Unit 8
Investing

Lesson 8B:
Evaluating Investment Options

Rule 8: Grow your wealth safely.

Investing requires three simple steps: (i) saving a portion of your income each year to invest, (ii) letting your investments grow (avoiding withdrawals), and (iii) managing your investment risk. These lessons look at investment options, criteria for evaluating investments (using the PACED decisionmaking model), and strategies for managing investment risk.

Lesson Description

Students use the PACED decisionmaking model to investigate the trade-offs involved in choosing an investment.

Standards and Benchmarks (see page 188)

Grade Level

9-12

Concepts

Costs (related to investment options)

Liquidity

PACED decisionmaking model

Rate of return

Risk

Compelling Question

How do people choose among investment options?

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Objectives

Students will be able to

- identify and describe criteria that would be important in choosing investments and
- use the PACED decisionmaking model and grid to choose investments.

Materials

- Visual 8B.1: PACED Decisionmaking Model for Choosing Investments
- Visual 8B.1: PACED Decisionmaking Model for Choosing Investments—Answer Key
- Handout 8B.1: Evaluating an Investment Alternative, one copy for each student
- (optional) Handout 8B.2: Investment Alternatives, one copy for each student
- Handout 8B.3: Assessment, one copy for each student

Time Required

Several class periods

Procedure

1. Review the **PACED decisionmaking model** as necessary (see Lesson 1B). Remind students of the five basic steps: (1) Define the **p**roblem. (2) List the **a**lternatives. (3) Determine the **c**riteria. (4) **E**valuate the alternatives. (5) Make a **d**ecision. Discuss the following:
   - Once people have saved part of their income, what is the next question or problem they will likely need to address? (*Answers will vary, but lead students to realize that choosing investment options should be considered.*)
   - Using the PACED decisionmaking model, for Step 1, the defined problem is how to invest income.
   - What is Step 2? (*List the alternatives.*)
   - What are some investment alternatives? (List alternatives on the board.) (*Answers will vary. See the alternatives listed on* Visual 8B.1: PACED Decisionmaking Model for Choosing Investments *and note those students miss. Briefly describe each alternative as needed; however, students will be asked to research these more fully below.*)
   - Step 3 is to determine the criteria. Criteria are factors that could be used to rank one alternative as being "better" than another. What criteria do people find important for choosing investments? (List the criteria on the board.) (*Answers will vary but will likely include the rate of return and amount of risk.*)

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2. From the list below, add to the list on the board criteria students may have missed. Define each one as follows:

   - **Rate of return** is the return on an asset over a given period divided by the market value (the price it can be sold for in a market) of the asset at the beginning of that period. This ratio is typically multiplied by 100 and expressed as a percentage. (See Lesson 2B for more about the rate of return.)
   - **Risk** is the chance of loss. For an investment, the risk is that the actual rate of return may vary from the expected rate of return. (See Lesson 8A for more about risk.).
   - **Liquidity** is the quality that makes an asset easily converted into cash with little loss of value in the conversion process—that is, how easy is it to liquidate the investment. For example, money in savings can easily be withdrawn for spending, but a house takes time to convert into cash—you need to find a buyer and complete the paperwork before the deal is closed and a check is received.
   - **Costs** are charges, fees, or other expenses associated with buying, selling, or holding an investment. For example, such costs include account maintenance fees, broker charges for buying and selling stocks, closing costs for buying or selling a house, minimum balance requirements, and mutual fund management fees, and so on.

3. Display *Visual 8B.1: PACED Decisionmaking Model for Choosing Investments*. Explain that the grid lists alternatives down the left side and criteria across the top line. Remind the class that Step 4 of the PACED model is evaluating the alternatives. Each cell of the grid needs to be filled in with an evaluation of how well each alternative meets each criterion.

4. Distribute a copy of *Handout 8B.1: Evaluating an Investment Alternative* to each student. (Optional: Also distribute a copy of *Handout 8B.2: Investment Alternatives* to each student.) Form 15 groups of students and assign each group one of the 15 alternatives listed on Visual 8B.1. Explain the following and then allow students time to complete the assignment (one class period; roughly 40 minutes, should be sufficient):

   - Each group is to research and evaluate its assigned investment alternative according to the four criteria given on Handout 8B.1 so that the findings will be comparable: rate of return, risk, liquidity, and costs.

5. Have groups report their results and rationale, discuss any differences, and fill in the cells on Visual 8B.1. (See Visual 8B.1—Answer Key for a sample of how the grid may be filled out.) NOTE: The information on the Answer Key is dated and subjective, so students will not have the exact values shown. What is important is that they provide a reasonable rationale for their evaluation.

