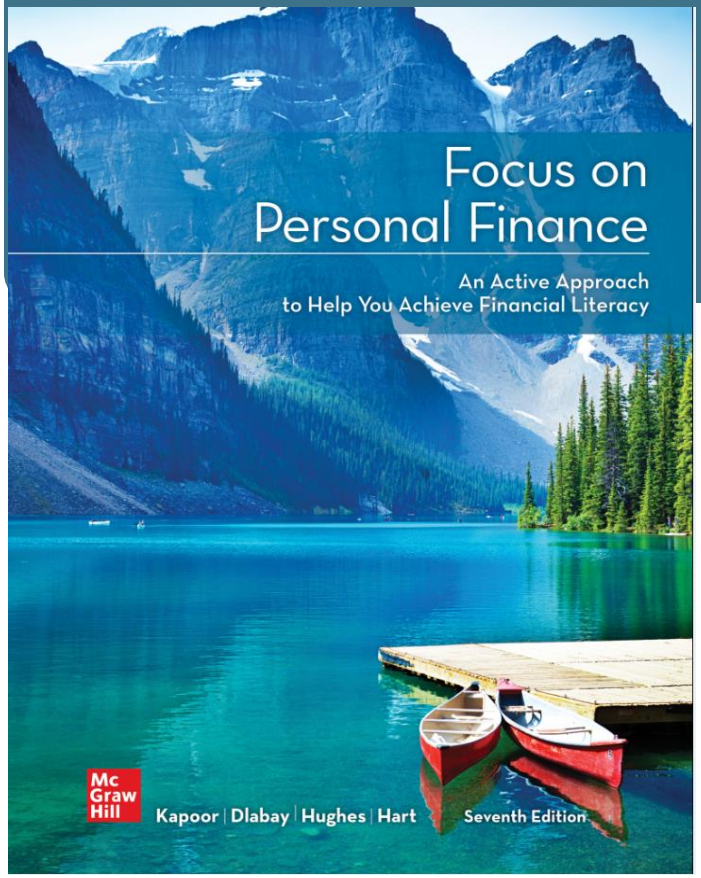



YinYang/Getty Images

# Chapter 1

# Personal Financial Planning in Action

# CHAPTER 1
# LEARNING OBJECTIVES

## In this chapter, you will learn to:

**LO1.1** Identify social and economic influences on financial literacy and personal financial decisions.

**LO1.2** Develop personal financial goals.

**LO1.3** Calculate time value of money situations to analyze personal financial decisions.

**LO1.4** Implement a plan for making personal financial and career decisions.

# Making Financial Decisions
## LO 1.1

- **Personal financial planning** is the process of managing your money to achieve personal economic satisfaction
- *Financial literacy* is the use of knowledge and skills for earning, saving, spending, and investing money to achieve personal, family, and community goals
- A **financial plan** is a formalized report that summarizes your current financial situation, analyzes your financial needs, and recommends future financial activities

# Advantages of Financial Planning

- Increased effectiveness when obtaining, using, and protecting financial resources
- Expanded control of your financial affairs by avoiding excessive debt and dependence on others
- Improved personal relationships
- Sense of freedom from financial worries

# Your Life Situation and Financial Planning

- The stages in the family situation and financial needs of an adult is known as the **adult life cycle**
- Personal factors influencing spending and saving patterns include age, income, household size, and personal beliefs
- Societal changes also influence financial needs:
  - Delaying marriage
  - Dual-income households
  - Single parent households
  - Caring for both children and elderly parents
- **Values** are the ideas and principles that a person considers correct, desirable, and important

