Focus on

Personal Financial Literacy

1st Edition | High School Edition

Student Edition Sample Chapter

Kapoor
Dlabay
Hughes
Hart

McGraw Hill

Focus on Personal Financial Literacy

High School Edition | 1st Edition

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COLLEGE OF DUPAGE

Les R. Dlabay

LAKE FOREST COLLEGE

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FOCUS ON PERSONAL FINANCIAL LITERACY

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Dedication

To the memory of my parents, Ram and Susheela Kapoor; and to my wife, Theresa; and my children, Karen, Kathryn, and Dave

To my wife, Linda Dlabay; my children, Carissa and Kyle; their spouses, Doug Erickson and Anne Jaspers; and my grandchildren Lucy Dlabay and Caleb Erickson

To my wife, Robin, and the memory of my mother, Barbara Y. Hughes

To my husband, David Hart, and my children, Alex and Madelyn

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Focus on . . . the Authors

Jack R. Kapoor, EdD, *College of DuPage*

Jack R. Kapoor has been a professor of business and economics in the Business and Technology Division at the College of DuPage, where he has taught Introduction to Business, Marketing, Management, Economics, and Personal Finance for more than 40 years. He received his BA and MS from San Francisco State University and his EdD in Business and Economic Education from Northern Illinois University. He previously taught at Illinois Institute of Technology's Stuart School of Management, San Francisco State University's School of World Business, and other colleges. Professor Kapoor is a recipient of the Business and Technology Division's Outstanding Professor Award. He has also served as an Assistant National Bank Examiner for the U.S. Treasury Department and as an international trade consultant to Bolting Manufacturing Co., Ltd., Mumbai, India.

Dr. Kapoor is known internationally as a coauthor of several textbooks, including *Personal Finance*, 14e (McGraw Hill), *Focus on Personal Finance*, 7e (McGraw Hill), *Business and Personal Finance* (Glencoe), and *Foundations of Business*, 7e (Cengage Learning). He has served as a content consultant for the two popular national television series, *Dollars and Sense: Personal Finance for the 21st Century* and *The Business File: An Introduction to Business*, and has developed two full-length audio courses in Business and Personal finance. He has been quoted in many national newspapers and magazines, including *USA Today*, *U.S. News & World Report,* the *Chicago Sun-Times, Crain's Small Business,* the *Chicago Tribune*, and other publications. Dr. Kapoor has traveled around the world and has studied business practices in capitalist, socialist, and communist countries.

Les R. Dlabay, EdD, *Lake Forest College*

"Learning for a life worth living" is the teaching emphasis of Les Dlabay, professor of business emeritus, who taught at Lake Forest College, Lake Forest, Illinois, for 35 years. In an effort to prepare students for diverse economic settings, he makes extensive use of field research projects and interactive learning. He believes our society can improve global business development through volunteering, knowledge sharing, and financial support. Dr. Dlabay has authored or has adaptations of more than 40 textbooks in the United States, Canada, India, and Singapore. He has taught more than 30 different courses and has presented more than 300 workshops and seminars to academic, business, and community organizations. Professor Dlabay has a collection of cereal packages from more than 100 countries and banknotes from 200 countries, which are used to teach about economic, cultural, and political elements of international business environments.

His research involves informal and alternative financial services in cross-cultural and global business settings. Dr. Dlabay serves on the board of Andean Aid (www.andeanaid.org), which provides tutoring assistance and spiritual guidance to school-age children in Colombia and Venezuela, and teaches community-based money management and workforce readiness classes for Love INC of Lake County (Illinois), which mobilizes local churches to transform lives and communities. Professor Dlabay has a BS (Accounting) from the University of Illinois, Chicago; an MBA from DePaul University; and an EdD in Business and Economic Education from Northern Illinois University.

Robert J. Hughes, EdD, *Dallas County Community Colleges*

Financial literacy! Only two words, but Bob Hughes, professor of business at Dallas County Community Colleges, believes that these two words can change your life. Whether you want to be rich or just manage the money you have, the ability to analyze financial decisions and gather financial information are skills that can always be improved. Dr. Hughes has taught personal finance, introduction to business, business math, small business management, small business finance, and accounting for over 35 years. He has also taught personal finance courses for high school students enrolled in Richland College's Dual Credit program. In addition to *Focus on Personal Finance* and *Personal Finance*, published by McGraw Hill, he has authored college textbooks for Introduction to Business, Business Mathematics, and Small Business Management. He also served as a content consultant for two popular national television series, *Dollars & Sense: Personal Finance for the 21st Century* and *It's Strictly Business*, and he is the lead author for a business math project utilizing artificial intelligence instruction funded by the ALEKS Corporation. He received his BBA from Southern Nazarene University and his MBA and EdD from the University of North Texas. His hobbies include writing, investing, collecting French antiques, art, and travel.

Melissa M. Hart, CPA, *North Carolina State University*

Melissa Hart is a senior lecturer in the Poole College of Management at North Carolina State University. She is a member of the Academy of Outstanding Teachers. She has been nominated for the Gertrude Cox Award for Innovative Excellence in Teaching with Technology as well as the Alumni Distinguished Undergraduate Professor Award. She teaches courses in personal finance and corporate finance and has developed multiple ways to use technology to introduce real-life situations into the classroom and online environments. Spreading the word about financial literacy has always been a passion of hers. Each year she shares her commonsense approach of "No plan is a plan" with various student groups, clubs, high schools, and other organizations. She is a member of the North Carolina Association of Certified Public Accountants (NCACPA) and the American Institute of Certified Public Accountants (AICPA). She received her BBA from the University of Maryland and an MBA from North Carolina State University. Prior to obtaining an MBA, she worked eight years in public accounting in auditing, tax compliance, and consulting. Her hobbies include keeping up with her family's many extracurricular activities. She travels extensively with her family to enjoy the many cultures and beauty of the country and the world.

Preface

Why Personal Finance?

Personal financial literacy is a critical life skill that establishes a framework for understanding and making sound decisions related to earning, spending, saving, investing, and managing finances and risks, that lead to a lifetime of financial well-being. A national set of standards identifies the knowledge, skills, and decision-making abilities that students should master to prepare them for a successful future as informed, educated consumers.

Focus on Personal Financial Literacy aligns closely with the **National Standards for Personal Finance Education** from the Council for Economic Education and Jump$tart Coalition, the **Personal Financial Responsibility Precision Exam** standards, and was designed specifically for today's high school classroom. The robust set of resources makes the program a perfect fit for standalone high school personal finance courses, and courses that combine financial literacy with another discipline, including economics.

About This Book

Reflecting the Diverse World Around Us

Focus on Personal Financial Literacy delivers comprehensive coverage of key topics in a personal finance course and is designed to appeal—and be relatable—to a diverse student population with a variety of life situations and financial literacy levels.

The learning system provides students with a useful framework to support understanding and application of concepts and assessing mastery. Key features include:

- **Accessible instruction** with a high school-friendly design, examples that resonate with students, and engaging illustrations of complex concepts and processes.
- **Real-life application** with *Your Dollars and $ense*, *BE AWARE*!, *Take Action*, *Financial Literacy NOW*, *Do the Math*!, *Daily Spending Diary*, *Your Personal Financial Plan*, and *What Would You Do* features that engage students in the decision making, critical thinking, and applying the skills they need for sound financial planning.
- **Practice and assessment** activities to help students develop core competencies with daily spending diaries, road maps, case studies, self-tests, and research assignments and projects.
- **Extension activities** in the companion workbook that offer an abundance of additional resources correlated to the textbook.
- **Cross-curriculum connections** through a modular, online economics course that supports student mastery of foundational concepts through adaptive learning. This includes just-in-time resources paired with practical assessments covering more than 260 topics.
- **Robust digital resources** including an interactive eBook and assignable, adaptive SmartBook®, a video series with accompanying questions that illustrate and reinforce key learning objectives, and the Finance Prep Courses covering topics such as Calculator, Mathematics, Excel, Accounting, Statistics, and Economics.
- **Unmatched teacher support** in print and online, that includes pacing guides, instructional support, discussion prompts, and project-based learning ideas.

Guided Tour
Focus on . . . Learning

Clear chapter-opening features break down the key action items that students need to address from the most important personal finance issues in the chapter. Chapters are organized in a simple, consistent format with lessons, quizzes, and supplemental features that keep students engaged.

Financial Literacy for Your Life appears in each chapter opener and is continued at the beginning of each lesson. In these scenarios, students have an opportunity to follow a real-life situation and consider how it applies to the chapter and lesson content, connecting the classroom learning to actual, relevant situations that students may encounter in their own lives.

Learning Outcomes highlight the goals of each chapter to provide context for the learning ahead. Throughout the book, in the end-of-chapter material, and the supplemental materials, these objectives provide a valuable foundation for assessment. Citations appear in the margins next to relevant text throughout the chapter.

1 Personal Financial Literacy: An Introduction

Financial Literacy for Your Life

Evelyn Davis works part-time after school and needs her car to get to her job. She recently had to pay for some major repairs to her eight-year-old vehicle. This unexpected expense, along with financial difficulties that Evelyn and many other people encountered during the pandemic, emphasizes the importance of having a savings plan and emergency fund at every stage of life.

Chapter 1 Learning Outcomes

In this chapter, you will learn to:

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

LO1.2 Create personal financial goals.

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

LO1.4 Develop and implement a plan for making personal financial and career decisions.

3 Steps to Financial Literacy . . .

Building an Emergency Fund

1. Track your daily spending to identify possible areas of reduced spending and increased savings.
   App: BUDGT or Mint
2. Determine the desired amount of your emergency fund based on monthly financial needs and earned income. Most financial advisors recommend three to six months, or more.
3. Decide where to keep your savings. Your choices include a bank, credit union, and other financial institutions.
   Website: www.depositaccounts.com

Your Financial Action Plan

A savings account and emergency fund will help you avoid or minimize financial difficulties from unexpected expenses or other unforeseen situations. Do you have a system for tracking your spending? If you were to create an emergency fund, what amount would you set aside? What actions would help you build your savings account? At the end of the chapter, you will be able to monitor your progress.

3 Steps to Financial Literacy presents a plan for getting finances in order. These steps connect with the *Road Map to Financial Literacy* and the *Financial Literacy Dashboard* at the end of each chapter.

LESSON 1.1

Making Financial Decisions

Evelyn should maintain and expand her savings for an emergency fund. This will require her to consider her personal situation and economic conditions, such as interest rates and inflation.

Every person has some money. However, the amount, along with needs, financial choices, and unexpected situations, will vary from person to person. In this book, you will have the opportunity to assess your current situation, learn about varied financial paths, and move forward toward personal financial security.

Financial literacy is the use of knowledge and skills for earning, saving, spending, and investing money to achieve personal, family, and community goals. The process includes developing attitudes, behaviors, and competencies to meet current and future financial obligations. Financial literacy leads to financial well-being and a lifetime of financial security, adapting to changing personal and economic circumstances. As shown in Exhibit 1–1, financial literacy is the result of information and knowledge, attitudes and abilities, and actions and behaviors.

Typical financial goals may include buying a car, renting an apartment or home, or saving for college, contributing to charity, traveling extensively, and gaining financial self-sufficiency. To achieve these and other goals, people need to identify and set priorities. Financial and personal satisfaction are the result of an organized process that is commonly referred to as *personal money management* or *personal financial planning*.

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

TAKE ACTION
Do you have an emergency fund for unexpected expenses?
☐ Yes ☐ No

financial literacy The use of knowledge and skills for earning, saving, spending, and investing money to achieve personal, family, and community goalspersonal

Take Action boxes are posted at the start of each main section and designed to get students thinking about what daily actions they can take to achieve financial literacy and independence.

Key terms appear in bold within the text and are defined in the margins to support financial literacy. A list of key terms and page references is located at the end of each chapter.

Practice Quizzes at the end of each major section provide questions and exercises to assess knowledge of the main ideas. These will determine whether concepts have been mastered and if a student is ready to move on to the next topic or if additional study is needed.

The integrated use of the **Your Personal Financial Plan** sheets is highlighted with an icon next to the Action Activity.

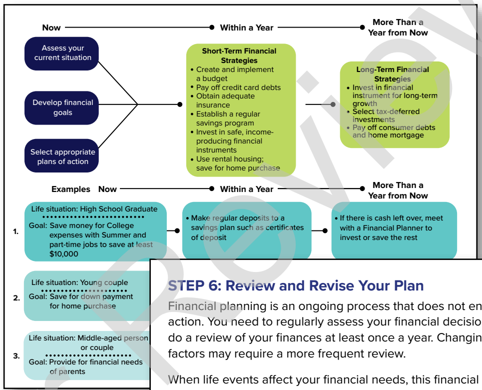
Practice Quiz 1–1

1. How do personal and economic factors affect the way the financial system operates and the way personal financial decisions?
2. For each of the following situations, indicate if the person would tend to "suffer" or to "benefit" from inflation. (Circle your answer)

A person with money in a savings account.	suffer	benefit
A person who is borrowing money.	suffer	benefit
A person who is lending money.	suffer	benefit
A person receiving a fixed-income amount.	suffer	benefit

3. What are the advantages of effective personal financial planning?

ACTION ACTIVITY: Use Your Personal Financial Plan Sheet 1 to create a record of your basic personal and financial data.



STEP 6: Review and Revise Your Plan

Financial planning is an ongoing process that does not end when you take action. You need to regularly assess your financial decisions. You should do a review of your finances at least once a year. Changing personal factors may require a more frequent review.

When life events affect your financial needs, this financial planning process will help you adapt to changes. A regular review of this process will help you adjust priorities to bring your financial goals and activities in line with your current life situation.

EXAMPLE: Step 6 - Review and Revise the Plan

Over the next 6 to 12 months, Carla Elliot should review her financial, personal, and educational situation. What circumstances might occur that would require Carla to take a different approach to her personal finances?

Example from Your Life

What factors in your life might affect your personal financial situation and decisions in the future?

To support visual learners and offer a variety of learning modalities, **graphics, exhibits,** and **tables** illustrate important personal finance concepts and processes.

Worked-out **examples** featuring key concepts and calculations appear throughout the text, a valuable model for students to see how personal finance works in practice.

Focus on . . .
Personal Finance in Real Life

The goal of a personal finance course is to give students the knowledge, skills, and tools they need to successfully set out on their own personal financial journey. A wealth of interactive features within the text and the digital resources allows students to participate in the decision making, critical thinking, and application processes they will need for sound financial planning.

BE AWARE! boxes highlight situations where students should take pause and think a decision through. This feature also provides insights into avoiding and remediating common pitfalls.

> **BE AWARE !**
>
> People who encounter money troubles start their bad habits when they are young. To avoid a life of financial difficulties, take these actions:
>
> - spend less than you take in
> - track your spending
> - set specific
> - create and f
> - pay your bil

Your Dollars and $ense boxes contain fun facts, information, and financial planning assistance for wise personal financial actions.

> **your dollars and $ense**
>
> To become financially disciplined:
>
> - Select a word or short phrase to describe your goal.
> - Use a visual reminder—a photo, sticky note, or note card on your desk, computer, bathroom mirror, refrigerator, or car dashboard.
> - Keep a financial diary or journal.
> - Obtain support; work with a roommate, spouse, or group accountable.
>
> Financial goals often lack the "w achieve meaningful results. If yo unable to answer "why," this may a goal that is not appropriate. W "why" for one of your financial g

FinTech for Financial Literacy covers apps, software, and computers for banking and other financial activities. This marginal feature highlights the emerging and expanding use of financial technology.

