PERSONAL FINANCE

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Personal Finance

1st Edition

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Detailed Licensing

Licensing

*A detailed breakdown of this resource's licensing can be found in **Back Matter/Detailed Licensing**.*

Preface

This text has an attitude: In addition to providing sources of practical information, it introduces you to a way of thinking about your personal financial decisions. This will lead you to think harder and farther about the consequences of your decisions. Many of the more practical aspects of personal finance will change over time. Practices, technologies, intermediaries, customs, and laws change, but a fundamental awareness of ways to solve financial questions is always useful. Some of the more practical ideas may be obvious and immediately relevant - and some not - but the decision-making and research skills you learn will have a lasting impact.

You may be enrolled in a traditional two- or four-year degree program or may just be taking the course for personal growth. You may be of any age and may have already done more or less academic and experiential learning. You may be a business major, with some prerequisite knowledge of economics or a level of accounting, or math skills, or you may be filling in an elective and have no such skills. Although they enhance personal finance decisions, such skills are not necessary. Software, downloadable applications, and calculators perform ever more sophisticated functions with ever more approachable interfaces. The emphasis in this text is on understanding the fundamental relationships behind the math and being able to use that understanding to make better decisions about your finances.

Entire tomes, both academic texts and trade books, have been and will be written about any of the subjects featured in each chapter of this text. The idea here is to introduce you to the practical and conceptual framework for making personal financial decisions in the larger context of your life, and in the even larger context of your individual life as part of a greater economy of financial participants.

Structure

The text is divided into four basic sections:

1. Learning Basic Skills, Knowledge, and Context (Chapter 1 - Chapter 6)
2. Getting What You Want (Chapter 7 - Chapter 9)
3. Protecting What You've Got (Chapter 10 - Chapter 11)
4. Building Wealth (Chapter 12 - Chapter 14)

This structure is based on the typical life cycle of personal financial decisions. These decisions, in turn, are based on the premise that in a market economy, an individual participates by trading something of value: labor or capital. Most of us start with nothing to trade but labor. We hope to sustain our desired lifestyle on the earnings from labor and to gradually (or quickly) amass capital that will then provide additional earnings.

Learning Basic Skills, Knowledge, and Context (Chapter 1 - Chapter 6)

Chapter 1 defines and introduces themes related to making financial decisions. Personal finance involves individual-specific economic decisions made progressively over a lifetime, frequently with the advice of a professional advisor. The idiosyncratic, systemic, and ongoing nature of personal finance is demonstrated, situating decisions within the broader context of a lifetime and the economy.

Chapter 2 introduces the basic financial and accounting categories of revenues, expenses, assets, liabilities, and net worth as tools to understand their relationships, which in turn helps organize financial thinking. It also introduces the concepts of opportunity costs and sunk costs as implicit but critical considerations in financial thinking.

Chapter 3 continues the discussion of organizing financial data to inform decision-making. It introduces basic analytical tools that can be used to clarify personal financial statements.

Chapter 4 introduces the cornerstone concept that a dollar today is not the same as a dollar tomorrow. It demonstrates how interest, compounding, and discounting underpin every major financial decision, from loans to retirement planning. More than just formulas, the article presents TVM as a way of evaluating value across time and enabling informed tradeoffs.

Chapter 5 demonstrates how organized financial data can be used to create a plan, monitor progress, and adjust personal financial goals.

Chapter 6 discusses the role of taxation in personal finance and its effect on earning and accumulating wealth. Emphasis is placed on the types, purposes, and impacts of taxes; the organization of resources for information; and the areas of controversy that lead to changes in the tax rules.

Getting What You Want (Chapter 7 - Chapter 9)

Chapter 7 offers a comprehensive framework for understanding and managing personal finances, grounded in six interrelated components. Beginning with the core functions of money, it traces how funds move through institutions and accounts, then examines how individuals interact with financial systems through credit, savings, and debt. The final section emphasizes forward-looking strategies that align financial behavior with long-term goals.

Chapter 8 examines the overlooked yet consequential moments that precede and follow a purchasing decision. We explore how consumer behavior is shaped by psychological, environmental, and design factors, often outside conscious awareness. By tracing the arc from impulse to intention, this chapter provides critical tools to analyze, interrupt, and reshape spending patterns toward greater agency and alignment.

Chapter 9 applies the ideas developed in the previous chapter to what, for most people, will be their most significant purchase: a home. The chapter discusses home ownership both as a living expense and an investment, as well as the financing and financial consequences of the purchase.

Protecting What You've Got (Chapter 10 - Chapter 11)

Chapter 10 incorporates risk management into financial planning. An awareness of the need for risk management often comes with age and experience. This chapter focuses on planning for the unexpected. It progresses from the more obvious risks to property to the less obvious risks, such as the possible inability to earn due to temporary ill health, permanent disability, or death.

Chapter 11 focuses on planning for the expected: retirement, loss of income from wages, and the eventual distribution of assets after death. Retirement planning explores the development of alternative sources of income from capital that can eventually substitute for wages. Estate planning touches on the considerations and mechanics of distributing accumulated wealth.

Building Wealth (Chapter 12 - Chapter 14)

Chapter 12 introduces the complex forces that drive markets, contrasting rational models like efficient market theory with real-world behavioral tendencies. By examining psychological biases, social influence, and historical anomalies, it reframes the market not as a perfect machine but as a dynamic human system.