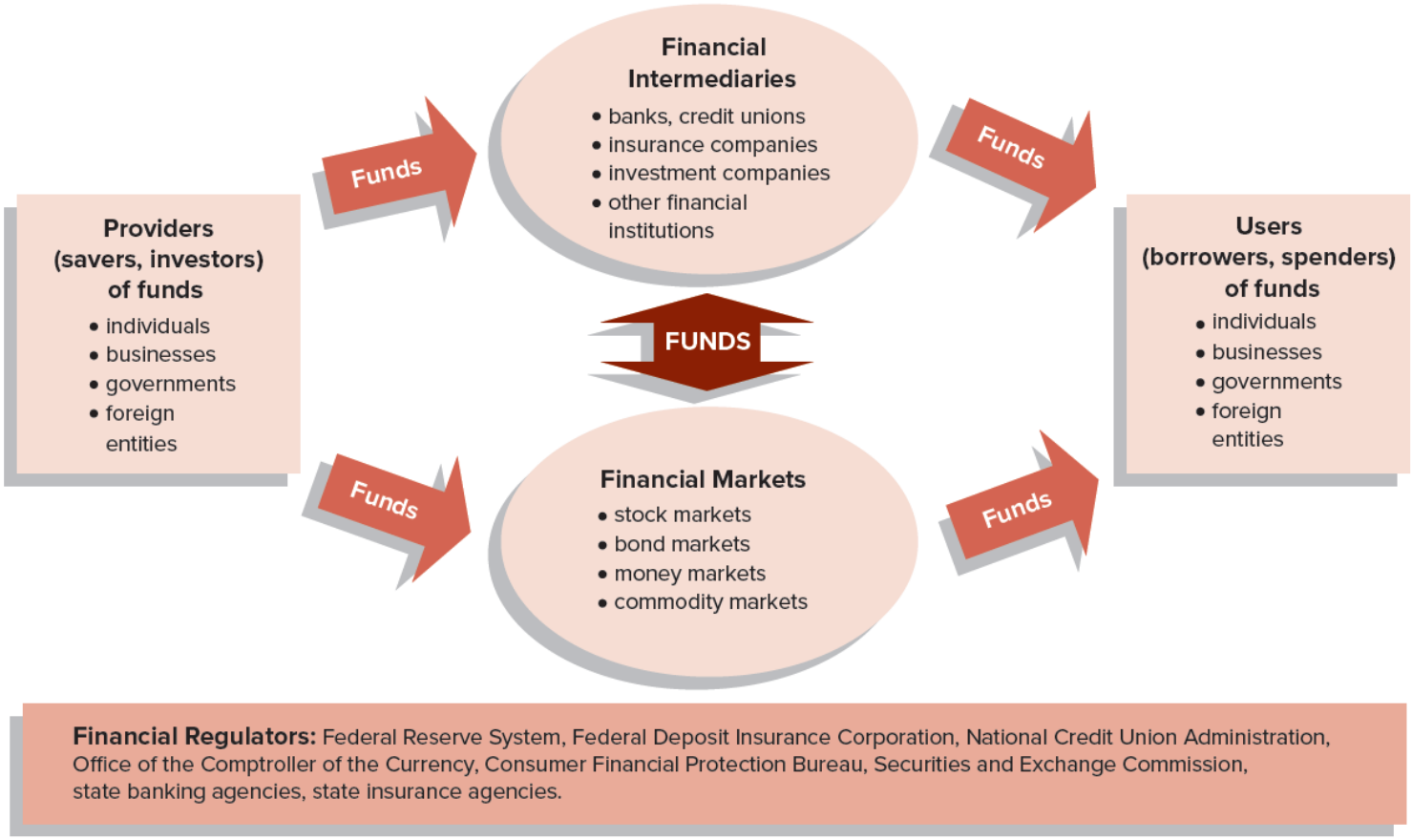
# Financial Planning in Our Economy

- Daily economic transactions facilitate financial planning activities
  - Examples include investing in debt securities (e.g., bonds), equity securities (e.g., stocks), or buying and selling mutual funds, certificates of deposit (CDs), and commodity futures
- **Economics** is the study of how wealth is created and distributed
  - Economic environment includes business, labor, and government working together to satisfy needs and wants
- The Federal Reserve System, or The Fed, attempts to maintain an adequate money supply to encourage consumer spending, business growth, and job creation

# Financial Planning in Our Economy

## The Financial System

Exhibit 1–2 **The Financial System**



# Financial Planning in Our Economy

## Global Influences

- U.S. economy is affected by foreign investors and competition from foreign companies
- Level of imports/exports affects available supply of dollars
  - When the level of exports of U.S.-made goods is lower than the level of imported goods, more U.S. dollars leave the country than the dollar value of foreign currency coming into the U.S. (and vice versa)
- Level of foreign investment affects domestic money supply
- Money supply affects consumer interest rates