> **FinTech for Financial Literacy**
>
> FinTech (financial technology) involves apps, websites, computers, and other automated systems for banking and personal finance activities. Artificial intelligence, robotics, drones, blockchain, and other innovations will influence how you earn, save, spend, and invest. Robo-advisors, for example, offer personalized investment advice based on your income, assets, debt, financial goals, and risk tolerance. Other FinTech operations include crowdfunding, cryptocurrencies, budgeting and payment apps, and online start-ups providing insurance.

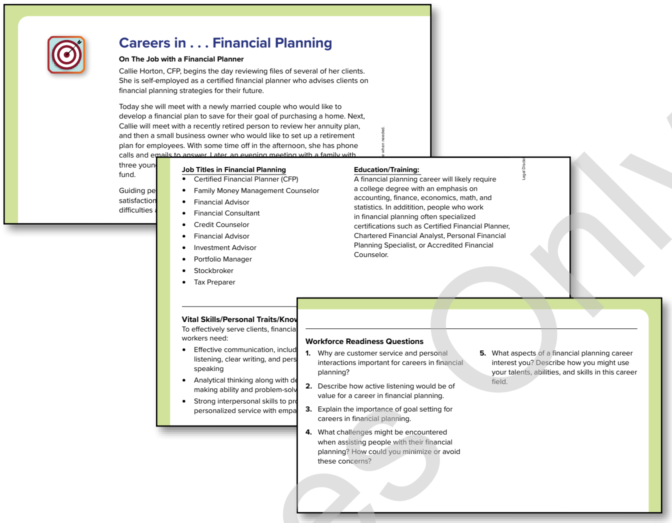
Digital Financial Literacy features show that students are both consumers and producers of digital content. This feature provides students with an opportunity to enhance their digital financial literacy skills to identify, research, and implement money decisions.

> **Digital Financial Literacy With. . .**
>
> Kiplinger's
> Kiplinger's Personal Finance
>
> Online resources (apps, websites, podcasts, blogs, videos, social media) are valuable for learning. As both a consumer and producer of digital content, you need to be able to locate, assess, create, and share information for wise money management. Also, online safety, privacy settings, social media sharing, and fake news can influence your financial well-being and career opportunities. Improving your *digital financial literacy* involves developing skills for using information to identify, research, and implement money decisions.
>
> Kiplinger.com and *Kiplinger's Personal Finance* magazine offer a wide variety of personal financial articles, videos, podcasts, calculators, and other features. A recent article in the magazine featured an individual who had a
>
> a higher return. His goals included continuing to save for retirement and buying a car and a house. He also kept some of his savings in an account as an emergency fund.
>
> As the years progressed, and marriage was on the horizon, consideration was given to some additional goals. These financial targets included buying a bigger house and renting out the current one. *Kiplinger's Personal Finance* staff also recommended that the couple consult a financial planner as they make plans to

Financial Literacy for Your Life appears in each chapter opener and is continued at the beginning of each lesson. In these scenarios, students have an opportunity to follow a specific financial situation and tie it back to the chapter and lesson content to bring context and relevance to the learning experience.

> **Financial Literacy For Your Life**
>
> Evelyn Davis works part-time after school and needs her car to get to her job. She recently had to pay for some major repairs to her eight-year-old vehicle. This unexpected expense, along with financial difficulties that Evelyn and many other people encountered during the pandemic, emphasizes the importance of having a savings plan and emergency fund at every stage of life.

Students can read the **Careers in. . .** feature to learn about on-the-job scenarios that require financial understanding and to find out what it's like to work in a finance-related field. Appearing once per chapter, this feature also identifies needed training and skills, in addition to *Workforce Readiness* study questions that assess student awareness of these skills, to give them more background.



Careers in . . . Financial Planning

On The Job with a Financial Planner

Callie Horton, CFP, begins the day reviewing files of several of her clients. She is self-employed as a certified financial planner who advises clients on financial planning strategies for their future.

Today she will meet with a newly married couple who would like to develop a financial plan to save for their goal of purchasing a home. Next, Callie will meet with a recently retired person to review her annuity plan, and then a small business owner who would like to set up a retirement plan for employees. With some time off in the afternoon, she has phone calls and emails to answer. Later, an evening meeting with a family with three youn… fund.

Guiding pe… satisfaction… difficulties…

Job Titles in Financial Planning

- Certified Financial Planner (CFP)
- Family Money Management Counselor
- Financial Advisor
- Financial Consultant
- Credit Counselor
- Financial Advisor
- Investment Advisor
- Portfolio Manager
- Stockbroker
- Tax Preparer

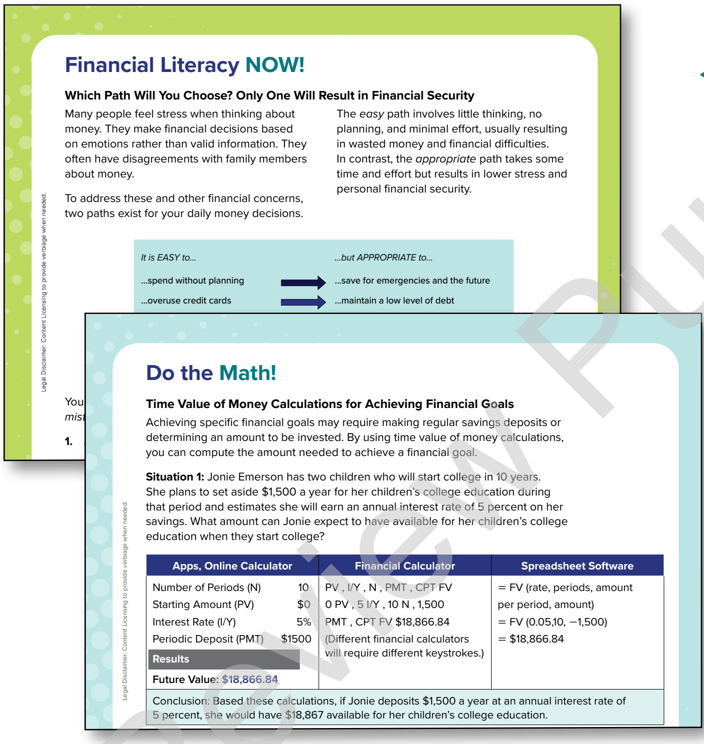
Education/Training:
A financial planning career will likely require a college degree with an emphasis on accounting, finance, economics, math, and statistics. In addititon, people who work in financial planning often specialized certifications such as Certified Financial Planner, Chartered Financial Analyst, Personal Financial Planning Specialist, or Accredited Financial Counselor.

Vital Skills/Personal Traits/Know…
To effectively serve clients, financia… workers need:

- Effective communication, includ… listening, clear writing, and pers… speaking
- Analytical thinking along with de… making ability and problem-solv…
- Strong interpersonal skills to pr… personalized service with empa…

Workforce Readiness Questions

1. Why are customer service and personal interactions important for careers in financial planning?
2. Describe how active listening would be of value for a career in financial planning.
3. Explain the importance of goal setting for careers in financial planning.
4. What challenges might be encountered when assisting people with their financial planning? How could you minimize or avoid these concerns?
5. What aspects of a financial planning career interest you? Describe how you might use your talents, abilities, and skills in this career field.



Financial Literacy NOW!

Which Path Will You Choose? Only One Will Result in Financial Security

Many people feel stress when thinking about money. They make financial decisions based on emotions rather than valid information. They often have disagreements with family members about money.

To address these and other financial concerns, two paths exist for your daily money decisions.

The *easy* path involves little thinking, no planning, and minimal effort, usually resulting in wasted money and financial difficulties. In contrast, the *appropriate* path takes some time and effort but results in lower stress and personal financial security.

It is EASY to...	*...but APPROPRIATE to...*
...spend without planning	...save for emergencies and the future
...overuse credit cards	...maintain a low level of debt

You… *mis…*

1.

Do the Math!

Time Value of Money Calculations for Achieving Financial Goals

Achieving specific financial goals may require making regular savings deposits or determining an amount to be invested. By using time value of money calculations, you can compute the amount needed to achieve a financial goal.

Situation 1: Jonie Emerson has two children who will start college in 10 years. She plans to set aside $1,500 a year for her children's college education during that period and estimates she will earn an annual interest rate of 5 percent on her savings. What amount can Jonie expect to have available for her children's college education when they start college?

Apps, Online Calculator	Financial Calculator	Spreadsheet Software
Number of Periods (N) 10 Starting Amount (PV) $0 Interest Rate (I/Y) 5% Periodic Deposit (PMT) $1500 **Results** Future Value: $18,866.84	PV , I/Y , N , PMT , CPT FV 0 PV , 5 I/Y , 10 N , 1,500 PMT , CPT FV $18,866.84 (Different financial calculators will require different keystrokes.)	= FV (rate, periods, amount per period, amount) = FV (0.05,10, −1,500) = $18,866.84

Conclusion: Based these calculations, if Jonie deposits $1,500 a year at an annual interest rate of 5 percent, she would have $18,867 available for her children's college education.

Financial Literacy NOW! features offer information that can assist students when faced with special situations and unique financial planning decisions. They challenge students to apply the concepts they have learned to their lives and record personal responses.

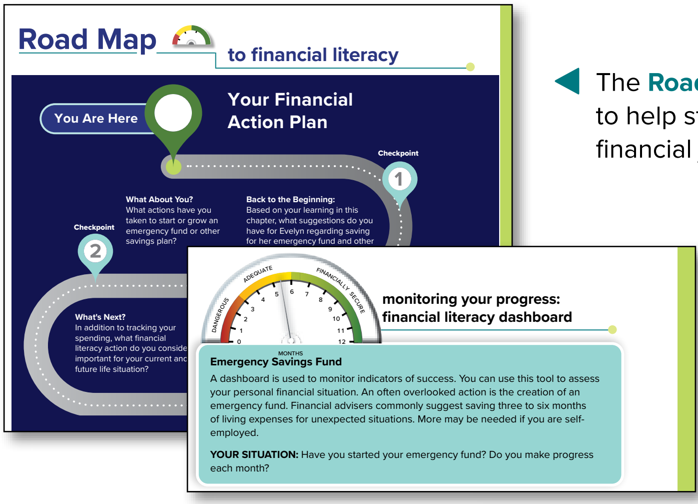
Do the Math! features show important mathematical applications relevant to personal finance situations and concepts.

What Would You Do? These situations, placed throughout each chapter, are designed to engage students in decision making related to the topics being discussed.

> **What Would You Do?**
>
> Each day, interest rates change, increasing or decreasing. If interest rates are expected to rise or fall, what saving, investing, or borrowing actions might be appropriate?

Focus on . . .
Practice and Assessment

Chapter-level practice and assessments provide an opportunity for students to refresh, reinforce, and assess their learning with an array of end-of-chapter activities, including a summary, review problems, and worksheets.



The **Road Map to Financial Literacy** is designed to help students move forward in their personal financial journey.

The **financial literacy dashboard** is designed to help monitor key performance indicators for personal financial situations.

Organized by learning objective, the concise **Chapter Summary** is a study and self assessment tool to reinforce learning.

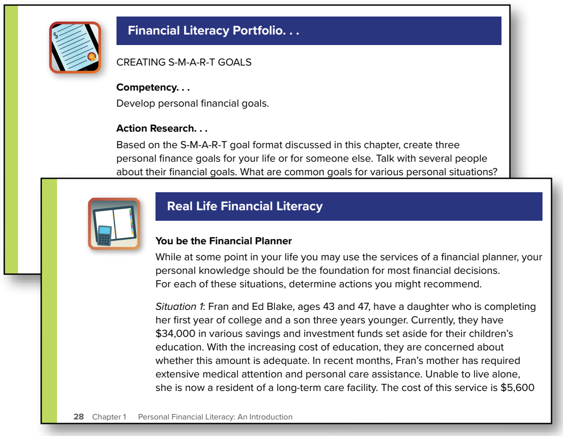
A list of **key terms and formulas** with page references appear at the end of select chapters, grouped for easy reference.

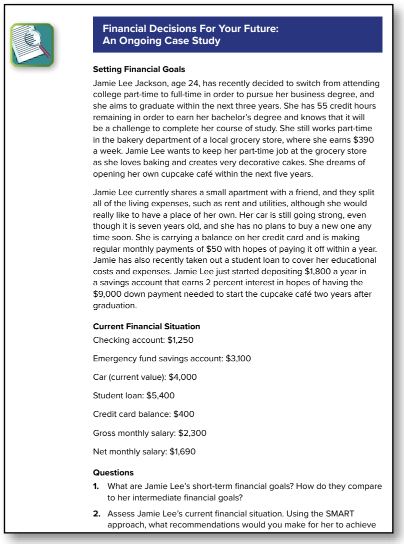
Self-test problems model using step-by-step solutions so students can see how they were solved. This user-friendly feature increases comprehension of the material and the confidence to solve the end-of-chapter problems.

A variety of **Financial Literacy Problems** allow students to put their quantitative analysis of personal financial decisions to work.

Financial Literacy Portfolio helps students develop competencies related to specific financial decisions. These activities ask students to conduct action research beyond the class setting.

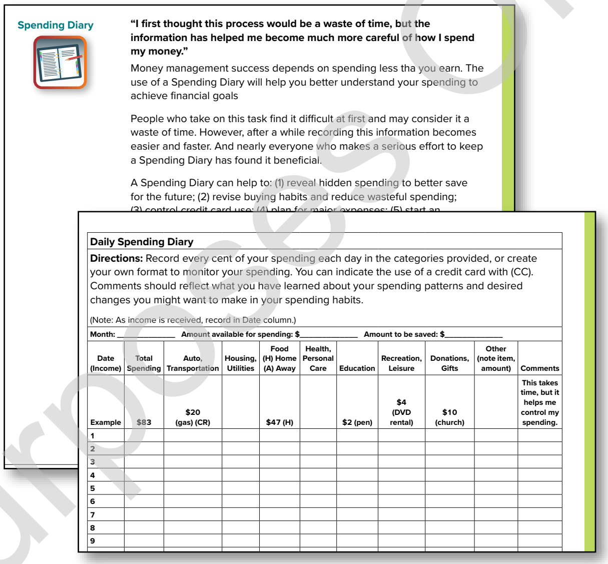
Real Life Financial Literacy allows students to work through a hypothetical personal finance dilemma and apply concepts from the chapter.



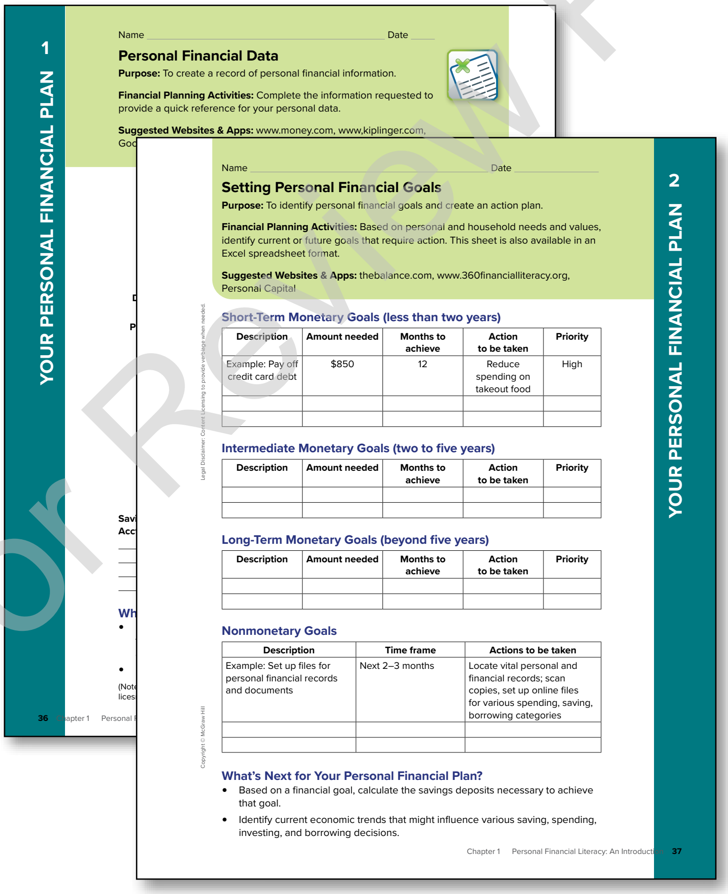


Financial Decisions for Your Future

allows students to apply course concepts in a daily life situation that they are likely exposed to in their own homes. It encourages students to evaluate the finances that affect a household and respond to the resulting shift in needs, resources, and priorities through the questions at the end of each case.