6. Point out that the class is now at Step 5 in the PACED decisionmaking model—make a decision. Discuss the following:

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- Given the information shown on Visual 8B.1, which alternative is the "best" choice? (*Students should recognize that the best choice depends on which of the criteria are most important to the person choosing. For example, if the person is uncomfortable with risk, they would not want to choose alternatives with high risk. On the other hand, a person interested only in a high rate of return would likely choose one of the more risky alternatives.*)
- Why might an investor wish to choose more than one investment alternative? (*The investor may have multiple needs: They may want high liquidity to meet short-term goals, a high rate of return to meet long-term goals, or to lower risk through diversification.*)

Closure

7. Explain that most financial planners will ask their clients questions about how they feel about various criteria to help them select the investment(s) that best suits their desires and needs. They basically apply the PACED decisionmaking model or a similar model.

Assessment

8. Distribute a copy of *Handout 8B.3: Assessment* to each student and allow time for students to work (or assign as homework).

Handout 8B.3—Answer Key

Directions: Use the PACED decisionmaking model to select an investment for each of the investors below. For each investor, explain which of the four criteria (rate of return, risk, liquidity, and costs) were the most important factors in choosing those investments.

1. Investor 1 is young with lots of time until retirement and is not afraid to take on risk.

   Answers will vary. Responses should emphasize that Investor 1 has the time to take on additional risk. As such, Investor 1 should likely pursue relatively riskier investments with a higher rate of return, such as corporate bonds, income stocks, growth stocks, real estate, commodities, collectibles, or mutual funds.

2. Investor 2 hopes to retire in three to five years and has a high level of anxiety about fluctuating investment values.

   Answers will vary. Responses should emphasize that Investor 2 has a short horizon for investing and is risk averse. As a result, Investor 2 should likely pursue investments with low risk and higher liquidity, such as certificates of deposit, U.S. savings bonds and Treasury bonds, and money market mutual funds.

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Visual 8B.1: PACED Decisionmaking Model for Choosing Investments

Investment alternatives	Criteria			
	Rate of return	Risk	Liquidity	Costs
Cash				
Checking accounts				
Savings accounts				
Money market deposit accounts				
Certificates of deposit				
U.S. savings bonds				
Money market mutual funds				
U.S. Treasury bonds				
Corporate bonds				
Income stocks				
Growth stocks				
Real estate				
Commodities				
Collectibles				
Mutual funds				

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Visual 8B.1: PACED Decisionmaking Model for Choosing Investments—Answer Key

Investment Alternatives	Criteria*						
	Rate of return**		**Risk**		**Liquidity**	**Costs**	
Cash	1	0%	2	Theft, inflation	5	1	None
Checking accounts	1	0-0.25%	1	Insured, inflation	5	1	Fees
Savings accounts	2	0.25-1%	1	Insured, inflation	4	1	Maintenance fees
Money market deposit accounts	2	2.5-3.5%	1	Insured, inflation	4	2	Minimum balance required
Certificates of deposit	3	4-5%	1	Insured	3	2	Transaction, access fees
U.S. savings bonds	3	2-4%	1	Government guaranteed***	3	2	Transaction, access fees
Money market mutual funds	3	4.5-5%	2	Not insured	3	2	Transaction, other fees
U.S. Treasury bonds	3	3.5-5.5%	1	Government guaranteed***	3	3	Transaction, access fees
Corporate bonds	3-4	6-10%	2-4	Company rating	3	3	Broker, transaction fees
Income stocks	4	9-11%	3-4	Company rating/market	3	3	Broker, transaction fees
Growth stocks	4-5	12-15%	4-5	Company rating /market	3	3	Broker, transaction fees
Real estate	4-5	Varies	3-4	Market	2	4	Agent, transaction fees
Commodities	4	Varies	4-5	Market	3	3	Broker, transaction fees
Collectibles	1-5	Varies	4-5	Market	1	4	Transaction fees
Mutual funds	2-4	Varies	2-4	Mix dependent	3	3-5	Management fees

NOTE: *1 = Very low, 2 = Low, 3 = Medium, 4 = High, 5 = Very high. **Historical data. *** U.S. savings bonds, Treasury notes, and bonds are backed by the full faith and credit of the U.S. government.

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Handout 8B.1: Evaluating an Investment Alternative

Name:________________________________

Investment alternative: ____

Directions: Using the information on Visual 8B.1, evaluate your assigned investment alternative according to the four criteria below (rate of return, risk, liquidity, and costs).

Criteria

________________ **Rate of return:** Find the current rate of return or expected range of rates of return for your investment alternative.

________________ **Risk:** Rate the risk of this investment on a scale from 1 (virtually no risk) to 5 (very high degree of risk). What are the risks of this investment? Risk can come from many sources: market fluctuations that affect the market value of the investment, funds that are not insured, bankruptcy of companies, default by borrowers, inflation, theft, fraud, and so on.

________________ **Liquidity:** Rate the liquidity of this investment on a scale from 1 (low—very difficult to convert into cash) to 5 (very high—very easy to convert into cash). Consider how difficult, costly, or time-consuming it would be to sell the investment to turn it into cash.

________________ **Costs:** Rate the cost of this investment on a scale from 1 (no or very low costs) to 5 (very high costs). Consider all fees, charges, or other expenses associated with buying, selling, or holding the investment (such as maintenance fees, broker charges, transactions fees, minimum balance requirements, and so on). Notice that these costs do not include the price of the actual financial asset.