Chapter 13 answers the essential question: *Why invest at all?* It explores the tension between saving and investing, the relationship between risk and return, and how personal goals shape financial strategies.

Chapter 14 builds on foundational concepts, surveying the major instruments - especially stocks, bonds, mutual funds, real estate, and collectibles - available to investors. The focus is not just on definitions but also on matching tools to objectives, risk profiles, and time horizons.

About the Authors

Rachel S. Siegel, CFA

Rachel S. Siegel, chartered financial analyst (CFA), has been a professor of finance, economics, and accounting at Lyndon State College since 1990. She has also taught as an adjunct faculty member at Trinity College (Vermont), Granite State College (New Hampshire), Springfield College (Massachusetts), the University of Vermont, and in Tel Aviv, Israel, for Champlain College.

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Siegel's column "Follow the Money" has been a regular feature of the *Northstar Monthly* since 2001.

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Carol Yacht, Business Educator and Author

Carol Yacht is a business educator and textbook author. Yacht's best-selling textbook, *Computer Accounting with Peachtree* (McGraw-Hill/Irwin), is in its fourteenth edition. She has also written textbooks for QuickBooks, Microsoft Dynamics GP, Microsoft Office Accounting, Excel, and Carol Yacht's General Ledger.

Yacht's writing career started in the classroom. To help her students learn new business and technology concepts, Yacht created instructional material. Her first book was published in 1979. Yacht is committed to teaching, learning, sharing, and writing. She is a frequent presenter at conferences.

Yacht teaches Accounting Information Systems at the University of South Florida Sarasota-Manatee, College of Business, Executive and Professional Education Center. She has also taught on the faculties of California State University - Los Angeles, West Los Angeles College, Yavapai College, and Beverly Hills High School. She is also the Accounting Section Editor for the *Business Education Forum*, a publication of the National Business Education Association; serves on the AAA Commons Editorial Board; and is a member of the Microsoft Dynamics Academic Advisory Council.

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Rachel S. Siegel photograph by David G. Ballou.

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About This Edition

This updated edition of *Personal Finance* builds upon the foundational work of original authors Rachel S. Siegel, CFA, and Carol Yacht. First published in 2010 and released as an Open Educational Resource (OER) in 2012, the text has supported countless learners in understanding core financial concepts.

In this 2025 edition, a team of three author-editors and one copy editor worked collaboratively to revise, reorganize, and modernize the content. Our goal was to retain the accessibility and clarity of the original while reflecting current financial realities, tools, and terminology relevant to students in the 2020s.

We thank the original authors for their enduring contributions and are proud to continue the legacy of this valuable resource.

Guy Buker

Guy Buker is an adjunct faculty member in Business and Computer Science at Golden West College in Huntington Beach, California. With a Diplom-Kaufmann from the Universität zu Köln (University of Cologne, West Germany) and experience as the owner and chief-technologist of a healthcare-focused software development firm, he connects academic principles with real-world application. Passionate about clear, practical education, Guy specializes in making complex concepts accessible for students. His work emphasizes problem-solving, critical thinking, and the evolving role of technology in business and healthcare.

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Erin's undergraduate degree is in Information and Computer Science, and her graduate degree is in Business Administration, both from UC Irvine. She entered higher education after a 17-year career in information technology and business, spanning the telecommunications, defense, and non-profit industries. At her peak responsibility, she led a team of over 100 people, supporting 10+ managers and overseeing a budget exceeding $20 million. This background leads her to focus on data when assessing situations and solving problems.

Erin led this team as the project manager, focusing her editorial work on the overall text, particularly on Chapter 11.

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Editorial Feedback

The team welcomes your reporting of errors, omissions, and suggestions on this text. Please contact LibreText Support and provide the chapter and section number in your message.

CHAPTER OVERVIEW

1: Personal Financial Planning

This chapter defines and introduces themes related to making financial decisions. Personal finance involves individual-specific economic decisions made progressively over a lifetime, frequently with the advice of a professional advisor. The idiosyncratic, systemic, and ongoing nature of personal finance is demonstrated, situating decisions within the broader context of a lifetime and the economy.

1.1: Introduction
1.2: Individual or "Micro" Factors That Affect Financial Thinking
1.3: Systemic or "Macro" Factors That Affect Financial Thinking
1.4: The Planning Process
1.5: Financial Planning Professionals

1.1: Introduction

Mark and Alice are both one semester shy of graduating from a state college. Mark is pursuing a degree in protective services and is considering becoming certified as a fire protection engineer, which would incur an additional $4,500 cost. With his degree in protective services, many other fields will be open to him. He could become a first responder, a game warden, or a correctional officer. Mark will have to specialize right away and wants a job in his state with some occupational safety and excellent job security.

Alice is pursuing a Bachelor of Science degree in medical technology and hopes to leverage this degree into a career as a laboratory technician. She has interviews at a nearby regional hospital and a local pharmaceutical firm. She hopes to get the hospital job because it pays a little better and offers additional on-site training. Both Mark and Alice will need further training to have the jobs they want, and they are already in debt for their educations.