Daily Spending Diary shows students that everyday spending activities might go largely unnoticed, but they have a significant effect on the overall financial health of an individual. The *Daily Spending Diary* sheets offer students a place to keep track of every cent they spend in any category.



Your Personal Financial Plan sheets correlate with sections of the text and ask students to work through the applications and record their own responses. These sheets apply concepts learned to their unique situation and serve as a road map to their personal financial future.

References to key websites and apps are provided to help students research and devise their own plan, and the *What's Next for Your Personal Financial Plan?* section at the end of each sheet challenges students to use their responses to plan the next level of their financial journey, as well as foreshadow upcoming concepts. Look for the *Your Personal Financial Plan* icon next to most Practice Quizzes.

Focus on. . .

Digital Resources

Focus on Personal Financial Literacy **includes the** ***Principles of Economics*** **modular course (details on page xxii). Both are enriched with multimedia content that enhance the teaching and learning experience inside and outside of the classroom.**

Developed with the world’s leading subject matter experts and organized by chapter level, the resources provide students with multiple opportunities to contextualize and apply their understanding. Teachers can save time, customize lessons, monitor student progress, and make data-driven decisions in the classroom with the flexible, easy-to-navigate instructional tools.

Intuitive Design

Resources are organized at the chapter level. To enhance the core content, teachers can add assignments, activities, and instructional aides to any lesson. The chapter landing page gives students access to:

- the interactive eBook,
- adaptive SmartBook assignments,
- application-based activities,
- topic-specific videos,
- narrated presentations,
- and customizable, auto-graded assessments.

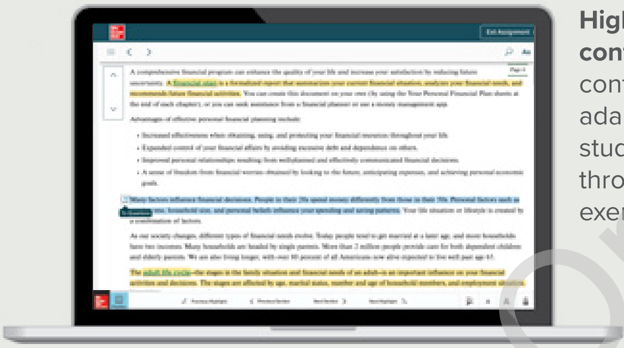
Chapter landing page links students to resources that support success.

Mobile Ready Access to course content on-the-go is easier and more efficient than ever before with the *ReadAnywhere* mobile app.

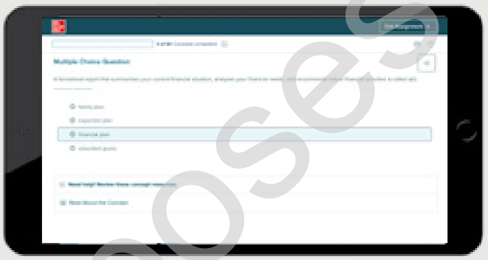
Adaptive Study Tools

SMARTBOOK® is the assignable, adaptive study tool. The interactive features personalize learning with self-guided tools that:

- assess proficiency and knowledge,
- track which topics have been mastered,
- identify areas that need more study,
- deliver meaningful practice with guidance and instant feedback,
- recharge learning with previously completed assignments and personalized recommendations,
- and allow teachers to assign material at the subtopic level.



Highlighted content continuously adapts as students work through exercises.



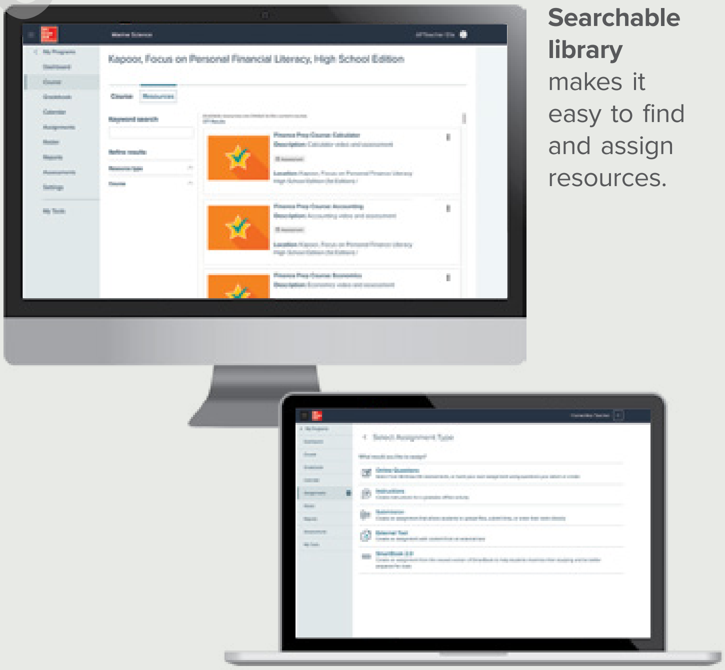
Practice sets measure depth of understanding and present a personalized learning path based on student responses.

Teacher Resources

Teachers have access to the interactive student eBook and adaptive *SmartBook®* plus, a wealth of customizable chapter resources and powerful gradebook tools.

Resources include:

- an online Teacher Manual with chapter overviews, key concepts, discussion prompts, and group activities;
- student performance reports to help teachers identify gaps, make data-driven decisions, and adjust instruction;
- customizable PowerPoint presentations;
- an online version of the student workbook;
- and a bonus chapter for *Principles of Economics*.

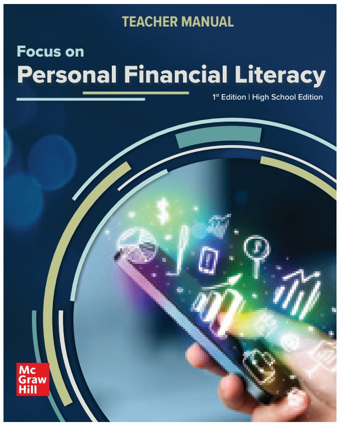


Searchable library makes it easy to find and assign resources.

Customizable assignments and quiz banks are automatically graded and populate easy-to-read reports.

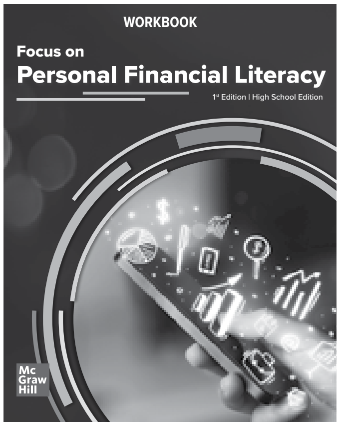
Harness technology, unlock success with the digital resources for *Focus on Personal Financial Literacy*. **Visit My.MHEducation.com**

Focus on. . . Additional Resources



Teacher Manual

The *Focus on Personal Financial Literacy* Teacher Manual is designed for a diverse range of high school classrooms and teaching approaches. It provides chapter-level overviews and guidance to help teachers create an engaging personal finance learning experience for students with varying life situations and financial literacy levels. Discussion prompts and activities support key concepts, pacing guides and chapter resources are clearly presented, and answers to questions in the Student Edition are included.



Student Workbook

The *Focus on Personal Financial Literacy* Workbook was written specifically with the high school student in mind. Each activity helps bring real-world personal finance topics to life through hands-on exercises that can be done in school or at home. The workbook is organized to correspond to each chapter in this Student Edition, with ideas to enhance topics, extension activities, and vocabulary to support the content. In addition, the *Your Personal Financial Plan* pages are included, taken directly from this Student Edition for students' convenience.

Comprehensive Economics Coverage

There are courses in which financial literacy education is combined with economics. To accommodate those courses, we offer the Asarta/Butters *Principles of Economics* course, which features lessons and videos covering discreet fundamental economic topics. The course:

- includes an eBook and SmartBook;
- features a modular, digital-first approach;
- covers hundreds of topics, each anchored by an engaging 2- to 4-minute video;
- and provides support with worked out examples and assessment tools.

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1 Personal Financial Literacy: An Introduction

Financial Literacy for Your Life

Evelyn Davis works part-time after school and needs her car to get to her job. She recently had to pay for some major repairs to her eight-year-old vehicle. This unexpected expense, along with financial difficulties that Evelyn and many other people encountered during the pandemic, emphasizes the importance of having a savings plan and emergency fund at every stage of life.

Chapter 1 Learning Outcomes

In this chapter, you will learn to:

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

LO1.2 Create personal financial goals.

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

LO1.4 Develop and implement a plan for making personal financial and career decisions.

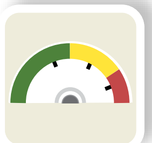
3 Steps to Financial Literacy . . .

Building an Emergency Fund

1. Track your daily spending to identify possible areas of reduced spending and increased savings.
   App: BUDGT or Mint
2. Determine the desired amount of your emergency fund based on monthly financial needs and earned income. Most financial advisors recommend three to six months, or more.
3. Decide where to keep your savings. Your choices include a bank, credit union, and other financial institutions.
   Website: www.depositaccounts.com

Your Financial Action Plan

A savings account and emergency fund will help you avoid or minimize financial difficulties from unexpected expenses or other unforeseen situations. Do you have a system for tracking your spending? If you were to create an emergency fund, what amount would you set aside? What actions would help you build your savings account? At the end of the chapter, you will be able to monitor your progress.



LESSON 1.1

Making Financial Decisions

LO1.1

Identify personal and economic influences on financial literacy and personal financial decisions.

Evelyn should maintain and expand her savings for an emergency fund. This will require her to consider her personal situation and economic conditions, such as interest rates and inflation.

Every person has some money. However, the amount, along with needs, financial choices, and unexpected situations, will vary from person to person. In this book, you will have the opportunity to assess your current situation, learn about varied financial paths, and move forward toward personal financial security.

TAKE ACTION

Do you have an emergency fund for unexpected expenses?

☐ Yes ☐ No

Financial literacy is the use of knowledge and skills for earning, saving, spending, and investing money to achieve personal, family, and community goals. The process includes developing attitudes, behaviors, and competencies to meet current and future financial obligations. Financial literacy leads to financial well-being and a lifetime of financial security, adapting to changing personal and economic circumstances. As shown in Exhibit 1–1, financial literacy is the result of information and knowledge, attitudes and abilities, and actions and behaviors.

financial literacy The use of knowledge and skills for earning, saving, spending, and investing money to achieve personal, family, and community goals.

Typical financial goals may include buying a car, renting an apartment or home, saving for college, contributing to charity, traveling extensively, and gaining financial self-sufficiency. To achieve these and other goals, people need to identify and set priorities. Financial and personal satisfaction are the result of an organized process that is commonly referred to as *personal money management* or *personal financial planning.*

Your Life Situation and Financial Planning

Personal financial planning is the process of managing your money to achieve personal economic satisfaction. This planning process allows you to control your financial situation. Every person, family, or household has a unique situation; therefore, financial decisions must be planned to meet specific needs and goals.

financial planning The process of managing your money to achieve personal economic satisfaction.

A **financial plan** is an organized report that summarizes your current financial situation, analyzes your financial needs, and recommends future financial activities. You can create this document on your own (by using the Your Personal Financial Plan sheets at the end of each chapter), or you can seek assistance from a financial planner or use a money management app.

financial plan An organized report that summarizes your current financial situation, analyzes your financial needs, and recommends future financial activities.

Advantages of effective personal financial planning include:

- Increased effectiveness when obtaining, using, and protecting your financial resources throughout your life.
- Expanded control of your finances by avoiding excessive debt and dependence on others.

- Improved personal relationships resulting from well-planned and effectively communicated financial decisions.
- A sense of freedom from financial worries obtained by looking to the future, anticipating expenses, and achieving personal goals.

Many factors influence financial decisions. Teens and people in their 20s spend money differently from those in their 50s. Personal factors such as age, income, household size, and personal beliefs influence your spending and saving patterns. Your life situation or lifestyle is created by a combination of factors.

The **adult life cycle**—the stages in the family situation and financial needs of an adult—is an important influence on your financial activities and decisions. The stages are affected by marital status, number and age of household members, and employment situation. Your life situation is also affected by events such as graduation, dependent children leaving home, changes in health, engagement and marriage, divorce, birth or adoption of a child, retirement, a career change or a move to a new area, or the death of a spouse, family member, or other dependent.

adult life cycle The stages in the family situation and financial needs of an adult.

In addition to being defined by your family situation, you are defined by your **values**—the ideas and principles that you consider correct, desirable, and important. Values have a direct influence on such decisions as spending now versus saving for the future or continuing school versus getting a job.

values Ideas and principles that a person considers correct, desirable, and important.