# Financial Planning in Our Economy
## Inflation

- **Inflation** is a rise in the general level of prices
  - In times of inflation, the buying power of the dollar decreases
  - Most harmful to people with fixed incomes
  - Inflation rates vary

- *Consumer price index (CPI)* is computed and published by the Bureau of Labor Statistics
  - Measures average change in the prices urban consumer pay for a fixed "basket" of goods and services
  - Many people face *hidden* inflation
  - Alternatively, *deflation* is a decline in prices

# Financial Planning in Our Economy
## Rule of 72

- To find out how fast prices (or your savings) will double, use the *Rule of 72*
  - Divide 72 by the annual inflation (or interest) rate

**EXAMPLE:** Rule of 72

An annual inflation rate of 4 percent, for example, means prices will double in 18 years (72 ÷ 4 = 18). Regarding savings, if you earn 6 percent, your money will double in 12 years (72 ÷ 6 = 12).

# Financial Planning in Our Economy
## Interest Rates

- Interest rates represent the cost of money
- Forces of supply and demand usually influence interest rates
  - When consumers expand their saving and investing, supply increases and interest rates tend to decrease
  - As borrowing by consumers, businesses, and government increases, interest rates are likely to rise due to increased demand
- Interest rates affect your financial planning activities
  - Earnings you receive as a saver or investor reflect current interest rates, as well as a *risk premium*

# Financial Planning Activities

| | |
|---|---|
| • Obtaining | Chapter 1 |
| • Planning | Chapters 2, 3 |
| • Saving | Chapters 2, 4 |
| • Borrowing | Chapter 5 |
| • Spending | Chapters 6, 7 |
| • Managing Risk | Chapters 8–10 |
| • Investing | Chapters 11–13 |
| • Retirement and Estate Planning | Chapter 14 |

# Developing and Achieving Financial Goals
## LO 1.2

- Goal setting time frames:
  - *Short-term goals* will be achieved within the next year or so
    - **Examples**: Saving for a vacation or paying off small debts
  - *Intermediate goals* have a time frame of two to five years
  - *Long-term goals* involve financial plans that are more than five years off
    - **Examples**: Retirement, money for children's college education, or the purchase of a vacation home

# Developing and Achieving Financial Goals

## Types of Financial Goals

- *Consumable-product goals*
  - Usually occur on a periodic basis and involve items that are used up relatively quickly, such as food, clothing, and entertainment
- *Durable-product goals*
  - Usually involve infrequently purchased, expensive items such as appliances, cars, and sporting equipment
  - Tangible items
- *Intangible-purchase, or nonfinancial, goals*
  - Relate to personal relationships, health, education, community service, and leisure
    - **Examples**: Learning a new skill to expand your career, participating in community service activities, and creating art through writing, photography, drawing, or sculpture

# Goal-Setting Guidelines
## The "SMART" Approach

- Effective goals should be SMART:
  - **S** = Specific
  - **M** = Measurable
  - **A** = Action-oriented
  - **R** = Realistic
  - **T** = Time-based

# Opportunity Costs and the Time Value of Money
## LO 1.3

- Every financial decision requires you to sacrifice something in order to get something that you consider more desirable
  - **Example**: You may not buy an item now to save for a future purchase or long-term financial security
- **Opportunity cost** is what you give up when making a choice
  - Often referred to as a ***trade-off***
  - Cannot always be measured in dollars
  - Should be viewed in terms of both personal and financial resources

# Opportunity Costs and the Time Value of Money

## Personal and Financial Opportunity Costs

- Personal opportunity costs include the following:
  - Time
  - Energy
  - Health
  - Abilities
  - Knowledge

- Financial opportunity costs
  - If you wait to receive your money in the future, you want to be rewarded for the risk
    - Would you prefer $100 today or $103 a year from now?
    - How about $120 a year from now instead of $100 today?