Alice qualified for a Direct loan, and the federal government subsidizes her loan by paying the interest on it until six months after she graduates. She will owe about $40,000 of principal plus interest at a fixed annual rate of 6.8 percent. Alice plans to start working immediately after graduation and to take classes on the job or at night for as long as it takes to get the extra certification she needs. Unsubsidized, the additional training would cost about $3,500. She earns about $5,000 a year working weekends as a home health aide and could easily double that after she graduates. Alice also qualified for a Pell grant of around $5,000 each year when she was a full-time student, which covered her room in an off-campus student co-op housing unit. Mark also lives in the co-op, and that's how they met.

Mark would like to propose to Alice and looks forward to being a family man one day. He was awarded a service scholarship from his hometown and received a windfall from his grandmother's estate after she passed away during his sophomore year. He also borrowed $30,000 for five years at an interest rate of only 2.25 percent from his local bank through a family circle savings plan. He has been attending classes part-time year-round so he can work to earn money for college and living expenses. He earns approximately $19,000 per year working for a catering service. Mark is committed to repaying his relatives who have helped finance his education; he is also willing to help Alice pay off her Stafford loan after they get married.

Alice has $3,000 in U.S. Treasury Series EE savings bonds, which mature in two years. She has also managed to put aside $600 in a savings account earmarked for clothes and gifts. Mark has sunk all his savings into tuition and books, and his only other asset is his trusty old pickup, which has no liens and a trade-in value of $3,900. Having reliable transportation is a big concern for both Alice and Mark. After graduating, Alice hopes to find a job with accessible public transportation. Mark and Alice are both savvy with their finances and have successfully avoided getting into credit card debt. Each keeps only one major credit card and a debit card. They generally pay their statements in full each month.

Mark and Alice will have to find new housing after they graduate. They could look for another cooperative housing opportunity or rent an apartment. They could get married now instead of waiting, but Mark has a rent-free option to move in temporarily with his brother. Alice feels strongly about saving money to buy a home and wants to wait until her career is well-established before having a child. Alice is concerned about getting good job benefits, especially medical insurance and family leave. Although still young, Mark is worried about being able to retire, the sooner the better, but he has no idea how that would be possible. He thinks he would enjoy running his own catering firm as a retirement business someday.

Alice's starting salary as a lab technician will be approximately $30,000, and as a fire protection engineer, Mark's starting salary will be around $38,000. Both have the potential to double their salaries after fifteen years on the job, but they are worried about the economy. Their graduations are coinciding with a downturn. Aside from Alice's savings bonds, she and Mark are not in the investment market. When he can, Mark wants to invest in a diversified portfolio of money market funds that include corporate stocks and municipal bonds.

Nevertheless, the state of the economy affects their situation. Money is tight, loans are hard to obtain, jobs are scarce and highly competitive, purchasing power and interest rates are rising, and pension plans and retirement funds risk losing value. It's uncertain how long it will be before the trend reverses, so for the short term, they need to play it safe. What if they can't land the jobs they're preparing for?

Alice and Mark certainly have a lot of decisions to make, and some of those decisions have high-stakes consequences for their lives. In making those decisions, they will have to answer some difficult questions:

1. What individual or personal factors will affect Alice's and Mark's financial thinking and decision-making?

2. What are Mark's best options for job specializations in protective services? What are Alice's best options for job placement in the field of medical technology?
3. When should Mark and Alice invest in the additional job training each will need, and how can they finance that training?
4. How will Alice pay off her college loan, and what will be the cost? How soon can she pay off her debt?
5. How will Mark repay his family's investment in his education?
6. What are Alice's short-term and long-term goals? What are Mark's? If they marry, how well will their goals mesh or need to adjust?
7. What should they do about medical insurance and retirement needs?
8. What should they do about saving and investing?
9. What should they do about getting married and starting a family?
10. What should they do about buying a home and a car?
11. What is Mark's present and projected income from all sources? What is Alice's?
12. What is the tax liability on their present incomes as singles? What would their tax liability be on their future incomes if they filed jointly as a married couple?
13. What budget categories should Alice and Mark create for expenses and expenditures over time?
14. How could Alice and Mark adjust their budgets to meet their short-term and long-term goals?
15. What five-year financial plan could Alice and Mark develop?
16. How will larger economic factors affect the decisions Mark and Alice make, and the outcomes of those decisions?

You will make financial decisions throughout your life. Sometimes you can see those decisions coming and plan deliberately; sometimes, however, things happen unexpectedly, and you are faced with a more sudden decision. Personal financial planning is about making deliberate decisions that allow you to get closer to your goals, or sudden decisions that allow you to stay on track if things take an unexpected turn.

Personal financial planning is a lifelong process. Your time horizon will arc until the very end of your life, and your circumstances will change in predictable and unpredictable ways. A financial plan has to be re-evaluated, adjusted, and re-adjusted. It must be flexible enough to respond to unanticipated needs, robust enough to advance toward goals, and prescient enough to protect against unforeseen risks.

One of the most critical resources in the planning process is information. We live in a world awash in information, and there is no shortage of advice. To utilize this information effectively, you must understand what it is telling you, why it matters, where it originates, and how to apply it in the planning process. You need to be able to put that information in context before you can use it wisely. That context encompasses factors specific to your situation that influence your financial thinking, as well as broader economic factors that impact your financial decision-making.

1.2: Individual or "Micro" Factors That Affect Financial Thinking

Learning Objectives

1. List individual factors that strongly influence financial thinking.
2. Discuss how income, income needs, risk tolerance, and wealth are affected by individual factors.
3. Explain how life stages affect financial decision-making.
4. Summarize the basis of sound financial planning.