Financial Planning in Our Economy

Daily economic transactions facilitate financial planning activities. Exhibit 1–2 shows the monetary flows among providers and users of funds that occur in a financial system. These financial activities affect personal finance decisions. Investing in a bond, which is a *debt security*,

Exhibit 1–1 Planning for Personal Financial Literacy

Personal Finance Information Sources

Attitudes, Abilities

- A desire for ongoing learning in varied settings
- A willingness to monitor spending and saving activities
- Reconciliation of varied money attitudes among family and household members
- Motivation to reduce or eliminate unplanned spending and credit use
- Determination and discipline to achieve long-term goals
- A commitment to share time, talents, and resources with others

Goals for Action

Short Term

- Obtain needed career training
- Create a financial document system
- Track spending; create/implement a budget
- Begin emergency fund, regular savings plan
- Reduce/eliminate existing credit balances
- Purchase appropriate insurance coverages
- Explore additional income sources

Long Term

- Monitor investments for changing needs
- Seek actions for beneficial tax planning
- Ongoing review of changing life situation
- Adapt budget, financial plan, as needed
- Assess changing career opportunities
- Plan retirement income, living situation

Financial Literacy Development

Experiential Learning
... use interviews, observations, and market experiences for improved financial decisions

Retention, Reinforcement
... consistently use knowledge and skills for wise money management and personal financial opportunities

Critical Thinking
... creatively analyze and solve problems for financial opportunities

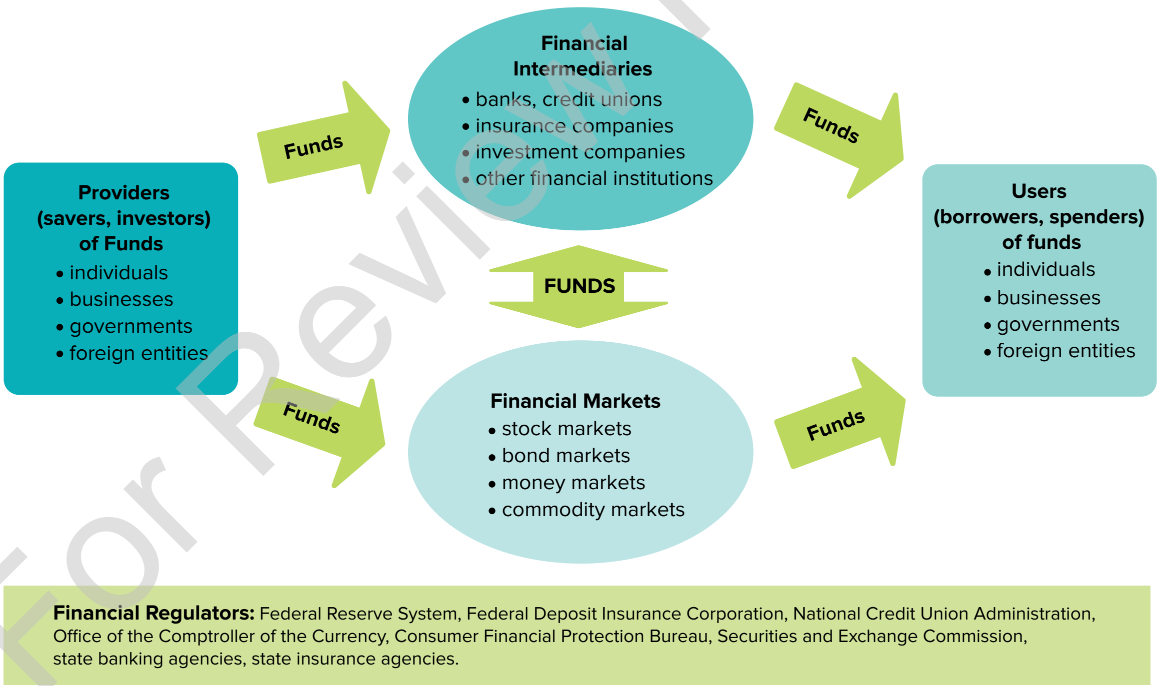
involves borrowing by a company or government. In contrast, investing in stock, called an *equity security*, represents ownership in a corporation. Other financial market activities include buying and selling mutual funds, certificates of deposit (CDs), and commodity futures.

In most societies, the forces of supply and demand set prices for securities, goods, and services. **Economics** is the study of how wealth is created and distributed. The economic environment includes business, labor, and government working together to satisfy needs and wants. As shown in Exhibit 1–2, government agencies regulate financial activities. The Federal Reserve System, the central bank of the United States, has significant economic responsibility. The Fed, as it is often called, attempts to maintain an adequate money supply to encourage consumer spending, business growth, and job creation.

economics The study of how wealth is created and distributed.

Global Influences The global economy influences financial activities. The U.S. economy is affected by both foreign investors and competition from foreign companies. American businesses compete against foreign companies for the spending dollars of American consumers. 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 United States. This reduces the funds available for domestic spending and investment. Also, if foreign companies decide not to invest in the United States, the domestic money supply is reduced. This reduced money supply can cause higher interest rates.

Exhibit 1–2 The Financial System



Inflation Most people are concerned with the buying power of their money. **Inflation** is a rise in the general level of prices. In times of inflation, the buying power of the dollar decreases. For example, if prices increased 5 percent during the last year, items that previously cost $100 would now

inflation A rise in the general level of prices.

cost $105. This means more money is needed to buy the same amount of goods and services.

Inflation is most harmful to people with fixed incomes. Due to inflation, retired people and others whose incomes do not change can only afford fewer goods and services. Inflation can also have a negative effect on lenders of money. Unless an appropriate interest rate is charged, amounts repaid by borrowers in times of inflation have less buying power than the money they borrowed.

Inflation rates vary. During the late 1950s and early 1960s, the annual inflation rate was in the 1 to 3 percent range. At other times, the cost of living increased 10 to 12 percent annually. At a 12 percent annual inflation rate, prices double (and the value of the dollar is cut in half) in about six years. To find out how fast prices (or your savings) will double, use the *Rule of 72*: Just 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 ($72 \div 4 = 18$). Regarding savings, if you earn 6 percent, your money will double in 12 years ($72 \div 6 = 12$).

The *consumer price index (CPI)*, computed and published by the Bureau of Labor Statistics, is a measure of the average change in the prices urban consumers pay for a fixed "basket" of goods and services.

Inflation rates can be deceptive since the price index is based on certain items. Many people face *hidden* inflation since the cost of necessities (food, gas, health care) on which they spend the greatest proportion of their money may rise at a higher rate than that of nonessential items, which could be dropping in price. This results in a reported inflation rate much lower than the actual cost-of-living increase being experienced by consumers.

Deflation, a decline in prices, can also have damaging economic effects. As prices drop, consumers expect they will go even lower. As a result, consumers cut their spending, which causes damaging economic conditions. While widespread deflation is unlikely, certain items may be affected and their prices will drop.

BE AWARE !

People who encounter money troubles start their bad habits when they are young. To avoid a life of financial difficulties, take these actions:

- spend less than you take in
- track your spending
- set specific savings goals
- create and follow a budget
- pay your bills on time

Interest Rates In simple terms, interest rates represent the cost of money. Like everything else, money has a price. The forces of supply and demand usually influence interest rates. When consumers expand their saving and investing, the supply of money available for lending increases and interest rates tend to decrease. However, as borrowing by consumers, businesses, and government increases, interest rates are likely to rise due to an increased demand for money.

Interest rates affect your financial planning activities. The earnings you receive as a saver or an investor reflect current interest rates as well as a *risk premium* based on such factors as the length of time your funds will be used by others, expected inflation, and the extent of uncertainty about getting your money back. Risk is also a factor in the interest rate you pay as a borrower. People with poor credit ratings pay a higher interest rate than people with good credit ratings. Interest rates influence many financial decisions.

What Would You Do?

Each day, interest rates change, increasing or decreasing. If interest rates are expected to rise or fall, what saving, investing, or borrowing actions might be appropriate?

Financial Planning Activities

To achieve a secure financial position, you must coordinate several components through an organized plan and wise decision making, as shown in Exhibit 1–3.

Exhibit 1–3 Components of Personal Financial Planning

Earning (Chapters 1–2) You obtain financial resources from employment, investments, or ownership of a business. Earning income is the foundation of financial planning.

Planning (Chapters 3–4) Planned spending with a budget is key to achieving goals and future financial security. A spending plan starts with tracking your spending (see Daily Spending Diary at the end of the chapter). Efforts to anticipate expenses and financial decisions can reduce taxes. Wise tax planning is a vital element for increasing your financial resources.

Saving (Chapter 5) Long-term financial security starts with a regular savings plan for emergencies, unexpected bills, replacement of major items, and the purchase of expensive goods and services, such as a college education, a boat, or a vacation home. Once you have established a basic savings plan, use additional money for investments that offer greater financial growth.

Managing Credit (Chapter 6) Wise use of credit can contribute to your financial goals. In contrast, the overuse and misuse of credit will likely result in a person's debts exceeding the resources available to pay those debts.

Spending (Chapters 7, 8) Financial planning is not designed to prevent enjoyment of life but to help you obtain what you want. Too often purchases are made without considering the financial consequences. Some people shop compulsively, creating financial difficulties. Use a spending plan to control your living expenses and other financial obligations. Spending less than you earn is the only way to achieve long-term financial security.

Managing Risk (Chapters 9–11) Adequate insurance coverage is another area for financial planning decisions. Some types of insurance are commonly overlooked. For example, the number of people who suffer disabling injuries or diseases at age 50 is greater than the number who die at that age, so people may need disability insurance more than they need life insurance. Yet research reveals that most people have adequate life insurance but few have disability insurance.

Investing (Chapters 12–14) Although many types of investments are available, people invest for two primary reasons. Those interested in *current income* select investments that pay regular dividends or interest. In contrast, investors who desire *longterm growth* choose stocks, mutual funds, real estate, and other investments with potential for increased future value. You can achieve investment diversification by creating a *portfolio* with varied assets, such as stocks, bonds, mutual funds real estate, and collectibles such as rare coins.

Most people desire financial security upon completion of full-time employment; however, retirement planning also involves thinking about your housing situation, your recreational activities, and possible part-time work or volunteering.

Practice Quiz 1–1

1. How do personal and economic factors affect the way the financial system operates and the way personal financial decisions are made?
2. For each of the following situations, indicate if the person would tend to "suffer" or to "benefit" from inflation. (Circle your answer)

A person with money in a savings account.	suffer	benefit
A person who is borrowing money.	suffer	benefit
A person who is lending money.	suffer	benefit
A person receiving a fixed-income amount.	suffer	benefit

3. What are the advantages of effective personal financial planning?

ACTION ACTIVITY: Use Your Personal Financial Plan Sheet 1 to create a record of your basic personal and financial data.

LESSON 1.2

Developing and Achieving Financial Goals

LO1.2

Create personal financial goals.

Evelyn from the chapter opening has a goal of expanding her savings to increase her emergency fund. What other financial goals might she consider?

Since the United States is one of the richest countries in the world, it is difficult to understand why so many Americans have money problems. The answer is the result of poor planning and weak money management related to spending and credit use. Achieving personal financial satisfaction starts with tracking your spending (see Daily Spending Diary at the end of the chapter) and creating clear financial goals.

TAKE ACTION

Do you have specific financial goals that you hope to achieve in the future?

☐ Yes ☐ No

Types of Financial Goals

What would you like to do tomorrow? Believe it or not, that question involves goal setting, which may be viewed in three time frames (see Exhibit 1–4):

- *Short-term goals* will be achieved in two years or less, such as 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, such as retirement, money for children's college education, or the purchase of a vacation home.

Exhibit 1–4 Types of Financial Goals

Short-Term	Intermediate	Long-Term
Less than 2 years to achieve	takes 2–5 years to achieve	Takes more than 5 years to achieve
Example: Pay off my $500 credit card balance in full	*Example*: Save $4,000 to start investing in stocks	*Example*: Invest 10 percent of income for retirement

Long-term goals should be planned in coordination with short-term and intermediate goals. Setting and achieving short-term goals is commonly the basis for moving toward success of long-term or intermediate goals. For example, saving for a down payment to buy a house is a short-term goal that can be a foundation for a long-term goal: owning your home.

What Would You Do?

What situations in your life might influence the financial goals that you decide to pursue? Describe various actions you might take to achieve your financial goals.

Goal-Setting Guidelines

Goal setting is central to financial decision making. Your financial goals are the basis for planning, implementing, and measuring the progress of your spending, saving, and investing activities. Exhibit 1–1 offers short-term and long-term financial actions that can be the basis for your financial goals.

Your financial goals should take a SMART approach, in that they are:

- **S—specific**, so you know exactly what your goals are and can create a plan designed to achieve those objectives.
- **M—measurable**, by a specific amount. For example, "Accumulate $5,000 in an investment fund within three years" is more measurable than "Put money into an investment fund."
- **A—action-oriented**, providing the basis for the personal financial activities you will undertake. For example, "Reduce credit card debt" will usually mean actions to pay off amounts owed.
- **R—realistic**, involving goals based on your income and life situation. For example, it is probably not realistic to expect to buy a new car each year if you are a student.
- **T—time-based**, indicating a time frame for achieving the goal, such as three years. This allows you to measure your progress toward your financial goals.

your dollars and $ense

To become financially disciplined:

- Select a word or short phrase to describe your goal.
- Use a visual reminder—a photo, sticky note, or note card on your desk, computer, bathroom mirror, refrigerator, or car dashboard.
- Keep a financial diary or journal.
- Obtain support; work with a friend, roommate, spouse, or group to stay accountable.

Financial goals often lack the "why" to achieve meaningful results. If you are unable to answer "why," this may indicate a goal that is not appropriate. What is the "why" for one of your financial goals?

Once you identify a S-M-A-R-T goal, planning is needed to achieve the goal. Actions, along with a timeline, can be the basis for achieving financial goals. The *Financial Literacy NOW!* feature "Creating Goals and Assessing Financial Health" can guide your goal-setting activities.

Practice Quiz 1–2

1. True or False: Saving money for a vacation in three months is a long-term goal.

2. What are the main characteristics of useful financial goals?

3. Match the following common goals to the life situation of the people listed.

a. Pay off student loans	______ A young couple without children
b. Start a college savings fund	______ An older person living alone
c. Increase retirement contributions	______ A person who just completed college
d. Finance long-term care	______ A single mother with a preschool daughter

ACTION ACTIVITY: Use Your Personal Financial Plan Sheet 2 to create financial goals for your current and future life situation.

Financial Literacy NOW!

Creating Goals and Assessing Financial Health
Using the S-M-A-R-T format, create a financial goal that you would like to accomplish regarding saving, spending, or sharing your time, talents, or financial resources.

Example	Your Goal
Specific ...Create an emergency fund...	
Measurable ...of $400...	
Action-oriented ...at a credit union...	
Realistic ...by reduced spending on food away from home...	
Time-based ...within the next six months...	

What are your next actions to achieve this financial goal?

(1)

(2)

(3)

To evaluate your current financial activities for achieving goals, respond with a YES or NO answer to the following items:

	Yes	No
1. Do you have a budget or spending plan that guides your financial activities?		
2. Each month, do you pay your bills and credit card accounts on time?		
3. Do you maintain a record of the amount spent on various items each month?		
4. Is your monthly spending less than your income?		
5. If you had an unexpected major expense, would you have access to funds to cover this cost?		
6. Do you know the amount in the bank account you use for daily spending?		
7. Do you have money automatically set aside each month in a savings or investment program?		
8. Do you know the balance of your credit card accounts and other loans?		
9. Do you avoid late fees for credit cards, loans, and bills?		

How About You? A positive answer to eight or more of these questions indicates a strong personal financial future. For which items do you need to take action?

LESSON 1.3

Opportunity Costs and the Time Value Of Money

To set aside money for her emergency fund and other financial goals, Evelyn can use time value of money calculations to measure her progress.

In every financial decision, you sacrifice something to get something that you consider more desirable. For example, you might not buy an item now to save for a future purchase. Or you might obtain the use of an expensive item now by making credit payments from future earnings.

Opportunity cost is what you give up when making a choice. This cost, often called a trade-off, cannot always be measured in dollars. Opportunity costs should be viewed in terms of both personal and financial resources.

Personal Opportunity Costs

An important personal opportunity cost is the time used for one activity cannot be used for other activities. Time used for studying, working, or shopping will not be available for other uses. Other personal opportunity costs relate to health. Poor eating habits, lack of sleep, or avoiding exercise can result in illness, time away from school or work, increased health care costs, and reduced financial security. Similar to financial resources, your personal resources (time, energy, health, abilities, knowledge) require planning and wise management.

Financial Opportunity Costs

Would you rather have $100 today or $103 a year from now? How about $120 a year from now instead of $100 today? Your choice among these alternatives will depend on several factors, including current needs, future uncertainty, current interest rates, or potential returns on your investments. If you wait to receive your money in the future, you want to be rewarded for the risk. The **time value of money** involves increases in an amount of money as a result of interest earned. Saving or investing a dollar instead of spending it today results in a future amount greater than a dollar. Every time you spend, save, invest, or borrow money, you should consider the time value of that money as an opportunity cost. Spending money from your savings account means lost interest earnings; however, what you buy with that money may have a higher priority than the interest earned.

What Would You Do?

Savings is the foundation for successful money management. However, most people do not make saving a priority. What would you tell someone who says they do not have enough money available to save anything? Describe actions you might take to start or expand your savings program.