# Opportunity Costs and the Time Value of Money
## Time Value of Money

- **Time value of money** is the increase in an amount of money as a result of interest earned
  - Saving today results in more money tomorrow as a result of interest earnings
  - Spending today results in a loss of potential interest earnings

- Saving and spending decisions involve consideration of current needs, future uncertainty, and current interest rates

# Time Value of Money
## Interest Calculations

- Three amounts are used in calculating the time value of money for savings in the form of interest earned:
  - The amount of the savings (i.e., the *principal*)
  - The annual interest rate
  - The length of time the money is on deposit

- Simple interest is calculated as follows:

# Time Value of Money
## Interest Calculation Example

- $500 on deposit at 6% for six months would earn the following:

$$\$500 * 0.06 * 0.5 = \mathbf{\$15}$$

# Time Value of Money
## Types of TVM Calculations

- *Future value* is the amount that will be available at a later date
- *Present value* is the current value of an amount desired in the future

# Time Value of Money
## Calculation Methods

1. Formula calculation
2. TVM tables
3. Financial calculator
4. Spreadsheet software
5. Websites and apps

# Time Value of Money

## Future Value of a Single Amount

- **Future value** is the amount to which current savings will increase based on a certain interest rate and a certain time period
  - Also referred to as *compounding*

- **Example**: $100 deposited in a 6% account for one year will grow to $106.

  Future value = $100 + ($100 × 0.06 × 1 year) = **$106**

- *Compounding* occurs when interest is earned on previously earned interest

# Time Value of Money
## Future Value of a Single Amount (Continued)

- Assume a $650 investment earning 8% for 10 years. What is the future value?

- $FV = PV (1 + i)^n$
- $FV = \$650 (1 + .08)^{10}$
- FV = **$1,403.30**

# Time Value of Money
## Future Value of a Series of Deposits

- An *annuity* is a series of equal deposits or payments
- Time value of money tables can be used to determine the future value of equal yearly savings deposits
  - See Exhibit 1-B in Chapter 1 Appendix
  - To use these tables, and for an annuity to exist, deposits must earn a constant interest rate
- **Example**: If you deposit $50 a year at 7% for six years, starting at the end of the first year, you will have $357.65 at the end of that time ($50 * 7.153)

# Time Value of Money
## Present Value of a Single Amount

- **Present value** is the current value for a future amount based on a certain interest rate an da certain time period
  - Also referred to as *discounting*