The circumstances or characteristics of your life influence your financial concerns and plans. What you want and need, and how and to what extent you protect those wants and needs, will depend on how you live now and how you hope to live in the future. Everyone is different, but ordinary life circumstances affect everyone's personal financial concerns, which in turn impact their financial planning. Factors that influence personal financial concerns include family structure, health, career choices, and age.

Family Structure

Partners and dependents affect your financial planning as you seek to provide for them, such as paying for children's education. Parents typically want to protect or improve the quality of life for their children and may choose to limit their fulfillment to achieve that end.

Providing for others increases your need for income. Being responsible for others also affects your attitude toward and tolerance of risk. Typically, the willingness and ability to assume risk diminishes with fewer dependents, and a desire for more financial protection grows. People often seek protection for their income or assets past their lifetimes to ensure the continued well-being of partners and dependents. Life insurance that names a spouse or dependents as beneficiaries is a good example.

Health

Your health is another key factor that influences your expected income needs and risk tolerance, and therefore your financial planning. Personal financial planning should include protection against the risks of chronic illness, accidents, or long-term disability, as well as provisions for short-term events, such as pregnancy and childbirth. If health issues limit your earnings or ability to work, or significantly increase your expenditures, your income needs may also increase. The need to protect yourself against further limitations or increased costs may also increase. At the same time, your risk tolerance may decrease, which can further impact your financial decisions.

Career Choice

Your career choices affect your financial planning. Careers have different hours, pay, benefits, risk factors, and advancement patterns over time. Your financial planning will need to reflect these realities. Table 1.2.1 displays 2023 data from the U.S. Bureau of Labor Statistics Occupational Outlook Handbook (www.bls.gov/ooh/most-new-jobs.htm), and compares the median salaries of several careers.

Table 1.2.1 : Median Salary Comparisons by Profession

Profession	2023 Median Salary
Financial managers	$ 156,100
Lawyers	$ 145,760
Software developers	$ 132,270
Management analysts	$ 99,410
Accountants and auditors	$ 79,880
Market research analysts and marketing specialists	$ 74,680
Construction laborers	$ 45,300
Medical assistants	$ 42,000

Profession	2023 Median Salary
Stock and order fillers	$ 36,390
Cooks, restaurant	$ 35,780
Home health and personal care aides	$ 33,530

Most people begin their independent financial lives by selling their labor to earn an income through work. Over time, they may choose to change careers, develop additional sources of income, transition between employment and self-employment, become unemployed, or re-employed. Along with career choices, these changes affect personal financial management and planning.

Age

Needs, desires, values, and priorities change over a lifetime, and financial concerns change accordingly. Ideally, personal finance is a process of management and planning that anticipates or keeps abreast with changes. Although everyone is different, some financial concerns are common to most adults in various stages of life. Analysis of **life stages** is part of financial planning.

As income, spending, and asset base grow, the ability to assume risk grows, but the willingness to do so typically decreases. Now you have things that need protection: dependents and assets. As you age, you realize that *you* require more protection. You may want to stop working one day, or you may suffer a decline in health. As an older adult, you may want to establish alternative sources of income, such as a retirement fund, to serve as insurance against the loss of employment or income. Table 1.2.2 suggests the effects of life stages on financial decision making.

Table 1.2.2 : Financial Decisions Related to Life Stages

	Young Adulthood	Middle Adulthood	Older Adulthood	Retirement
Source of Income	Wages	Wages/ Investment	Wages/ Investment	Investment
Asset Base	None	Accumulating	Growing	Using up
Expenses	Low	Growing	Growing	Low
Risk: Ability	Low	Higher	Higher	High
Risk: Willingness	High	Lower	Lower	Low

Early and middle adulthood are periods of building: building a family, advancing a career, increasing earned income, and accumulating assets. Spending needs to grow, but so do investments and alternative sources of income.

Later adulthood is a period of spending down one's assets. There is less reliance on earned income and more on the accumulated wealth of assets and investments. You are likely to be without dependents, as your children have grown up or your parents have passed on, and so without the responsibility of providing for them, your expenses are lower. You are likely to have more leisure time, especially after retirement.

Effective financial planning primarily depends on being aware of how current and future life stages may impact your financial decisions.

Summary

- Personal circumstances that influence financial thinking include family structure, health, career choice, and age.
- Family structure and health affect income needs and risk tolerance.
- Career choice has a significant impact on income and wealth, as well as asset accumulation.
- Age and stage of life affect sources of income, asset accumulation, spending needs, and risk tolerance.
- Sound personal financial planning is based on a thorough understanding of your personal circumstances and goals.

Exercises

1. Create a personal financial journal to keep a written record of observations and insights about your financial thinking and behavior. Review How Journaling for Personal Finance Can Help You Manage Money (www.journling.com/journaling-for-personal-finance/). You may be surprised at what you discover. As you read, consider how the information in this text relates specifically to your observations and insights. After reading this chapter, for example, identify and describe your current life stage. How does your current age or life stage affect your financial thinking and behavior? To what extent and in what ways does your financial thinking anticipate your next stage of life? What financial goals are you aware of that you have set? How are your current experiences informing your financial planning for the future?
2. Continue your personal financial journal by describing how other micro factors, such as your present family structure, health, career choices, and other individual factors, affect your financial planning.
3. Consider the age range for your stage of life and read What To Know About Life Cycle Financial Planning (www.asset-map.com/blog/life-cycle-financial-planning). According to the articles on this page, what should be your top priorities in financial planning right now? Read the articles on the next life stage. How are your financial planning priorities likely to change?