LO1.3

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

TAKE ACTION

Do you set aside an amount of money on a regular basis for various financial goals?

☐ Yes ☐ No

opportunity cost
What a person gives up by making a choice.

time value of money
Increase in an amount of money as a result of interest earned.

Interest Calculations Three amounts are used to calculate the time value of money for savings in the form of interest earned:

- The amount of the savings (commonly called the *principal*).
- The annual interest rate.
- The length of time the money is on deposit.

These three items are multiplied to obtain the amount of interest. Simple interest is calculated as follows:

Amount in savings × Annual interest rate × Time period = Interest earned

For example, $1,500 on deposit at 3 percent for one year would earn $45 ($1,500 × 0.03 × 1 year).

The increased value of money from interest earned involves two types of time value of money calculations, future value and present value. The amount that will be available at a later date is called the future value. In contrast, the current value of an amount desired in the future is the present value.

Three methods are commonly used for calculating time value of money:

1. *Online calculator and apps*. Many time value of money calculators are available online and through mobile devices to compute *future value* and *present value*.
2. *Financial calculator*. Various calculators are programmed with financial functions. Both future value and present value calculations are performed using appropriate keystrokes.
3. *Spreadsheet software*. Excel and other spreadsheet programs have built-in formulas for financial calculations, including future value and present value.

Additional details for these methods are presented in the appendix at the end of this chapter. Four types of time value of money calculations are used for financial decisions:

Time Value of Money	Type	Uses
Future Value – the amount to which current funds will increase; also called compounding.	**1.** Single amount **2.** Series of amounts (annuity)	• To achieve a financial goal by determining the value of savings or investments at a later date. • To set aside an amount each year with plans to start your own business in the future.
Present Value – the current value of a future amount; also called discounting.	**3.** Single amount **4.** Series of amounts (annuity)	• To determine an amount to deposit today for a goal to buy a car in a certain number of years. • To set up a fund to withdraw an amount each year for living expenses while in college.

Future Value of a Single Amount Money deposited in a bank account earns interest. **Future value** is the amount to which current savings will grow based on a certain interest rate and a certain time period. For example, $100 deposited in a 6 percent account for one year will grow to $106. This amount is computed as follows:

future value The amount to which current savings will increase based on a certain interest rate and a certain time period; also called compounding.

$$\text{Future value} = \$100 + (\$100 \times 0.06 \times 1 \text{ year}) = \$106$$

The same process could be continued for a second, third, and fourth year; however, the computations would be time-consuming. The previously mentioned calculation methods make the process easier.

An example of the future value of a single amount might involve an investment of $650 earning 8 percent for 10 years. This situation would be calculated as follows:

Apps, Online Calculator	Financial Calculator	Spreadsheet Software
Number of Periods (N) 10 Starting Amount (PV) $650 Interest Rate (I/Y) 8% **Results** **Future Value: $1,403.30**	PV , I/Y , N , PMT , CPT FV 650 PV , 8 I/Y , 10 N , 0 PMT , CPT FV $1,403.30 (Different financial calculators will require different keystrokes.)	= FV(rate, periods, amount per period, single amount) = FV(0.08,10,0,−650) = $1,403.30

Note: Expanded explanations of these time value of money calculation methods are presented in the Chapter 1 Appendix.

Future value computations are referred to as *compounding*, since interest is earned on previously earned interest. Compounding allows the future value of a deposit to grow faster than it would if interest were paid only on the original deposit. The sooner you make deposits, the greater the future value will be. Depositing $1,000 in a 5 percent account at age 40 will give you $3,387 at age 65. Making the $1,000 deposit at age 25 would result in an account balance of $7,040 at age 65.

your dollars and $ense

A person investing $2,000 a year (at 9 percent) from ages 35 to 64 (30 years) would see the funds grow to over $350,000 by age 65. However, if you save $2,000 a year (at 9 percent) for only 10 years from ages 25 to 34, at age 65 you would have a retirement fund worth over $545,000! Most important: Start investing something now! Then keep saving an amount each year.

Future Value of a Series of Amounts Many savers and investors make regular deposits. An annuity is a series of equal deposits or payments.

Present Value of a Single Amount Another aspect of the time value of money involves determining the current value of an amount desired in the future. **Present value** is the current value for a future amount based on a particular interest rate for a certain period of time. Present value computations, also called *discounting*, allow you to determine how much to deposit now to obtain a desired total in the future

present value The current value for a future amount based on a certain interest rate and a certain time period; also referred to as discounting.

Present Value of a Series of Amounts You may also use present value computations to determine how much to deposit now so that you can take a certain amount out of the account for a desired number of years.

Three methods are commonly used for calculating time value of money:

1. *Online calculator and apps*. Many time value of money calculators are available online and through mobile devices to compute future value and present value.
2. *Financial calculator*. Various calculators are programmed with financial functions. Both future value and present value calculations are performed using appropriate keystrokes.
3. *Spreadsheet software*. Excel and other spreadsheet programs have built-in formulas for financial calculations, including future value and present value. Additional details for these methods are presented in the appendix at the end of this chapter.

The nearby *Do The Math!* feature presents examples of using time value of money to achieve financial goals.

Practice Quiz 1–3

1. What are some examples of personal opportunity costs?
2. What does time value of money measure?
3. Use a financial calculator, app, or online calculator to calculate the following:
   - **a.** The future value of $100 at 7 percent in 10 years.
   - **b.** The future value of $100 a year for six years earning 6 percent.
   - **c.** The present value of $500 received in eight years with an interest rate of 8 percent.

ACTION ACTIVITY: Create a future financial goal with a specific amount and timeline. Use time value of money calculations to determine the amount you would need to save each year based on an interest rate of your choice. (See Chapter Appendix and Your Personal Financial Plan Sheet 3.)

Do the Math!

Time Value of Money Calculations for Achieving Financial Goals

Achieving specific financial goals may require making regular savings deposits or determining an amount to be invested. By using time value of money calculations, you can compute the amount needed to achieve a financial goal.

Situation 1: Jonie Emerson has two children who will start college in 10 years. She plans to set aside $1,500 a year for her children's college education during that period and estimates she will earn an annual interest rate of 5 percent on her savings. What amount can Jonie expect to have available for her children's college education when they start college?

Apps, Online Calculator	Financial Calculator	Spreadsheet Software
Number of Periods (N) 10 Starting Amount (PV) $0 Interest Rate (I/Y) 5% Periodic Deposit (PMT) $1,500 **Results** **Future Value: $18,866.84**	PV , I/Y , N , PMT , CPT FV 0 PV , 5 I/Y , 10 N , 1,500 PMT , CPT FV $18,866.84 (Different financial calculators will require different keystrokes.)	= FV (rate, periods, amount per period, amount) = FV (0.05,10, −1,500) = $18,866.84
Conclusion: Based on these calculations, if Jonie deposits $1,500 a year at an annual interest rate of 5 percent, she would have $18,867 available for her children's college education.		

Situation 2: Don Calder wants to have $50,000 available in 10 years as a reserve fund for his parents' retirement living expenses and health care. If he earns an average of 8 percent on his investments, what amount must he invest today to achieve this goal?

Apps, Online Calculator	Financial Calculator	Spreadsheet Software
Future Value $50,000 Number of Periods (N) 10 Interest Rate (I/Y) 5% **Results** **Future Value: $23,159.67**	FV , N , I/Y , PMT , CPT PV 50,000 FV , 10 N , 8 I/Y , 0 PMT , CPT PV $23,159.67 (Different financial calculators will require different keystrokes.)	= PV (rate, periods, payment, future value amount type) = PV (0.08,10,0, −50,000) = $23,159.67
Conclusion: Don needs to invest approximately $23,160 today for 10 years at 8 percent to achieve the desired financial goal.		

Note: Expanded explanations of these time value of money calculation methods are presented in the Chapter 1 Appendix.

LESSON 1.4

A Plan for Personal Financial Literacy

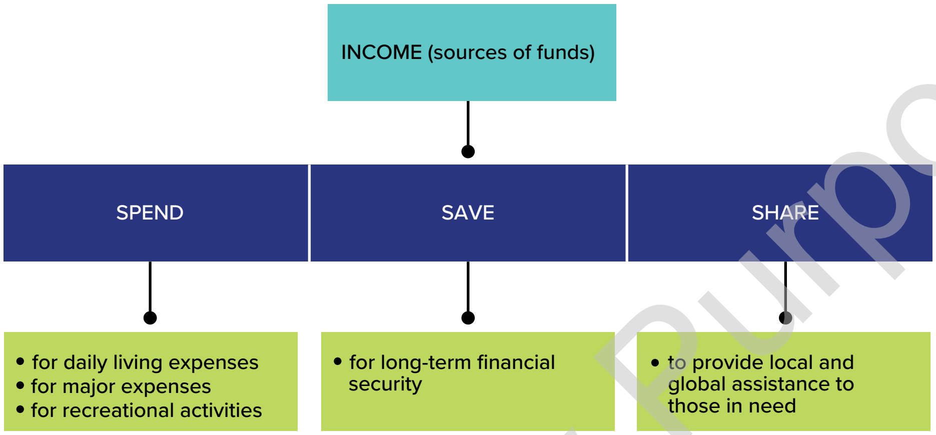
LO1.4

Develop and implement a plan for making personal financial and career decisions.

Creating and maintaining an emergency fund is only one element of your financial planning activities. What other money management activities might Evelyn consider?

Everyone makes hundreds of decisions each day. Most of these choices are quite simple and have few consequences. However, some are complex and have long-term effects on our personal and financial situations, as shown here.

While everyone makes decisions, not everyone considers how to make better decisions. As Exhibit 1–5 shows, the financial planning process can be viewed in six steps that can be adapted to any life situation.

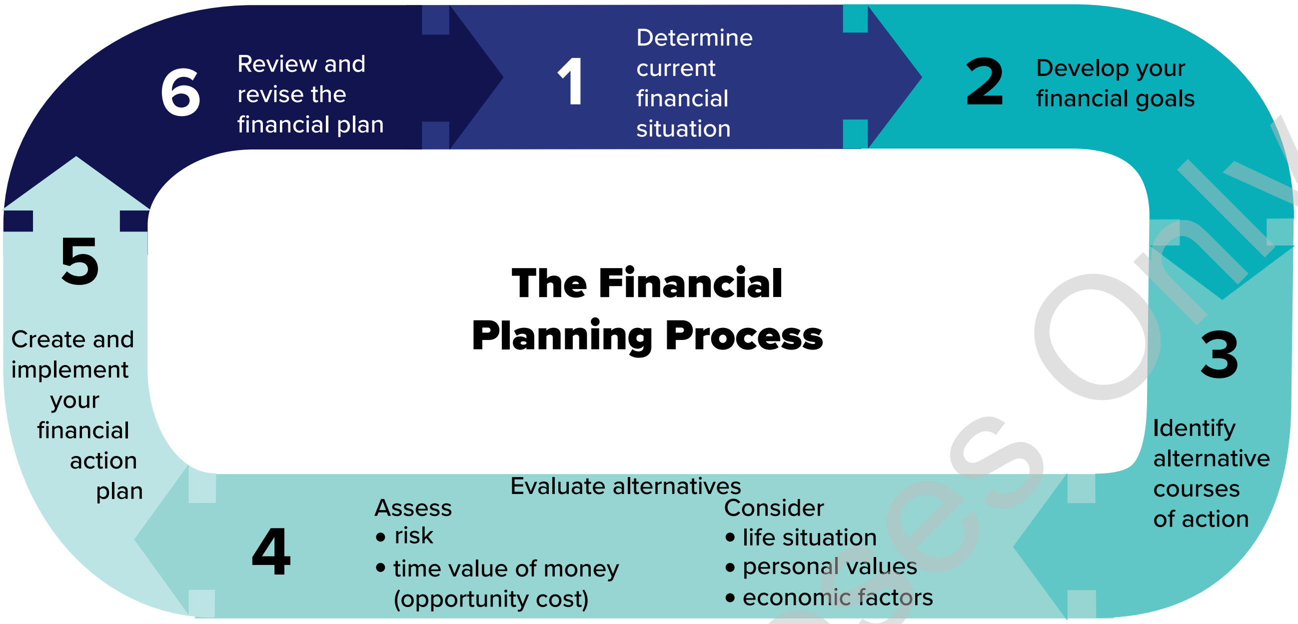


TAKE ACTION

Do you consider various risks when making personal financial decisions?

☐ **Yes** ☐ **No**

Exhibit 1–5 The Financial Planning Process



STEP 1: Determine Your Current Financial Situation

In the first step, determine your current financial situation regarding income, savings, living expenses, and debts. Prepare a list of assets and debts, along with amounts spent for various items is the foundation for financial planning activities. The personal financial statements discussed in Chapter 3 will provide the information needed for this phase of financial decision making. Set up a system to track your spending, which will help guide your current and future financial success.

EXAMPLE: Step 1 - Determine Your Current Situation

Carla Elliot plans to complete her college degree in the next two years. She works two part-time jobs in an effort to pay her educational expenses. Currently, Carla has $700 in a savings account and existing debt that includes a $640 balance on her credit card and $2,300 in student loans. What additional information should Carla have available when planning her personal finances?

Example from Your Life

What actions could you take to determine your current financial situation? Locate an app or online resource to help with this action.

STEP 2: Develop Your Financial Goals

Every once in a while, analyze your financial values and goals. The purpose of this action is to clarify your needs and wants. Specific financial goals are vital to financial planning. Others can suggest financial goals for you, but you must decide which goals to pursue. Your financial goals can range from spending all of your current income to developing an extensive savings and investment program for your future financial security.

EXAMPLE: Step 2 - Develop Financial Goals

Carla Elliot's main financial goals for the next two years are to complete her college degree and to reduce the amounts owed. What other goals might be appropriate for Carla?

Example from Your Life

Describe some short-term or long-term goals that might be appropriate for you now or in the future.

STEP 3: Identify Alternative Courses of Action

Identifying alternatives is crucial when making decisions. Although many factors can influence available alternatives, possible courses of action usually fall into these categories:

- *Continue the same course of action.* For example, you may determine that the amount you have saved each month is still appropriate.
- *Expand the current situation*. You may choose to save a larger amount each month.
- *Change the current situation*. You may decide to use a specific type of account that is ideal for your financial goals.
- *Take a new course of action*. You may decide to use your monthly saving budget to pay off credit card debts.

Not all of these categories will apply to every decision; they represent possible courses of action. If a person stops working full-time to go to school, they must identify several alternatives under the category "Take a new course of action." Creativity in decision making is vital. Considering all possible alternatives will help you make more effective and satisfying decisions. Most people believe they must own a car to get to work or school. However, they should consider other alternatives such as public transportation, carpooling, renting a car, shared ownership of a car, or using a ride-sharing service.

Remember, when you decide not to take action, you elect to "do nothing," which can be a dangerous alternative.

your dollars and $ense

Your education can be a significant investment, which will hopefully result in future financial and career benefits. To fund the costs of your future education, consider these alternatives: (1) grants from schools and government, which don't need to be repaid; (2) financial aid and work-study programs; (3) scholarships from government agencies, organizations, and other sources; (4) education loans; (5) tax credits and personal savings; (6) lower-cost living locations and tuition programs; and (7) tuition reimbursement from an employer. For additional guidance on financing your education, see the Chapter 6 appendix.

EXAMPLE: Step 3 - Identify Alternatives

To achieve her goals, Carla Elliot has several options available. She could reduce her spending, seek a higher-paying part-time job, or use her savings to pay off some of her debt. What additional alternatives might she consider?

Example from Your Life

List various alternatives for achieving the financial goals you identified in Step 2.