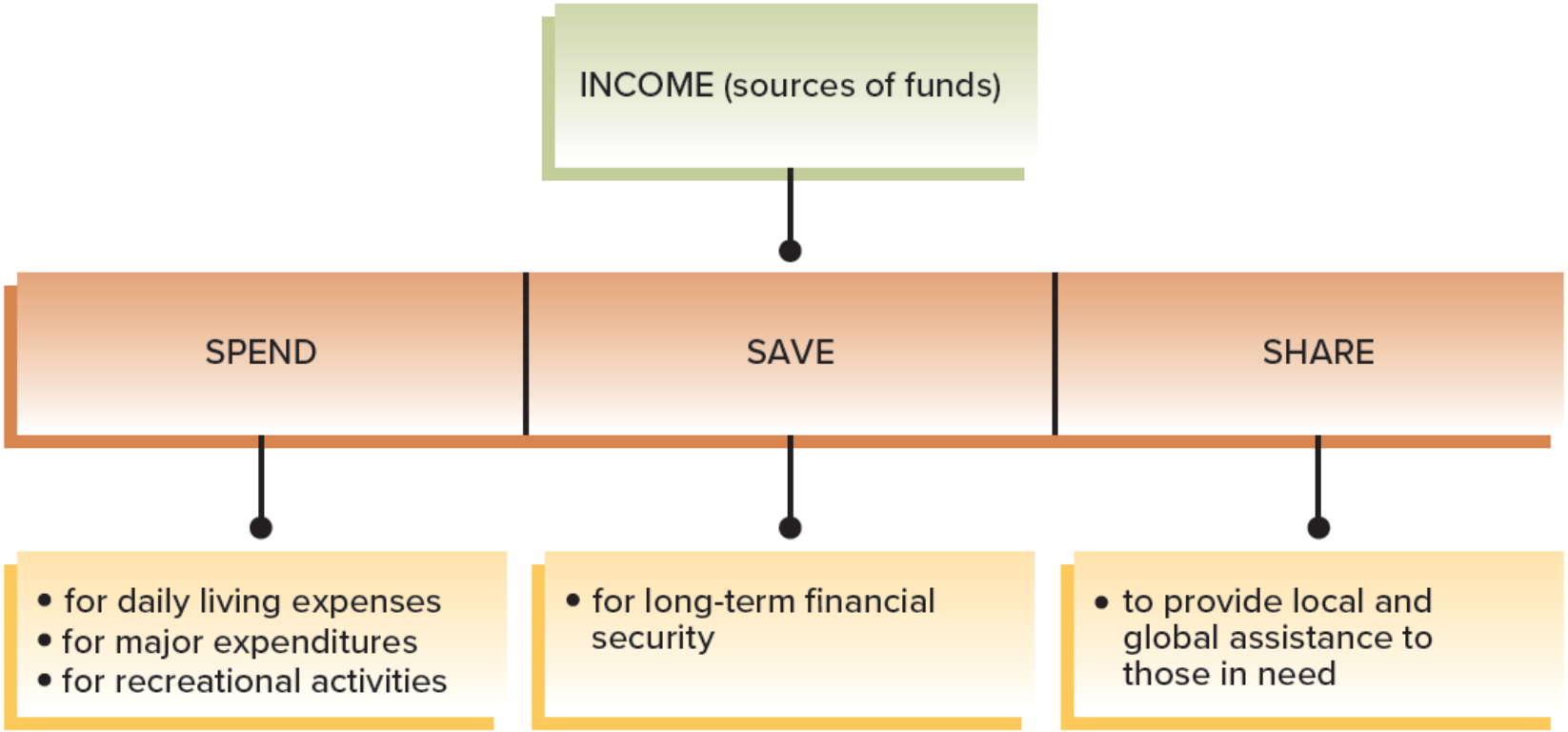
- **Example**: If you want $1,000 five years from now and you earn 5% on your savings, how much do you need to deposit?
  - Use the present value table (Exhibit 1-C in the Appendix)
  - You will need to deposit **$784** ($1,000 * 0.784)

# Time Value of Money
## Present Value of a Series of Deposits

- Present value computations may also be used to determine how much you need to deposit now so that you can take a certain amount out of the account for a desired number of years
- **Example**: If you want to take $400 out of an investment account each year for nine years and your money is earning an annual rate of 8%, you will need to make a current deposit of **$2,498.80** ($400 * 6.247)
  - See Exhibit 1-D in the Appendix

# A Plan for Personal Financial Planning

## LO1.4



# The Financial Planning Process

# Financial Planning Process
## Steps 1-3

1. Determine your current financial situation
   - Prepare a list of assets and debts, along with amounts spent for various items
2. Develop your financial goals
   - Periodically analyze your financial values and goals
   - Specific financial goals are vital to financial planning
3. Identify alternative courses of action
   - Possible courses of action include the following: continue the same course of action, expand the current situation, change the current situation, or take a new course of action