1.3: Systemic or "Macro" Factors That Affect Financial Thinking

Learning Objectives

1. Identify the systemic or macro factors that affect personal financial planning.
2. Describe the impact of inflation or deflation on disposable income.
3. Describe the effect of rising unemployment on disposable income.
4. Explain how economic indicators can have an impact on personal finances.

Financial planning must take into account the broader economic conditions and the markets that comprise them. The **labor market**, the **capital market** (which encompasses both cash and assets), and the **credit market** (where capital is loaned and borrowed) exist within a dynamic economic environment. Considering those dynamics and environmental realities is part of sound financial planning.

Business Cycles

An economy tends to be productive enough to meet the needs of its members. Typically, economic output increases as the population grows or people's expectations rise. An economy's output or productivity is measured by its G**ross Domestic Product (GDP)**, which represents the value of goods and services produced within a specific period. When the GDP increases, the economy is expanding, and when it decreases, the economy is contracting. An economy that contracts for half a year is said to be in **recession**; a prolonged recession is a **depression**. The GDP is a closely watched barometer of the economy (see Figure 1.3.1).

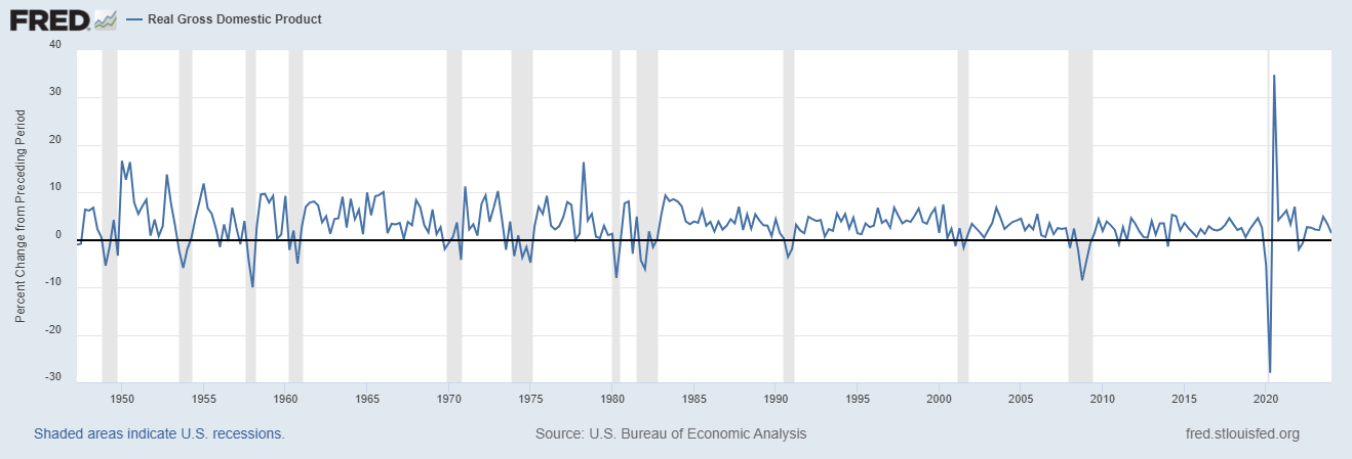

Figure 1.3.1 : GDP Percent Change[1]

The economy tends to be cyclical, usually expanding but sometimes contracting. This is called the **business cycle**. Periods of contraction are generally seen as market corrections or the market regaining its equilibrium after periods of growth. Growth is never perfectly smooth, so certain markets may become unbalanced and require self-correction. Over time, the periods of contraction seem to have become less frequent, as you can see in Figure 1.4. The business cycles still occur, nevertheless.

There are many metaphors to describe the cyclical nature of market economies, including "peaks and troughs," "boom and bust," "growth and contraction," and "expansion and correction," among others. While each cycle is born in a unique combination of circumstances, cycles occur because things change and upset economic equilibrium. Events alter the balance between supply and demand in the economy as a whole. Sometimes demand grows too quickly, and supply can't keep up; at other times, supply grows too quickly for demand. There are many reasons that this could happen, but whatever the reasons, buyers and sellers react to this imbalance, which then creates a change.

Employment Rate

An economy produces goods and services to meet the needs of its members and provides employment opportunities for its citizens. Most people participate in the market economy by trading their labor, and most rely on wages as their primary source of income. Therefore, the economy must provide opportunities for people to earn wages, allowing more individuals to participate in the

market. Otherwise, more people must be provided for in some other way, such as through a private or public subsidy (e.g., charity or welfare).

Unemployment also suggests that the economy is not efficient, as it cannot utilize all its productive human resources effectively. The **employment rate**, also known as the labor force participation rate, measures an economy's effectiveness in creating opportunities for labor and utilizing its human resources efficiently. A healthy market economy uses its labor productively, is productive, and provides employment opportunities and consumer satisfaction through its markets. Table 1.3.2 shows the relationship between GDP and unemployment during each stage of the business cycle.