STEP 4: Evaluate Your Alternatives

Next, evaluate possible courses of action, taking into consideration your life situation, personal values, and current economic conditions. How do you like to spend leisure time? How will changes in interest rates affect your financial situation?

Consequences of Choices Every decision closes off alternatives. For example, a decision to invest in stock may mean you cannot spend money for other activities. A decision to go to school full-time may mean you cannot work full-time. Opportunity cost is what you give up by making a choice. These trade-offs cannot always be measured in dollars. However, the resources you give up (money or time) have a value that is lost.

Evaluating Risk Uncertainty is also a part of every decision. Selecting a college major and choosing a career field involve risk. What if you don't like working in a field or cannot obtain employment? Other decisions involve a very low degree of risk, such as putting money in an insured savings account or purchasing items that cost only a few dollars. Your chance of losing something of great value is not present in these situations.

In many financial decisions, identifying and evaluating risk are difficult. Common risks to consider include:

- *Inflation risk*, due to rising or falling (deflation) prices that cause changes in buying.
- *Interest rate risk*, resulting from changes in the cost of money, which can affect your costs (when you borrow) and benefits (when you save or invest).
- *Income risk* may result from loss of a job or encountering illness.
- *Personal risk* involves tangible and intangible factors that create a less than desirable situation, such as health or safety concerns.

FinTech for Financial Literacy

FinTech (financial technology) involves apps, websites, computers, and other automated systems for banking and personal finance activities. Artificial intelligence, robotics, drones, blockchain, and other innovations will influence how you earn, save, spend, and invest. Robo-advisors, for example, offer personalized investment advice based on your income, assets, debt, financial goals, and risk tolerance. Other FinTech operations include crowdfunding, cryptocurrencies, budgeting and payment apps, and online start-ups providing insurance.

- **Liquidity risk** occurs when savings and investments that have potential for higher earnings are difficult to convert to cash or to sell without significant loss in value.

liquidity risk the marketability of an investment and whether it can be bought or sold quickly enough.

The best way to consider risk is to gather information based on your experience and the experiences of others, and to use financial planning information sources.

Financial Planning Information Sources Appropriate information is required at each stage of the financial planning process. In addition to this book, useful sources available to help you include:

1. online sources and apps
2. media sources - newspapers, magazines, television, radio, blogs, podcasts, online videos
3. financial institutions, apps, websites, materials from credit unions, banks, investment companies
4. financial specialists - financial planners, insurance agents, investment advisors, credit counselors, tax preparers

EXAMPLE: Step 4 - Evaluate Alternatives

As Carla Elliot evaluates her alternative courses of action, she should consider both her short-term and long-term situations. What risks and trade-offs should Carla consider?

Example from Your Life

What risks might you encounter now and later in life when planning and implementing personal financial activities?

STEP 5: Create and Implement Your Financial Action Plan

You are now ready to develop an action plan for your goals. For example, you can increase your savings by reducing your spending or by increasing your income.

To implement your financial action plan, you may need assistance from others. For example, you may contact an insurance agent to purchase auto insurance or use an investment broker to purchase stocks, bonds, or mutual funds. Exhibit 1–6 offers a framework for developing and implementing a financial plan, along with examples for several life situations. Also, the Chapter 6 Appendix provides information on financing your education.

EXAMPLE: Step 5 - Create a Financial Plan

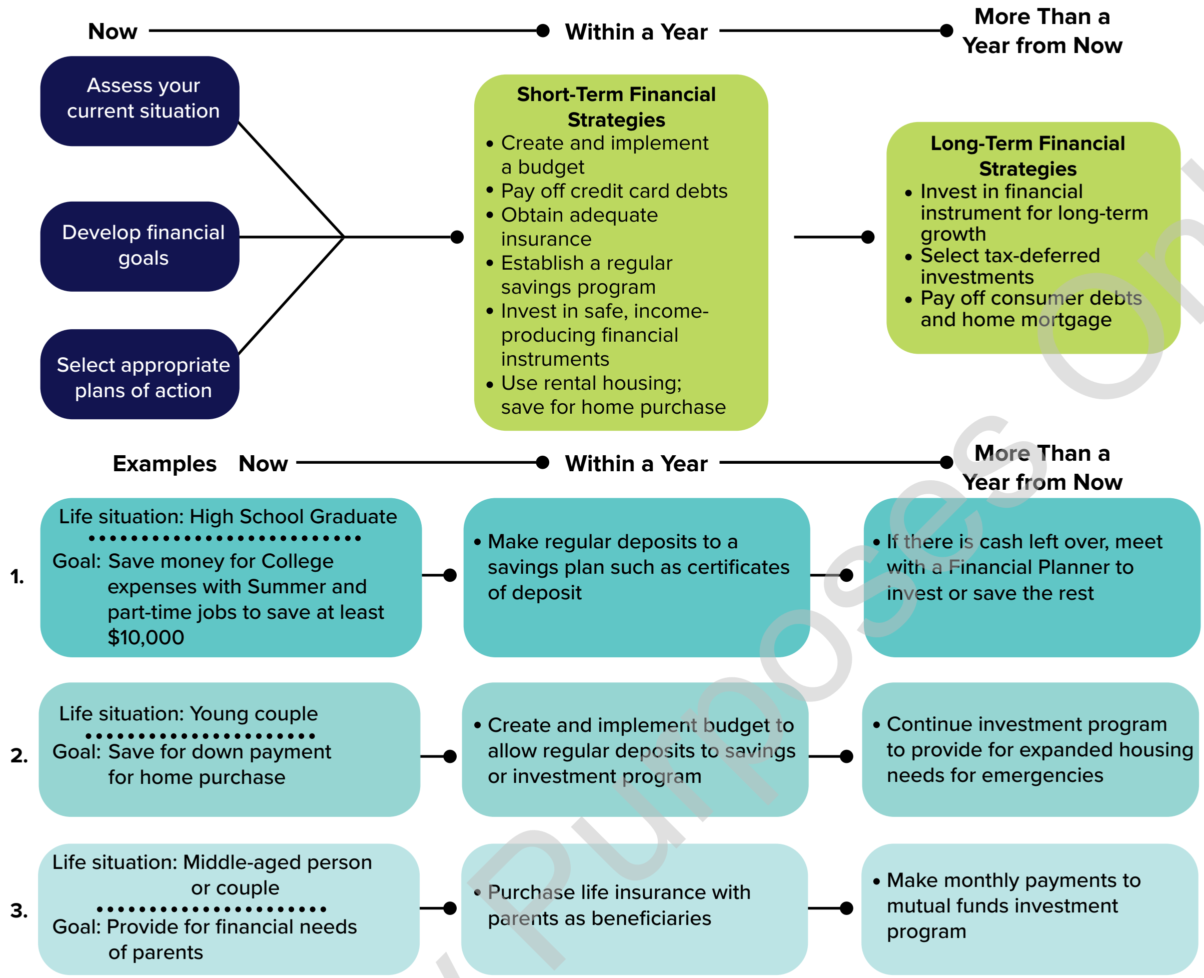
Carla has decided to reduce her course load and work longer hours in an effort both to reduce her debt level and to increase the amount she has in savings. What are the benefits and drawbacks of this choice?

Example from Your Life

Describe the benefits and drawbacks of a financial situation you have encountered during the past year.

The *Financial Literacy NOW!* feature “Which Path Will You Choose?” provides guidelines for choosing your financial planning direction.

Exhibit 1–6 **Financial Planning in Action**



STEP 6: Review and Revise Your Plan

Financial planning is an ongoing process that does not end when you take action. You need to regularly assess your financial decisions. You should do a review of your finances at least once a year. Changing personal factors may require a more frequent review.

When life events affect your financial needs, this financial planning process will help you adapt to changes. A regular review of this process will help you adjust priorities to bring your financial goals and activities in line with your current life situation.

EXAMPLE: Step 6 - Review and Revise the Plan

Over the next 6 to 12 months, Carla Elliot should review her financial, personal, and educational situation. What circumstances might occur that would require Carla to take a different approach to her personal finances?

Example from Your Life

What factors in your life might affect your personal financial situation and decisions in the future?

Career Choice and Financial Planning

Have you ever wondered why some people find great satisfaction in their work, while others only put in their time? As with other personal financial decisions, career selection and professional growth require planning. The lifework you select is a key to your financial well-being and personal satisfaction. The steps of the financial planning process can guide your career planning, advancement, and career change. Your career goals will affect how you use this process. If you desire more responsibility on the job, for example, you may decide to obtain advanced training or change career fields. Chapter 2 provides guidance for obtaining employment and career advancement.

Studying Personal Finance

Useful learning tools are in each chapter of this book for planning your financial activities. As you move forward, we recommend that you:

- Read and study this book carefully. Use the Practice Quizzes and end-of-chapter problems and activities.
- Talk to family members, friends, financial experts, and others who have knowledge of various money topics.
- Use online sources and apps for the latest information for answers to questions that result from your desire to know more.
- Remember, knowledge does not equal behavior. You must be determined to take appropriate actions as a result of your learning.

A common ***mistake*** when studying personal finance is a low desire to learn. An ***action*** would be to develop strong study skills when using this book. This can result in ***success*** both in class and for a satisfying personal and financial life.

Practice Quiz 1–4

1. What actions might a person take to identify alternatives when making a financial decision?
2. Why are career planning activities considered to be personal financial decisions?
3. For the following situations, identify the type of risk being described. (inflation risk, interest rate risk, income risk, personal risk, liquidity risk).

   ______ Not getting proper rest and exercise.

   ______ Not being able to obtain cash from a certificate of deposit before the maturity date.

   ______ Taking out a variable rate loan when rates are expected to rise.

   ______ Training for a career field with low potential demand in the future.
4. List a specific website, organization, or person whom you might contact in the future for a website, an app, a financial institution, and a financial specialist.

ACTION ACTIVITY: Talk to a family member or friend to obtain information about their financial activities. What advice do they offer for wise money management?

Financial Literacy NOW!

Which Path Will You Choose? Only One Will Result in Financial Security

Many people feel stress when thinking about money. They make financial decisions based on emotions rather than valid information. They often have disagreements with family members about money.

To address these and other financial concerns, two paths exist for your daily money decisions.

The *easy* path involves little thinking, no planning, and minimal effort, usually resulting in wasted money and financial difficulties. In contrast, the *appropriate* path takes some time and effort but results in lower stress and personal financial security.

It is EASY to...	*...but APPROPRIATE to...*
...spend without planning	...save for emergencies and the future
...overuse credit cards	...maintain a low level of debt
...avoid buying insurance	...have a risk management plan
...select investments carelessly	...research to avoid investment scams
...make decisions on your own	...consult with others

You can easily start to move yourself from easy *mistakes* to appropriate actions with these steps:

1. *Do something*. Start small, such as saving a small amount each month. Or decide to reduce your credit card use.
2. *Avoid excuses*. Do not tell yourself that "I don't have time" or "It's what everyone else is doing."
3. *Rate your current situation.* Indicate on this scale where you are currently in relation to the two available paths:

Spender — **Saver**

Financial difficulties — **Financial security**

4. *Set your mission*. Create a personal finance mission statement to communicate your personal values, financial goals, and future vision. This paragraph (or list, drawing, or other format) will remind you and family members of your desired path. The wording describes where you want to be and how you will get there.

Develop your financial mission statement by talking with those who can help guide your actions. Your personal finance mission statement may include such phrases as "My financial mission is to change my spending habits for . . . ," ". . . to better understand my insurance needs . . . ," or "donate to (or volunteer for) local community service organizations."

Choosing whether to take *easy* or *difficult* actions can result in reduced emotional stress, improved personal relationships, and enhanced personal security.

Digital Financial Literacy With. . .

Online resources (apps, websites, podcasts, blogs, videos, social media) are valuable for learning. As both a consumer and producer of digital content, you need to be able to locate, assess, create, and share information for wise money management. Also, online safety, privacy settings, social media sharing, and fake news can influence your financial well-being and career opportunities. Improving your *digital financial literacy* involves developing skills for using information to identify, research, and implement money decisions.

Kiplinger.com and *Kiplinger's Personal Finance* magazine offer a wide variety of personal financial articles, videos, podcasts, calculators, and other features. A recent article in the magazine featured an individual who had a strong savings program but wanted to invest for a higher return. His goals included continuing to save for retirement and buying a car and a house. He also kept some of his savings in an account as an emergency fund.

Kiplinger's Personal Finance

As the years progressed, and marriage was on the horizon, consideration was given to some additional goals. These financial targets included buying a bigger house and renting out the current one. *Kiplinger's Personal Finance* staff also recommended that the couple consult a financial planner as they make plans to formally combine their finances.

ACTION STEPS FOR. . .		
. . .Information Literacy	. . .Financial Literacy	. . .Digital Literacy
Based on your personal life situation, identify a financial goal and develop action steps to achieve that goal. Create a list of questions that might be used to validate the action steps	Locate the "Tools" at **kiplinger.com** and select one of the items. Prepare a visual (photo, poster) or brief video that explains how this tool might be used to achieve a personal financial goal	Select an article from **kiplinger.com** Talk with others about the article. Describe how an online video or app might be used to communicate the information from these sources.

Road Map to financial literacy

Your Financial Action Plan

You Are Here

Checkpoint 1

Back to the Beginning
Based on your learning in this chapter, what suggestions do you have for Evelyn regarding saving for her emergency fund and other financial planning activities?

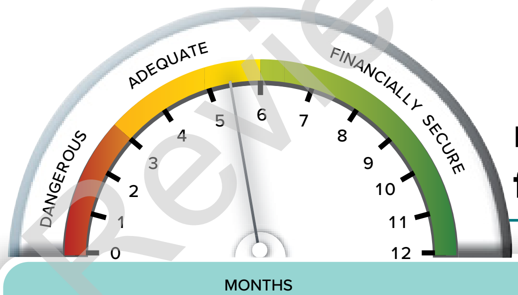
Checkpoint 2

What About You?
What actions have you taken to start or grow an emergency fund or other savings plan?

Checkpoint 3

What's Next?
In addition to tracking your spending, what financial literacy action do you consider important for your current and future life situation?

Financial Literacy



monitoring your progress: financial literacy dashboard

Emergency Savings Fund

A dashboard is used to monitor indicators of success. You can use this tool to assess your personal financial situation. An often overlooked action is the creation of an emergency fund. Financial advisers commonly suggest saving three to six months of living expenses for unexpected situations. More may be needed if you are self-employed.

YOUR SITUATION: Have you started your emergency fund? Do you make progress each month?

Chapter Summary

LO1.1 Financial decisions are affected by a person's life situation (income, age, household size, health), personal values, and economic factors (prices, interest rates, employment opportunities). The major elements of financial planning are obtaining, planning, saving, borrowing, spending, managing risk, investing, and retirement and estate planning.

LO1.2 Financial goals should take a S-M-A-R-T approach with goals that are Specific, Measurable, Action-oriented, Realistic, and Time-based.

LO1.3 Every decision involves a trade-off with things given up. 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.

LO1.4 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; and (6) review and revise the financial plan.

Key Terms

adult life cycle 4	future value 13	liquidity risk 20
economics 4	inflation 4	present value 13
financial plan 2	opportunity cost 11	time value of money 11
financial literacy 2	personal financial planning 2	values 3

Self-Test Problems

1. The Rule of 72 provides a guideline for determining how long it takes your money to double. This rule can also be used to determine your earning rate. If your money is expected to double in 12 years, what is your rate of return?
2. If you desire to have $10,000 in savings eight years from now, what amount would you need to deposit in an account that earns 5 percent?