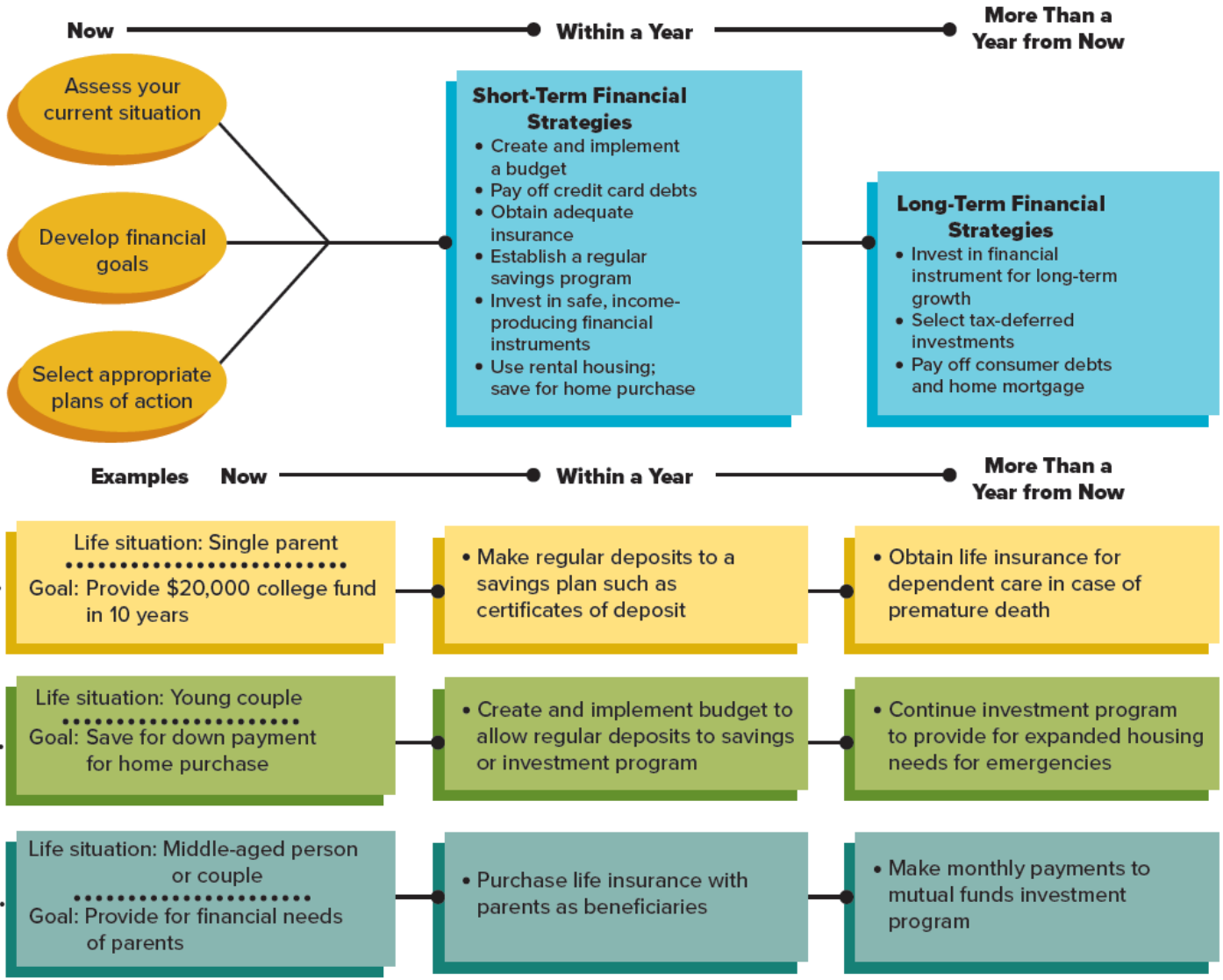
# Financial Planning Process
## Steps 4-6

4. Evaluate your alternatives
   - Take into consideration your life situation, personal values, and current economic conditions
   - Weigh the consequences of your choices, evaluate risks, and seek financial planning information from various sources throughout the process
5. Create and implement your financial action plan
   - You may need assistance from others, such as an insurance agent or an investment broker
6. Review and revise your plan
   - Financial planning is an ongoing process

# Financial Planning
## Information Sources

- In addition to this textbook, useful sources available to help you include the following:
  - Online sources and apps
  - Financial institutions
    - Banks, credit unions, and investment companies
  - Media sources
    - Newspapers, magazines, television, radio, podcasts, and online videos
  - Financial specialists
    - Financial planners, insurance agents, investment advisors, credit counselors, lawyers and tax preparers

# Financial Planning in Action



# Career Choice and Financial Planning

- Career selection, like other personal financial decisions, requires planning
- Education can be a significant investment with future career and financial benefits
- Alternatives to fund school costs include:
  - Grants
  - Financial aid and work-study programs
  - Scholarships
  - Education loans
  - Tax credits
  - Personal savings
  - Lower-cost living locations
  - Tuition reimbursement programs