Table 1.3.2 : Cyclical Economic Effects

	Boom	Expansion	Recession	Depression
Rate of GDP Increase	Unsustainably High	Positive	Negative	Unsustainably Low
Rate of Unemployment	Unsustainably Low	"Natural" or Minimal	Higher	Unsustainably High

At either end of this growth scale, the economy is in an unsustainable position: it is either growing too fast, with excessive demand for labor, or shrinking, with insufficient demand for labor.

If there is too much demand for labor (with more jobs than workers to fill them), wages will rise, which in turn will push up the cost of everything and cause prices to increase. Prices typically rise faster than wages for several reasons. Higher prices discourage consumption, and lower consumption in turn discourages production, causing the economy to slow down from its "boom" condition into a more manageable growth rate.

If there is too little demand for labor (with more workers than jobs), wages will fall or, more typically, there will be people without jobs (unemployment). If wages become low enough, employers will theoretically be encouraged to hire more labor, thereby raising employment levels. However, it doesn't always work that way, because people have job mobility; they are willing and able to move between economies to seek employment.

If unemployment is high and prolonged, then too many people will be without wages for too long and unable to participate in the economy because they have nothing to trade. In that case, the market economy is not working for too many people, and they will eventually demand a change. This is how most revolutions start.

Other Indicators of Economic Health

Other economic indicators give us clues as to how "successful" our economy is, how well it is growing, or how well positioned it is for future growth. These indicators include statistics such as the number of houses being built or existing home sales, orders for durable goods (e.g., appliances and automobiles), consumer confidence, producer prices, and others. However, GDP growth and unemployment are the two most closely watched indicators, because they get at the heart of what our economy is supposed to accomplish: to provide diverse opportunities for the most people to participate in the economy, to create jobs, and to satisfy the consumption needs of the most people by enabling them to get what they want.

An expanding and healthy economy will offer more choices to participants trading labor and capital. It will offer more opportunities to earn a return or income, and, therefore, offers more diversification and less risk.

Everyone would prefer to operate in a healthy economy, but this is not always possible. Financial planning encompasses preparing for the risk that economic factors may impact financial realities. A recession may increase unemployment, lowering the return on labor (wages) or making it harder to anticipate an income increase. Wage income could be lost altogether. A temporary, involuntary loss of wage income is likely to occur for most people at some point in life, as everyone inevitably experiences economic cycles.

Currency Value

Stable currency value is another important indicator of a healthy economy and a critical element in financial planning. Like anything else, the value of a currency is based on its usefulness. We use currency as a medium of exchange, so the value of a currency is based on how it can be used in trade, which in turn is based on what is produced in the economy. If an economy produces little that anyone wants, then its currency has little value relative to other currencies, because there is little use for it in trade. So a currency's value indicates how productive an economy is.

A currency's usefulness is based on what it can buy, or its **purchasing power**. The more a currency can buy, the more useful and valuable it is. When prices rise or things cost more, purchasing power decreases; the currency buys less and its value decreases.

When the value of a currency decreases, it indicates **inflation in an economy**. Its currency has less value because it is less useful. After all, less can be bought with it. Prices rise, and it takes more currency to buy the same amount of goods. When the value of a currency increases, on the other hand, an economy has **deflation**. Prices are falling; the currency is worth more and buys more.

If there is deflation, prices fall, so maybe a year later, you could buy ten video games with $20. Then, each game will cost only $2, and each dollar buys half a game. The same amount of currency buys more games: Its purchasing power has increased, as has its usefulness and its value (Figure 1.3.3).

Table 1.3.3 : Dynamics of Currency Value

	Inflation	Deflation
Prices	Rise	Fall
Purchasing Power	Decreases	Increases
Currency Value	Falls	Rises

Inflation is most commonly measured by the **Consumer Price Index** (CPI), an index created and tracked by the federal government. It measures the average nationwide prices of a "basket" of goods and services purchased by the average consumer. It is an accepted method of tracking rising or falling price levels, which are indicative of inflation or deflation. Figure 1.3.4 shows the percentage change in the Consumer Price Index as a measure of inflation from 1965 to 2020.