Self-Test Solutions

1. Using the Rule of 72, if your money is expected to double in 12 years, you are earning approximately 6 percent (72 ÷ 12 years = 6 percent).
2. To calculate the present value of $10,000 for eight years at 5 percent, use an app, online calculator, financial calculator, or Excel spreadsheet: $6,770.

Financial Literacy Problems

(Note: Some of these problems require the use of a financial calculator, app, online calculator, or spreadsheet software.)

1. Using the Rule of 72, approximate the following amounts: (LO1.1)

- **a.** If the value of land in an area is increasing 6 percent a year, how long will it take for property values to double?
- **b.** If you earn 10 percent on your investments, how long will it take for your money to double?
- **c.** At an annual interest rate of 5 percent, how long will it take for your savings to double?

2. In 2021, selected automobiles had an average cost of $16,000. The average cost of those same automobiles is now $20,000. What was the rate of increase for these automobiles between the two time periods? (LO1.1)

3. A family spends $46,000 a year for living expenses. If prices increase 3 percent a year for the next three years, what amount will the family need for their living expenses after three years? (LO1.1)

4. Ben Collins plans to buy a house for $260,000. If the real estate in his area is expected to increase in value by 2 percent each year, what will its approximate value be seven years from now? (LO1.2)

5. What would be the yearly earnings for a person with $9,000 in savings at an annual interest rate of 1.5 percent? (LO1.3)

6. Using a financial calculator, Excel, an app, or an online calculator, calculate the following: (LO1.3)

- **a.** The future value of $550 six years from now at 7 percent.
- **b.** The future value of $900 saved each year for 10 years at 8 percent.
- **c.** The amount a person would have to deposit today (present value) at a 5 percent interest rate to have $1,000 five years from now.
- **d.** The amount a person would have to deposit today to be able to take out $500 a year for 10 years from an account earning 8 percent.

7. A person would like to have $12,000 for a down payment for a house in five years, what amount would you need to deposit today? Assume that your money will earn 4 percent. (LO1.3)

8. Pete Morton is planning to go to graduate school program that will take three years. Pete wants to have $8,000 available each year for various school and living expenses. If he earns 3 percent on his money, how much must he deposit at the start of his studies to be able to withdraw $8,000 a year for three years? (LO1.3)

9. Carla Lopez deposits $2,800 a year into her retirement account. If these funds have an average earning of 7 percent over the 40 years until her retirement, what will be the value of her retirement account? (LO1.3)

10. If a person spends $10 a week on coffee (assume $500 a year), what would be the future value of that amount over 10 years if the funds were deposited in an account earning 3 percent? (LO1.3)

11. Tran Lee plans to set aside $2,600 a year for the next seven years, earning 3 percent. What would be the future value of this savings amount? (LO1.3)

12. If a person plans to borrow $8,000 with a 5 percent interest rate to be repaid in five equal payments at the end of the next five years, what would be the amount of each payment? (LO1.3)

Financial Literacy Portfolio. . .

Creating SMART Goals

Competency. . .

Develop personal financial goals.

Action Research. . .

Based on the S-M-A-R-T goal format discussed in this chapter, create three personal finance goals for your life or for someone else. Talk with several people about their financial goals. What are common goals for various personal situations? How might employment situations affect financial decisions? Also, ask about potential risks involved with making financial decisions. What actions might be taken to investigate and reduce these risks?

Outcome. . .

Create three S-M-A-R-T goals: (1) one for SAVING; (2) one for SPENDING; and (3) one for SHARING, such as donating money, time, or skills to a charity or nonprofit. For each goal, develop an action plan (with three to five steps) presented in a visual format (flowchart, video, photo essay, PowerPoint presentation, or other visual format).

Real Life Financial Literacy

You be the Financial Planner

While at some point in your life you may use the services of a financial planner, your personal knowledge should be the foundation for most financial decisions. For each of these situations, determine actions you might recommend.

Situation 1: Fran and Ed Blake, ages 43 and 47, have a daughter who is completing her first year of college and a son three years younger. Currently, they have $34,000 in various savings and investment funds set aside for their children's education. With the increasing cost of education, they are concerned about whether this amount is adequate. In recent months, Fran's mother has required extensive medical attention and personal care assistance. Unable to live alone, she is now a resident of a long-term care facility. The cost of this service is $5,600 a month, with annual increases of about 5 percent. While a major portion of the cost is covered by her Social Security and pension, Fran's mother is unable to cover the entire cost. In addition, the Blakes are concerned about saving for their own retirement. While they have consistently made annual deposits to a retirement fund, current financial demands may force them to access some of that money.

Situation 2: “While I knew it might happen someday, I didn’t expect it right now.” This was the reaction of Patrick Hamilton when his company merged with another business and moved its offices to another state, resulting in him losing his job. Patrick does have some flexibility in his short-term finances since he has three months of living expenses in a savings account. However, “three months can go by very quickly,” as Patrick noted.

Situation 3: Nina Resendiz, age 23, recently received an $8,000 gift from her aunt. She is considering various uses for these unexpected funds, including paying off credit card bills from her last vacation or setting aside money for a down payment on a house. Or she might invest the money in a tax-deferred retirement account. Another possibility is using the money for technology certification courses to enhance her earning power. Nina also wants to contribute some of the funds to a homeless shelter and a global organization that helps start small businesses in low-income areas. She is overwhelmed by the choices and comments to herself, “I want to avoid the temptation of wasting the money on impulse items. I want to make sure I use the money on things with lasting value.”

Questions

1. In each situation, what are the main financial planning issues that need to be addressed?
2. What additional information would you like to have before recommending actions in each situation?
3. Based on the information provided and your analysis of the situations, recommend actions related to: (a) SMART goals, (b) spending, and (c) saving, for the Blakes, Patrick, and Nina.

Financial Decisions For Your Future: An Ongoing Case Study

Setting Financial Goals

Jamie Lee Jackson, age 24, has recently decided to switch from attending college part-time to full-time in order to pursue her business degree, and she aims to graduate within the next three years. She has 55 credit hours remaining in order to earn her bachelor's degree and knows that it will be a challenge to complete her course of study. She still works part-time in the bakery department of a local grocery store, where she earns $390 a week. Jamie Lee wants to keep her part-time job at the grocery store as she loves baking and creates very decorative cakes. She dreams of opening her own cupcake café within the next five years.

Jamie Lee currently shares a small apartment with a friend, and they split all of the living expenses, such as rent and utilities, although she would really like to have a place of her own. Her car is still going strong, even though it is seven years old, and she has no plans to buy a new one any time soon. She is carrying a balance on her credit card and is making regular monthly payments of $50 with hopes of paying it off within a year. Jamie Lee has also recently taken out a student loan to cover her educational costs and expenses. Jamie Lee just started depositing $1,800 a year in a savings account that earns 2 percent interest in hopes of having the $9,000 down payment needed to start the cupcake café two years after graduation.

Current Financial Situation

Checking account: $1,250

Emergency fund savings account: $3,100

Car (current value): $4,000

Student loan: $5,400

Credit card balance: $400

Gross monthly salary: $2,300

Net monthly salary: $1,690

Questions

1. What are Jamie Lee's short-term financial goals? How do they compare to her intermediate financial goals?
2. Assess Jamie Lee's current financial situation. Using the SMART approach, what recommendations would you make for her to achieve her long-term goals?
3. Name two opportunity costs that should be considered in Jamie Lee's situation.

4. Jamie Lee needs to save a total of $9,000 in order to start her cupcake café venture. She is presently depositing $1,800 a year in a regular savings account earning 2 percent interest. How much will she have accumulated five years from now in this regular savings account, assuming she will leave her emergency fund savings account balance untouched?

Spending Diary

"I first thought this process would be a waste of time, but the information has helped me become much more careful of how I spend my money."

Money management success depends on spending less than you earn. The use of a Spending Diary will help you better understand your spending to achieve financial goals.

People who take on this task find it difficult at first and may consider it a waste of time. However, after a while recording this information becomes easier and faster. And nearly everyone who makes a serious effort to keep a Spending Diary has found it beneficial.

A Spending Diary can help to (1) reveal hidden spending to better save for the future; (2) revise buying habits and reduce wasteful spending; (3) control credit card use; (4) plan for major expenses; (5) start an investment program to achieve financial goals.

Directions Using the Daily Spending Diary sheet, which follows, record every cent of your spending each day in the categories provided or create your own system. Other formats for tracking your spending include an Excel spreadsheet, multicolum paper, sticky notes, a whiteboard, a monthly calendar page, or an app. Some available apps include Spending Tracker, Track Every Coin, Mint, Expensify, Level Money, and Spendee. You can indicate the use of a credit card with (CC). At the end of each chapter, questions are provided to guide your daily spending related to the topic of the chapter.

Questions

1. What did your daily spending diary reveal about your spending habits? What spending might you reduce or eliminate?
2. How might your daily spending diary assist you when identifying and achieving financial goals?

Daily Spending Diary (Instructions and Sheets)

Effective personal financial planning depends on spending less than you earn. The use of a Daily Spending Diary will provide information to better understand your spending patterns and to help you achieve desired financial goals.

The following sheets can be used to record every cent of your spending each day in the categories provided. Or, you can create your own format to monitor your spending. You can indicate the use of a credit card with (CC). Various apps are also available to record and monitor your spending.

This experience will help you understand your spending habits and identify desired changes you might want to make. Your comments should reflect what you have learned about your spending and can assist with changes you might want to make. Ask yourself, “What spending amounts can I reduce or eliminate?”

Many people who take on this task find it difficult at first and may consider it a waste of time. However, nearly everyone who makes a serious effort to keep a Daily Spending Diary has found it beneficial. The process may seem tedious at first, but after a while recording this information becomes easier and faster. Most important, you will know where your money is going. Then you will be able to better decide if that is truly how you want to spend your available financial resources. A sincere effort will result in useful information for monitoring and controlling your spending, and create the foundation for long-term financial security. At the end of each chapter, questions are provided to guide your daily spending related to the topic of the chapter.

Using a Daily Spending Diary can help to:

- reveal hidden spending habits so you can better save for the future.
- create and achieve financial goals.
- revise buying habits and reduce wasteful spending.
- control credit card purchases.
- improve record-keeping for measuring your financial progress and filing your taxes.
- plan for major expenses during the year.
- start an investment program with the money you save through controlled spending.

You may also track your spending using apps, such as Spending Tracker, Track Every Coin, Mint, Level Money, and Spendee.

Daily Spending Diary

Directions: Record every cent of your spending each day in the categories provided, or create your own format to monitor your spending. You can indicate the use of a credit card with (CC). Comments should reflect what you have learned about your spending patterns and desired changes you might want to make in your spending habits.

(Note: As income is received, record it in the Date column.)

Month: ______________ **Amount available for spending: $**______________ **Amount to be saved: $**______________

Date (Income)	Total Spending	Auto, Transportation	Housing, Utilities	Food (H) Home (A) Away	Health, Personal Care	Education	Recreation, Leisure	Donations, Gifts	Other (note item, amount)	Comments
Example	**$83**	**$20 (gas) (CC)**		**$47 (H)**		**$2 (pen)**	**$4 (DVD rental)**	**$10 (shelter)**		**This takes time, but it helps me control my spending.**
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
Subtotal										
15										
16										
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19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										
31										
Total										

Total Income	**Total Spending**	**Difference (+/−)**	***Actions:*** **amount to savings, areas for reduced spending, other actions . . .**
$______________	**$**______________	**$**______________	

Careers in . . . Financial Planning

On The Job with a Financial Planner

Callie Horton, CFP, begins the day reviewing files of several of her clients. She is self-employed as a certified financial planner who advises clients on financial planning strategies for their future.

Today she will meet with a newly married couple who would like to develop a financial plan to save for their goal of purchasing a home. Next, Callie will meet with a recently retired person to review her annuity plan, and then a small business owner who would like to set up a retirement plan for employees. With some time off in the afternoon, she has phone calls and emails to answer. Later, an evening meeting with a family with three young children who would like to create a college education savings fund.

Guiding people with their money decisions can provide great career satisfaction when helping families and individuals reduce financial difficulties and emotional stress.

Job Titles in Financial Planning

- Certified Financial Planner (CFP)
- Family Money Management Counselor
- Financial Advisor
- Financial Consultant
- Credit Counselor
- Financial Advisor
- Investment Advisor
- Portfolio Manager
- Stockbroker
- Tax Preparer

Education/Training

A financial planning career will likely require a college degree with an emphasis on accounting, finance, economics, math, and statistics. In addition, people who work in financial planning often have specialized certifications such as Certified Financial Planner, Chartered Financial Analyst, Personal Financial Planning Specialist, or Accredited Financial Counselor.

Vital Skills/Personal Traits/Knowledge

To effectively serve clients, financial planning workers need:

- Effective communication, including active listening, clear writing, and persuasive oral speaking
- Analytical thinking along with decision-making ability and problem-solving skills
- Strong interpersonal skills to provide personalized service with empathy
- Integrity, dependability, and attention to detail
- Knowledge of legal aspects and government regulations for financial services and investments
- Computer technology for spreadsheets, artificial intelligence, and FinTech

Workforce Readiness Questions

1. Why are customer service and personal interactions important for careers in financial planning?
2. Describe how active listening would be of value for a career in financial planning.
3. Explain the importance of goal setting for careers in financial planning.
4. What challenges might be encountered when assisting people with their financial planning? How could you minimize or avoid these concerns?
5. What aspects of a financial planning career interest you? Describe how you might use your talents, abilities, and skills in this career field.

Name ______________________ Date ____________

Personal Financial Data

Purpose: To create a record of personal financial information.

Financial Planning Activities: Complete the information requested to provide a quick reference for your personal data.

Suggested Websites & Apps: www.money.com, www.kiplinger.com, Google Docs.

Name ______________________

Birth Date ______________________

Marital Status ______________________

Address ______________________

Phone ______________________

Email ______________________

Social Security No.* ______________________

Driver's License No.* ______________________

Place of Employment ______________________

Address ______________________

Email ______________________

Position ______________________

Length of Service ______________________

Checking Acct. No. ______________________

Financial Inst. ______________________

Address ______________________

Website ______________________

Savings Acct. No.	Financial Inst.	Address	Website	Banking, Money Management Apps Used:

What's Next for Your Personal Financial Plan?

- Identify financial planning experts (insurance agent, banker, investment advisor, tax preparer, others) you might contact for financial planning information or assistance.
- Discuss various financial planning priorities with other household members.

*Note: Be careful where, when, and to whom you provide your Social Security information and driver's license number. This can lead to identity theft.

Name ______________________________ Date ______________

Setting Personal Financial Goals

Purpose: To identify personal financial goals and create an action plan.

Financial Planning Activities: Based on personal and household needs and values, identify current or future goals that require action.

Suggested Websites & Apps: thebalance.com, www.360financialliteracy.org, Personal Capital

Short-Term Monetary Goals (less than two years)

Description	Amount needed	Months to achieve	Action to be taken	Priority
Example: Pay off credit card debt	$850	12	Reduce spending on takeout food	High

Intermediate Monetary Goals (two to five years)

Description	Amount needed	Months to achieve	Action to be taken	Priority

Long-Term Monetary Goals (beyond five years)

Description	Amount needed	Months to achieve	Action to be taken	Priority

Nonmonetary Goals

Description	Time Frame	Actions to be taken
Example: Set up files for personal financial records and documents	Next 2–3 months	Locate vital personal and financial records; scan copies, set up online files for various spending, saving, borrowing categories

What's Next for Your Personal Financial Plan?