# Chapter Summary

## LO1.1: Identify social and economic influences on financial literacy and personal financial decisions.

- Financial decisions are affected by:
  - Life situation (income, age, household size, health)
  - Personal values
  - Economic factors (prices, interest rates, and employment opportunities)
- Major elements of financial planning:
  - Obtaining
  - Planning
  - Saving
  - Borrowing
  - Spending
  - Managing risk
  - Investing
  - Retirement and estate planning

# Chapter Summary

## LO1.2: Develop personal financial goals.

- Financial goals should be SMART:
  - **S** = Specific
  - **M** = Measurable
  - **A** = Action-oriented
  - **R** = Realistic
  - **T** = Time-based

# Chapter Summary

## LO1.3: Calculate time value of money situations to analyze personal financial decisions.

- Every decision involves a trade-off
- Personal opportunity costs include time, effort, and health
- Financial opportunity costs are based on the time value of money
- Future value and present value calculations enable you to measure the increased value (or lost interest) that results from a saving, investing, borrowing, or purchasing decision

# Chapter Summary

## LO1.4: Implement a plan for making personal financial and career decisions.

Personal financial planning involves these steps:

1. Determine your current financial situation
2. Develop financial goals
3. Identify alternative courses of action
4. Evaluate alternatives
5. Create and implement a financial action plan
6. Review and revise the financial plan

# Chapter 1 Appendix:
## Using Your Financial Calculator

- Every financial calculator has five buttons of interest for time value of money calculations:

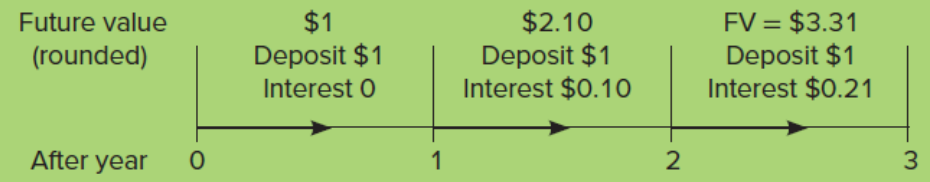
| | |
|---|---|
| N | Number of time periods |
| I/YR | Interest rate per period |
| PV | Present value |
| PMT | Payment amount per period |
| FV | Future value |

# Chapter 1 Appendix:
# Future Value of a Single Amount

| FUTURE VALUE OF A SINGLE AMOUNT | | |
|---|---|---|
| **Formula** | **Table** | **Financial Calculator** |
| **Example D:** If your savings of $400 earns 12 percent, compounded *monthly,* over a year and a half, use the table factor for 1 percent (the monthly rate) for 18 time periods; the future value would be: | | |
| $\$478.46 = \$400\ (1 + 0.01)^{18}$ | $\$478.40 = \$400\ (1.196)$ | –400 [PV], 12/12 = 1 [I/Y], 1.5 × 12 = 18 [N], 0 [PMT], [CPT] [FV] 478.46 |
| Excel formula notation for future value of a single amount | =FV(rate, nper, pmt, pv, type) | |
| | Example D solution =FV(0.01,18, 0,–400) = 478.46 | |

# Chapter 1 Appendix:
# Future Value of a Series of Equal Amounts (an Annuity)

| FUTURE VALUE OF A SERIES OF PAYMENTS (ANNUITY) | | |
|---|---|---|
| **Formula** | **Table** | **Financial Calculator** |
| $FV = \text{Annuity} \frac{(1+i)^n - 1}{i}$ | Using Exhibit 1–B:<br>Annuity × Table factor | PMT, N, I/Y, PV, CPT FV |
| This calculation assumes that (1) each deposit is for the same amount, (2) the interest rate is the same for each time period, and (3) the deposits are made at the end of each time period. | | |
| **Example E:** The future value of three $1 deposits made at the end of the next three years, earning 10 percent interest, is $3.31. This is calculated as follows: | | |
| $\$3.31 = \$1 \frac{(1+0.10)^3 - 1}{0.10}$ | Using Exhibit 1–B:<br>$3.31 = $1 × 3.31 | –1 PMT, 3 N, 10 I/Y, 0 PV, CPT FV 3.31 |
| This may be viewed as follows: | | |



