers across or five down, say “Bingo.”

Investing	Builds	Wealth
	FREE SPACE	

Bond
Diversification
Inflation Risk
Mutual Fund
Stock

Capital Gain
Dollar-Cost Averaging
Investing
Risk Tolerance
Tax-Deferred Investment

Compound Interest
Emergency Fund
Investment Pyramid
Saving

Investment Basics Quiz

Multiple Choice Questions:

Circle the correct answer from among the four answers provided.

- Investments that produce income that will be taxed at a future date (usually after retirement) are
 - Non-taxable
 - Tax-deferred
 - Taxable
 - Tax-exempt
- Making a regular investment deposit at regular time intervals is called
 - Dollar-cost averaging
 - Market timing
 - The buy and hold technique
 - Leveraging
- Which investment has historically earned the highest average annual return?
 - Treasury bills
 - Corporate bonds
 - Common stock
 - Municipal bonds
- If you buy a company's bond,
 - You own part of the company
 - You are liable for the company's unpaid debts
 - You have lent money to the company
 - You can vote at the company's annual business meeting
- The process of owning many stocks in a variety of industries is called
 - Leverage
 - Dollar-cost averaging
 - Compounding
 - Diversification

True-False Questions:

Mark "T" for True or "F" for False in the space before each question.

- ___ 1. When interest rates increase, the value of existing bonds sold prior to maturity decreases.
- ___ 2. Common stock owners can potentially make money on stocks by receiving interest and stock splits.
- ___ 3. Savings products have low risk and high potential reward.
- ___ 4. A typical economic cycle lasts 4-5 years.
- ___ 5. Bonds are an example of an ownership investment.

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