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Handout 8B.2: Investment Alternatives

Cash is accepted as payment for all debts both public and private. There are no costs associated with holding cash, but there is also no return and its value diminishes due to inflation. It may seem that holding cash has no risk; however, cash is vulnerable to loss or theft.

Checking accounts, which may be held at a bank or credit union, allows the account owner to deposit and withdraw funds. Account owners have the privilege of writing checks on their accounts and using ATM cards and debit cards to access funds. Accounts in FDIC (Federal Deposit Insurance Corporation) member banks are insured up to $250,000. Your principal will always be available to you, but you will receive little or no return.

Savings accounts are accounts with a bank or credit union in which people can deposit their money for future use and earn interest. Accounts in FDIC member banks are insured up to $250,000. You will never lose your principal, but your return will be relatively small.

Money market deposit accounts are offered through banks and operate like a savings account but with a higher minimum investment. They are usually FDIC insured up to $250,000 and offer limited check-writing privileges, so your money is fairly accessible.

Certificates of deposit (CDs) are a saving alternative in which money is left on deposit for a stated period of time to earn a specific interest rate. They are very safe and offer a greater return than a savings accounts, but access carries a penalty if money is withdrawn before the specified time.

U.S. savings bonds are debt securities issued by the U.S. government. Buying a bond is essentially the same as lending money to the U.S. government. You can purchase a bond for as little as $25. Bonds are backed by the full faith and credit of the U.S. government, making them one of the safest investments.

Money market mutual funds are an investment product offered by non-bank institutions such as mutual funds companies. They are not FDIC insured, although they tend to buy relatively safe investments such as short-term government bonds and corporate bonds. The funds offer limited check-writing privileges, so your money is fairly accessible.

U.S. Treasury bonds are backed by the full faith and credit of the U.S. government. You will not lose your principal; there is no chance of default. The return is usually greater than from savings accounts or certificates of deposit. When you buy a U.S. Treasury bond, you are lending your money to the U.S. government.

Corporate bonds are not insured. They are debt issued by corporations. If a company wants to borrow money to finance a project, it might borrow from the public by issuing a bond. The return on a corporate bond will be greater than on a government bond because there is a risk of default.

Stocks are part ownership in a company. Some stocks are riskier than others. Generally, the lower the price, the higher the risk. Potential returns on stocks are greater than those from bonds or insured savings to account for the greater risk.

- **Income stocks** are shares in what investors consider to be very stable and profitable companies, and they usually pay dividends (which provides income to the investor).
- **Growth stocks** are shares in companies that might be smaller, younger companies, but have the potential to grow much larger in the future. These stocks are less likely to pay dividends (because they often reinvest profits for growth). While growth stocks have the potential for faster growth, they are considered to be more risky than income stocks.

Real estate is residential or commercial property. The recent housing bubble illustrated the risk in real estate. For those who sold before the bubble burst, the returns were quite high.

Commodities, such as gold and silver, are speculative. In general, their values grow in times of economic uncertainty but returns are relatively low during steady economic times.

Collectibles vary greatly in value and popularity as do their potential for risk and return. Some art, coins, and stamps may increase in value and provide a return, while others collectibles, for example, Beanie Babies, may not.

Mutual funds are collections of financial assets such as stocks and/or bonds that provide a means of diversification. Some funds are more risky than others because they have a more uncertain future value. Returns on mutual funds vary based on the financial assets held by the fund. Mutual fund companies charge investors fees to manage the portfolio of investments, and these fees can vary widely based on the fund

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Handout 8B.3: Assessment

Name:_________________________________

Directions: Use the PACED decisionmaking model to select an investment for each of the investors below. For each investor, explain which of the four criteria (rate of return, risk, liquidity, and costs) were the most important factors in choosing those investments.

1. Investor 1 is young with lots of time until retirement and not afraid to take on risk.

2. Investor 2 hopes to retire in three to five years and has a high level of anxiety about fluctuating investment values.

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Standards and Benchmarks

National Standards for Financial Literacy

Standard 5: Financial Investing. Financial investment is the purchase of financial assets to increase income or wealth in the future. Investors must choose among investments that have different risks and expected rates of return. Investments with higher expected rates of return tend to have greater risk. Diversification of investment among a number of choices can lower investment risk.

- Benchmark: Grade 8
    5. The rate of return on financial investments consists of interest payments, dividends, and capital appreciation expressed as a percentage of the amount invested.
    6. Financial risk means that a financial investment has a range of possible returns, including possibilities of actual losses. Higher-risk investments have a wider range of possible returns.
    7. The rate of return earned from investments will vary according to the amount of risk. In general, a trade-off exists between the security of an investment and its expected rate of return.
- Benchmark: Grade 12
    5. An investment with greater risk than another investment will commonly have a lower market price, and therefore a higher rate of return, than the other investment.
    7. Diversification by investing in different types of financial assets can lower investment risk.
    11. People vary in their willingness to take risks. The willingness to take risks depends on factors such as personality, income, and family situation.

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