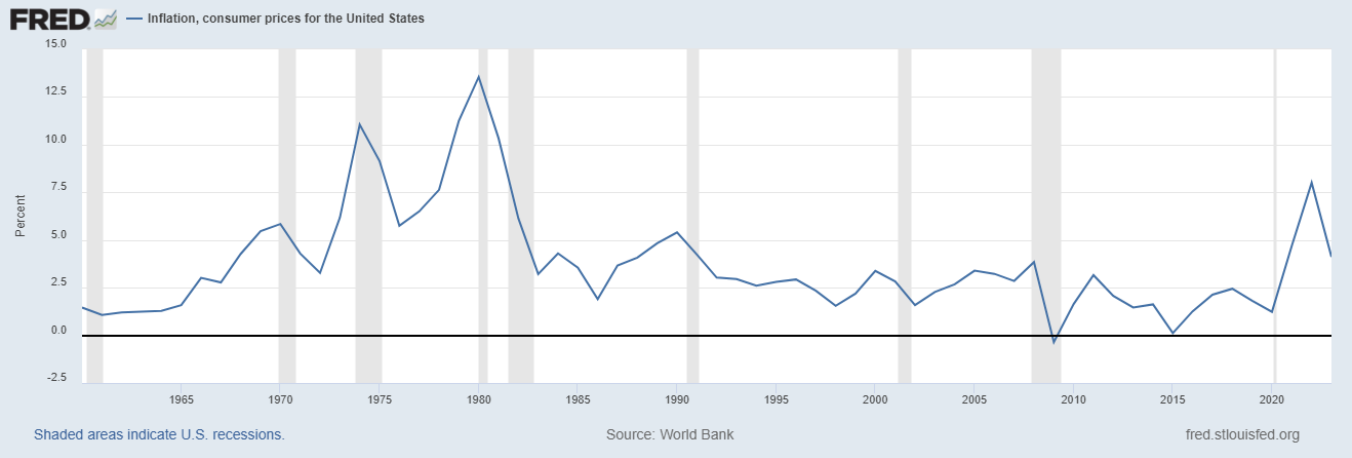

Figure 1.3.4 : Inflation, 1965-2020.[2]

Currency instabilities can also affect investment values, because the dollars that investments return don't have the same value as the dollars that the investment was expected to return. Say you lend $100 to your sister, who plans to pay you back one year from now. There is inflation, so over the next year, the value of the dollar decreases (it buys less as prices rise). Your sister pays you back on time, but now the $100 she gives back to you is worth less (because it now buys less) than the $100 you gave her. Your investment, although nominally returned, has lost value: You have your $100 back, but you can't do as much with it; it is less useful.

If the **currency value** - the units in which wealth is measured and stored - is unstable, then investment returns are more complex to predict. Under such circumstances, investment involves greater risk. Both inflation and deflation are currency instabilities that are troublesome for an economy and the financial planning process. An unstable currency affects the value of income purchasing power. Price changes affect consumption decisions, while changes in currency value impact investment decisions.

It is human nature to assume that things will stay the same, but financial planning must include the assumption that you will encounter and endure economic cycles throughout your life. You should try to anticipate the risks of an economic downturn and the possible loss of wage income and/or investment income. At the same time, you should not assume or rely on the windfalls of an economic expansion.

Summary

- Business cycles include periods of expansion and contraction (including recessions), as measured by the economy's productivity (gross domestic product).
- An economy is in an unsustainable situation when it grows too quickly or too slowly; each situation causes stress in the economy's markets.
- In addition to GDP, measures of the health of an economy include
  - rates of employment and unemployment
  - currency value (the consumer price index)
- Financial planning should consider that periods of inflation or deflation change the currency value, affecting purchasing power and investment values.
- Thus, personal financial planning should take into account changes in
  - business cycles
  - the economy's productivity
  - the currency value
  - other economic indicators

Exercises

1. Review the Business Cycle Dating chart published by the National Bureau of Economic Research (www.nber.org/research/business-cycle-dating). The chart illustrates the business cycles in the United States, along with their durations, starting in 1948. What patterns and trends do you see in these historical data? Which years saw the longest recessions? How can you tell that the U.S. economy has tended to become more stable over the decades?
2. Record in your financial journal the macroeconomic factors influencing your financial thinking and behavior today. What are some specific examples? How have large-scale economic changes or cycles, such as the pandemic or high inflation of 2022-2024, affected your financial planning and decision-making?
3. How does the health of the economy affect your financial health? How healthy is the U.S. economy right now? On what measures do you base your judgments? How will your appreciation of the big picture help you plan for your future?
4. How do business cycles and the economic health affect the value of your labor? In terms of supply and demand, what are the optimal conditions for selling your labor? How might further education increase your mobility in the labor market (the value of your labor)?
5. Consider effective personal financial strategies for
   - protecting against recession
   - hedging against inflation
   - mitigating the effects of deflation
   - taking realistic advantage of periods of expansion

[1] Based on data from the Bureau of Economic Analysis, U.S. Department of Commerce, St. Louis Fed. fred.stlouisfed.org/series/A191RL1Q225SBEA#.

[2] Based on data from the World Bank, U.S. Inflation 1965 - 2020. fred.stlouisfed.org/series/FPCPITOTLZGUSA#.

1.4: The Planning Process

Learning Objectives

1. Trace the steps of the financial planning process and explain why that process needs to be repeated over time.
2. Characterize effective goals and differentiate goals in terms of timing.
3. Explain and illustrate the relationships among costs, benefits, and risks.
4. Analyze cases of financial decision-making by applying the planning process.

A **financial planning process** involves determining where you are, where you'd like to be, and how to transition from one to the other. More formally, a financial planning process includes the following:

- Defining goals
- Assessing the current situation
- Identifying choices
- Evaluating choices
- Choosing
- Assessing the resulting situation
- Redefining goals
- Identifying new choices
- Evaluating new choices
- Choosing
- Assessing the resulting situation over and over again

Personal circumstances change, and the economy changes. Your plans must be flexible enough to adapt to changes, yet steady enough to achieve your long-term goals. You must remain alert to those changes; however, as Bob Dylan advised in his classic tune "*Forever Young*", "May you have a strong foundation when the winds of change shift."

Defining Goals

Figuring out where you want to go is a process of defining goals. You have shorter-term (1-2 years), intermediate (2-10 years), and longer-term goals that are quite realistic, as well as more wishful goals. Setting goals is a skill that usually improves with experience. According to a popular model, to be effective, goals must be Specific, Measurable, Achievable, Relevant, and Time-bound (SMART). Goals change over time, and certainly over a lifetime. However, regardless of your goals, life is complex and unpredictable, and having a plan to achieve them increases the likelihood of success. Table 1.4.1 shows the relationship between timing, goals, and sources of income.