- Based on a financial goal, calculate the savings deposits necessary to achieve that goal.
- Identify current economic trends that might influence various saving, spending, investing, and borrowing decisions.

Name ____________________ Date ____________

Achieving Financial Goals Using Time Value of Money

Purpose: To calculate future and present value amounts related to financial planning decisions.

Financial Planning Activities: Calculate future and present value amounts related to specific financial goals using a financial calculator, spreadsheet software, or an online calculator.

Suggested Websites & Apps: www.grunderware.com, www.calculator.net, TVM Financial Calculator

Future Value of a Single Amount

1. To determine future value of a single amount
2. To determine interest lost when cash purchases are made

(Use an online calculator, app, financial calculator, or Excel.)

current amount	future value amount
$ ____	$ ____

Future Value of a Series of Deposits

1. To determine future value of regular savings deposits
2. To determine future value of regular retirement deposits

(Use an online calculator, app, financial calculator, or Excel.)

regular deposit amount	future value amount
$ ____	$ ____

Present Value of a Single Amount

1. To determine an amount to be deposited now that will grow to desired amount

(Use an online calculator, app, financial calculator, or Excel.)

future amount desired	present value amount
$ ____	$ ____

Present Value of a Series of Deposits

1. To determine an amount that can be withdrawn on a regular basis

(Use an online calculator, app, financial calculator, or Excel.)

regular amount to be withdrawn	present value amount
$ ____	$ ____

What's Next for Your Personal Financial Plan?

- Describe some situations in which you could use time value of money calculations for achieving various personal financial goals.
- What specific actions are you taking to achieve various financial goals?

Chapter 1 Appendix: Time Value of Money

- "If I deposit $10,000 today, how much will I have for a down payment on a house in five years?"
- "Will $2,000 saved each year give me enough money when I retire?"
- "How much must I save today to have enough for my college education?"

The time value of money, more commonly called *interest,* is the cost of money borrowed or lent. Interest can be compared to rent, because it is the cost of living in an apartment. The time value of money is based on the fact that a dollar received today is worth more than a dollar that will be received one year from today because the dollar received today can be saved or invested and will be worth more than a dollar a year from today. Similarly, a dollar that will be received one year from today is currently worth less than a dollar today.

The time value of money has two major components: future value and present value. *Future value* computations, also called *compounding*, yield the amount to which a current sum will increase based on a certain interest rate and period of time. *Present value*, which is calculated through a process called *discounting*, is the current value of a future sum based on a certain interest rate and period of time.

In future value problems, you are given an amount to save or invest and you calculate the amount that will be available at some future date. With present value problems, you are given the amount that will be available at some future date and you calculate the current value of that amount. Both future value and present value computations are based on basic interest rate calculations.

Interest Rate Basics

Simple interest is the dollar cost of borrowing or earnings from lending money. The interest is based on three elements:

- The dollar amount, called the *principal.*
- The *rate of interest.*
- The length of *time.*

The formula and financial calculator computations are as follows:

INTEREST RATE BASICS	
Formula	**Financial Calculator***
Interest = Principal × Rate of interest (annual) × Time (years)	Interest = Amount × Rate × Number of (or portion of) years
The interest rate is stated as a percentage for a year. For example, you must convert 12 percent to either 0.12 or 12/100 before doing your calculations. The time element must also be converted to a decimal or fraction. For example, three months would be shown as 0.25, or 1/4 of a year. Interest for two and a half years would involve a time period of 2.5.	

INTEREST RATE BASICS	
Formula	**Financial Calculator***
Example A: Suppose you borrow $1,000 at 5 percent and will repay it in one payment at the end of one year. Using the simple interest calculation, the interest is $50, computed as follows:	
$50 = $1,000 × 0.05 × 1 year	**$50 = 1,000 × .05 × 1**
Example B: If you deposited $750 in a savings account paying 8 percent, how much interest would you earn in nine months? You would compute this amount as follows:	
Interest = $750 × 0.08 × 3/4 (or 0.75 of a year) = $45	−750 **PV**, 8 **I/Y**, 9/12 = .75 **N**, 0 **PMT**, **CPT** **FV** 795. 795 − 750 = 45

*Note: These financial calculator notations may require slightly different keystrokes when using various brands and models. Also, see "Using Financial Calculators for Time Value of Money" later in this appendix.

Sample Problem 1

How much interest would you earn if you deposited $300 at 6 percent for 27 months?

(Answers to sample problems are given later in this appendix.)

Sample Problem 2

How much interest would you pay to borrow $670 for eight months at 12 percent?

Future Value of a Single Amount

The future value of an amount consists of the original amount plus compound interest.

This calculation involves the following elements:

FV = Future value

PV = Present value

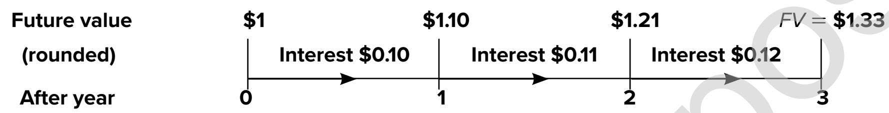
i = Interest rate

n = Number of time periods

The computations are as follows:

FUTURE VALUE OF A SINGLE AMOUNT		
Online Calculator	**Excel**	**Financial Calculator**
An online future value calculator asks for the amount, time, and rate.	=FV(rate, nper, pmt, pv, type)	**PV**, **I/Y**, **N**, **PMT**, **CPT** **FV**

FUTURE VALUE OF A SINGLE AMOUNT		
Online Calculator	**Excel**	**Financial Calculator**
Example C: The future value of $1 at 10 percent after three years is $1.33. This amount is calculated as follows:		
Number of Periods (N) 3 Starting Amount (PV) $1 Interest Rate (I/Y) 10% Periodic Deposit (PMT) $0 **Results** **Future Value: $1.33**	=FV(0.1, 3, 0, −1) = 1.33	1 [PV], 10 [I/Y], 3 [N], 0 [PMT], [CPT] [FV] 1.33
Future value calculations allow you to determine compounded interest amounts. The result for $1 at 10 percent for three years would be $1.33.		



Future Value of a Single Amount		
Online Calculator	**Excel**	**Financial Calculator**
Example D: If your savings of $400 earns 12 percent, compounded monthly, over a year and a half, the process would be considered as 1 percent (the monthly rate) for 18 time periods; the future value would be:		
Number of Periods (N) 18 Starting Amount (PV) $400 Interest Rate (I/Y) 1% Periodic Deposit (PMT) $0 **Results** **Future Value: $478.46**	=FV(0.01,18, 0,–400) = 478.46	−400 [PV], 12/12 = 1 [I/Y], 1.5 × 12 = 18 [N], 0, [PMT], [CPT] [FV] 478.46

Sample Problem 3

What is the future value of $800 at 8 percent after six years?

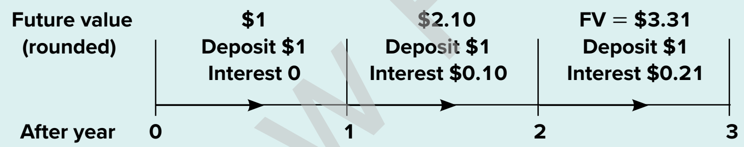
Sample Problem 4

How much would you have in savings if you kept $200 on deposit for eight years at 8 percent, compounded semiannually?

Future Value of a Series of Equal Amounts (Annuity)

Future value may also be calculated for a situation in which regular deposits are made to savings. These computations are as follows:

FUTURE VALUE OF A SERIES OF EQUAL AMOUNTS (ANNUITY)		
Online Calculator	**Excel**	**Financial Calculator**
An online future value calculator asks for the amount, time, and rate.	=FV(rate, nper, pmt)	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:		
Number of Periods (N) 3 Starting Amount (PV) $0 Interest Rate (I/Y) 10% Periodic Deposit (PMT) $1 **Results** **Future Value:** $3.31	=FV(0.1, 3, −1) = 3.31	**−1 PMT, 3 N, 10 I/Y, 0 PV, CPT FV 3.31**
This may be viewed as follows:		



Future Value of a Series of EQUAL AMOUNTS		
Online Calculator	**Excel**	**Financial Calculator**
Example F: If you plan to deposit $40 a year for 10 years, earning 8 percent compounded annually, the future value of this amount is:		
Number of Periods (N) 10 Starting Amount (PV) $0 Interest Rate (I/Y) 8% Periodic Deposit (PMT) $40 **Results** **Future Value:** $579.46	=FV(0.08, 10, −40) = 579.46	**−40 PMT, 10 N, 10 I/Y, 0 PV, CPT FV 579.46**

Sample Problem 5

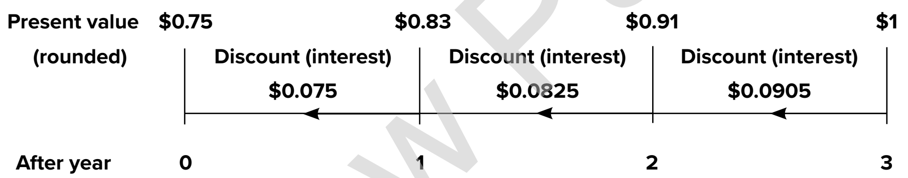
What is the future value of an annual deposit of $230 earning 6 percent for 15 years?

Sample Problem 6

What amount would you have in a retirement account if you made annual deposits of $375 for 25 years earning 12 percent, compounded annually?

Present Value of a Single Amount

If you want to know how much you need to deposit now to receive a certain amount in the future, the present value computations are as follows:

PRESENT VALUE OF A SINGLE AMOUNT		
Online Calculator	**Excel**	**Financial Calculator**
Inputs will be: amount desired in the future (FV), number of time periods, and interest rate.	=PV(rate, nper, pmt, fv, type)	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:		
Future Value (FV) $1 Number of Periods (N) 3 Interest Rate (I/Y) 10% **Results** **Present Value: $0.75**	=PV(0.10, 3, 0, –1) = .75131	1 FV, 3 N, 10 I/Y, 0 PMT, CPT PV – .75131
This may be viewed as follows:		
		
Notice that $1 at 10 percent for three years has a present value of $0.75.		
Example H: If you want to have $300 seven years from now and your savings earn 10 percent, compounded semiannually (which would be 5 percent for 14 time periods), finding how much you would have to deposit today is calculated as follows:		
Future Value (FV) $200 Number of Periods (N) 14 Interest Rate (I/Y) 5% **Results** **Present Value: $151.52**	=PV(0.05,14, 0,–300) = 151.52	300 FV, 7 × 2 = 14 N, 10/2 = 5 I/Y, 0 PMT, CPT PV – 151.52

Sample Problem 7

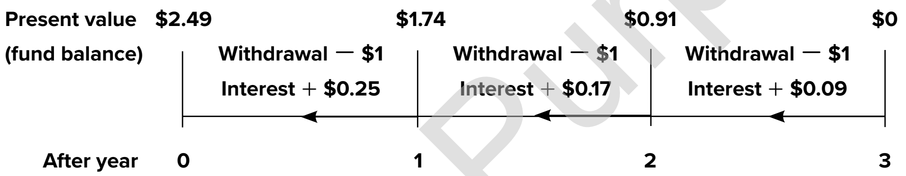
What is the present value of $2,200 earning 15 percent for eight years?

Sample Problem 8

To have $6,000 for a child's education in 10 years, what amount should a parent deposit in a savings account that earns 12 percent, compounded quarterly?

Present Value of a Series of Equal Amounts (an Annuity)

The final time value of money situation allows you to receive an amount at the end of each time period for a certain number of periods. These computations are as follows:

PRESENT VALUE OF A SERIES OF EQUAL AMOUNTS (ANNUITY)		
Online Calculator	**Excel**	**Financial Calculator**
An online present value calculator asks for the amount, time, and rate.	=PV(rate, nper, pmt)	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		
Number of Periods (N) 3 Interest Rate (I/Y) 10% Periodic Deposit (PMT) $1 **Results** **Present Value: $2.49**	= PV(0.10, 3–1) = 2.49	1 PMT, 3 N, 10 I/Y, 0 FV, CPT PV – 2.48685
This may be viewed as follows:		
		
Example J: If you wish to withdraw $100 at the end of each year for 10 years from an account that earns 14 percent, compounded annually, what amount must you deposit now?		
Number of Periods (N) 10 Interest Rate (I/Y) 14% Periodic Deposit (PMT) $100 **Results** **Present Value: $521.61**	=PV(0.05,14, 0,–300) = 151.52	100 PMT, 10 N, 14 I/Y, 0 FV, CPT PV – 521.61

Sample Problem 9

What is the present value of a withdrawal of $200 at the end of each year for 14 years with an interest rate of 7 percent?

Sample Problem 10

How much would you have to deposit now to be able to withdraw $650 at the end of each year for 20 years from an account that earns 11 percent?

Using Present Value to Determine Loan Payments

Present value calculations can also be used to determine installment payments for a loan as follows:

PRESENT VALUE TO DETERMINE LOAN PAYMENTS	
Excel	**Financial Calculator**
=PMT(rate, nper, pv)	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:	
=PMT(.06, 3, −1000) = $374.11	1000 PV, 6 I/Y, 3 N, 0 FV, CPT PMT – 374.10981

Sample Problem 11

What would be the annual payment amount for a $20,000, 10-year loan at 7 percent?

Answers to Sample Problems

1. $40.50
2. $53.60
3. $1,269.60
4. $374.60
5. $5,353.48
6. $49,998.75
7. $719.40
8. $1,842.00
9. $1,749.00
10. $5,175.95
11. $2,847.38

Using Financial Calculators for Time Value of Money

Although differences exist among models, financial calculators generally have five special keys for calculating time value of money:

N – number of time periods

I or % – rate for the time period

PV – current amount (present value)

PMT – periodic payment (annuity)

FV – future amount (future value)

An example: The future value of $100 after 20 years at a rate of 5 percent would be $265.30. Using a financial calculator, the keystrokes would be:

1. enter the present amount (PV= – 100)
2. the rate (I=5)
3. time (N=20)
4. no annual payments (PMT=0)
5. the future value (FV=?)

Answer: $265.33

(Note: Different financial calculators may require slightly different keystrokes.)

Time Value of Money Calculation Methods: A Summary

The time value of money may be calculated using a variety of techniques. When achieving specific financial goals requires regular deposits to a savings or investment account, the computation may occur in one of several ways. For example, Jonie Emerson plans to deposit $10,000 in an account for the next 10 years. She estimates these funds will earn an annual rate of 5 percent. What amount can Jonie expect to have available after 10 years?

Method	Process, Results
Financial Calculator A variety of financial calculators are programmed with various financial functions. Both future value and present value calculations may be performed using the appropriate keystrokes.	Using a financial calculator, the keystrokes would be: Amount –10,000 PV Time periods 10 N Interest rate 5 I Result FV $16,288.94
Spreadsheet Software Excel and other software programs have built-in formulas for various financial computations, including time value of money.	When using a spreadsheet program, this type of calculation would require this format: = FV(rate, periods, amount per period, single amount) The results of this example would be: = FV(0.05, 10, 0, –10,000) = $16,288.95
Online Calculators Many time value of money calculators are available online. These web-based programs perform calculations for the future value of savings as well as determine amounts for loan payments.	Some easy-to-use calculators for computing the time value of money and other financial computations are located at • www.fncalculator.com/ • www.dinkytown.net • www.moneychimp.com/calculator • www.calculator.net
Mobile Apps Financial tools on a mobile device are available for time value of money calculations.	• TVM Financial Calculator • Time Value of Money Calculator • FV & PV Calculator

Note: The slight differences in answers are the result of rounding.