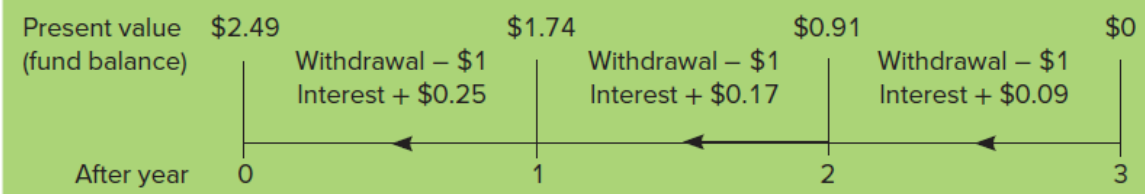
# Chapter 1 Appendix:
# Present Value of a Single Amount

| PRESENT VALUE OF A SINGLE AMOUNT | | |
|---|---|---|
| **Formula** | **Table** | **Financial Calculator** |
| $PV? = ?\frac{FV}{(1+i)^n}$ | Using Exhibit 1–C:<br>PV = FV(Table factor) | FV, N, I/Y, PMT, CPT PV |
| **Example G:** The present value of $1 to be received three years from now based on a 10 percent interest rate is calculated as follows: | | |
| $\$0.75 = \frac{\$1}{(1+0.10)^3}$ | Using Exhibit 1–C:<br>$0.75 = $1(0.751) | 1 FV, 3 N, 10 I/Y, 0 PMT, CPT PV –.75131 |
| This may be viewed as follows: | | |
| Present value (rounded) $0.75 $0.83 $0.91 $1<br>Discount (interest) $0.075<br>Discount (interest) $0.0825<br>Discount (interest) $0.0905<br>After year 0 1 2 3 | | |
| Present value tables are available to assist you in this process (see Exhibit 1–C). Notice that $1 at 10 percent for three years has a present value of $0.75. For amounts other than $1, multiply the table factor by the amount involved. | | |

# Chapter 1 Appendix:
# Present Value of a Series of Equal Amounts (an Annuity)

| PRESENT VALUE OF A SERIES OF PAYMENTS (ANNUITY) | | |
|---|---|---|
| **Formula** | **Table** | **Financial Calculator** |
| $PV = \text{Annuity} \times \dfrac{1 - \dfrac{1}{(1+i)^n}}{i}$ | Using Exhibit 1–D:<br>PV = Annuity(Table factor) | PMT, N, I/Y, FV, CPT PV |
| **Example I:** The present value of a $1 withdrawal at the end of the next three years would be $2.49, for money earning 10 percent. This would be calculated as follows: | | |
| $\$2.49 = \$1\left[\dfrac{1 - \dfrac{1}{(1 + 0.10)^3}}{0.10}\right]$ | Using Exhibit 1–D:<br>$2.49 = $1(2.487) | 1 PMT, 3 N, 10 I/Y, 0 FV, CPT PV – 2.48685 |

This may be viewed as follows:




This same amount appears in Exhibit 1–D for 10 percent and three time periods. To use the table for other situations, multiply the table factor by the amount to be withdrawn each year.

# Chapter 1 Appendix:
# Using Present Values to Determine Loan Payments

| PRESENT VALUE TO DETERMINE LOAN PAYMENTS | |
|---|---|
| **Table** | **Financial Calculator** |
| $\frac{\text{Amount borrowed}}{\text{Present value of a series table factor (Exhibit 1–D)}} = \text{Loan payment}$ | PV, I/Y, N, FV, CPT PMT |
| **Example K:** If you borrow $1,000 with a 6 percent interest rate to be repaid in three equal payments at the end of the next three years, the payments will be $374.11. This is calculated as follows: | |
| $\frac{\$1{,}000}{2.673} = \$374.11$ | 1000 PV, 6 I/Y, 3 N, 0 FV, CPT PMT – 374.10981 |
| Excel formula notation for determining loan payment amount | =PMT(rate, nper, pv) |
| | Example K solution =PMT(.06, 3, –1000) = $374.11 |