Table 1.4.1 : Timing, Goals, and Income

	Goals	Income Source
Short Term	Reduce Debt	Wages/Salary
Intermediate	Accumulate Assets	Wages/Salary
Long Term	Create Retirement Income	Investment

It's essential to understand where income will come from and how it will contribute to achieving your goals. That begins with assessing your current situation.

Assessing the Current Situation

Figuring out where you are or assessing the current situation involves understanding your present situation and the choices it creates. There may be many choices, but you want to identify those that will be most effective in helping you reach your goals.

Assessing the current situation is a matter of organizing personal financial information into summaries that show different and important aspects of financial life (assets, debts, incomes, and expenses). These numbers are expressed in financial statements, an

income statement, a balance sheet, or a cash flow statement (see Chapter 3). Businesses also use these three types of statements in their financial planning.

For now, we can assess Alice's simple situation by identifying her assets and debts, as well as listing her annual income and expenses. That will show if she can expect a budget surplus or deficit. More importantly, it will show whether her goals are achievable and if she is making progress toward them. Even a ballpark assessment of the current situation can be illuminating.

Alice's assets include a car worth approximately $5,000 and a savings account with a balance of $250. Debts include a student loan with a balance of $53,000 and a car loan with a balance of $2,700; these are shown in Table 1.4.2 .

Table 1.4.2 : Alice's Financial Situation

Assets		Debt	
Car	$ 5,000	Car Loan	$ 2,700
Savings	$ 250	Student Loan	$ 53,000
Total	$ 5,250	Total	$ 55,700

Her annual disposable income (after-tax income or take-home pay) may be $35,720, and annual expenses are expected to be $10,800 for rent and $14,400 for living expenses (food, gas, entertainment, clothing). Her annual loan payments are $2,400 for the car loan and $7,720 for the student loan, as shown in Table 1.4.3 .

Table 1.4.3 : Alice's Income and Expenses

Income & Expenses	Value
After-tax income	$ 35,720
Rent	$ 10,800
Living expenses	$ 14,400
Remaining for debt reduction and savings	$ 10,520
Student loan payments	$ 7,720
Car loan payments	$ 2,400
Remaining for savings	$ 400

Alice will have an annual budget surplus of just $400 (income = $35,720 − $35,320 [total expenses + loan repayments]). She will achieve her short-term goal of reducing debt, but with a small annual budget surplus, it will be challenging for her to begin accumulating assets.

To reach that intermediate goal, she will need to either increase her income or decrease her expenses to create a larger annual surplus. When her car loan is paid off next year, she hopes to buy another car, but she will have at most only $650 (250 + 400) in savings for a down payment, assuming she can save all her surplus. When her student loans are paid off in about five years, she will no longer have student loan payments, and that will increase her surplus significantly (by $7,720 per year) and allow her to put that money toward asset accumulation.

Alice's long-term goals also depend on her ability to accumulate productive assets, as she aims to retire and live off the income from her assets. Alice is making progress toward meeting her short-term goal of reducing debt, which she must accomplish before she can work toward her intermediate and long-term goals. Until she reduces her debt, which would reduce her expenses and increase her income, she will not make progress toward her intermediate and long-term goals.

Assessing her current situation allows Alice to see that she needs to delay accumulating assets until she can reduce her expenses by paying off debt (and thus her student loan payments). She is now reducing her debt, and as she continues to do so, her financial situation will begin to improve, and new choices will become available to her.

Alice learned about her current situation from two simple lists: one listed her assets and debts, and the other showed her income and expenses. Even in this simple example, it is clear that articulating a current situation can put information into a helpful context. These simple lists can help reveal the critical paths to achieving goals.

Evaluating Alternatives and Making Choices

Figuring out how to go from here to there is a process of making some immediate choices and then identifying their effect on longer-term strategies or a series of choices. To do this, you must be realistic yet imaginative about your situation. The choices you make now will affect many of the choices you will make in the future. The characteristics of your living situation (family structure, age, career choice, and health) and the broader economic context will influence or define the relative value of your choices.

In her current situation, Alice is reducing debt, so one choice would be to continue. If she could reduce expenses to create a larger budget surplus, she could begin to accumulate assets sooner and save even more. Alice looks over her expenses and decides she really can't reduce them much. She decides that reducing expenses is not a feasible alternative. However, she could increase her income. She has two choices: work a second job or take her chances in Las Vegas.

If Alice worked a second, part-time job, her after-tax income would increase, but extra work would leave her tired and without time for other interests. The economy is in a slump, and unemployment is up, so her second job probably wouldn't pay much. A big win in Vegas is unlikely, but her only initial cost would be the trip to Vegas. To evaluate her alternatives, Alice needs to calculate the benefits and costs of each (Table 1.4.4).

Table 1.4.4 : Alice's Choices: Benefits and Costs

Choices	Benefit	Explicit Cost	Implicit Cost
Continue	Reduce debt	None	None
Second Job	Reduce debt and increase surplus a little (more income)	None	Give up leisure pursuits
Vegas	Eliminate debt and increase surplus a lot (no debt payments)	Airfare and hotel in Vegas	Risk of increased deficit and debt

Laying out Alice's choices in this way shows the consequences more clearly. The alternative with the most significant possible benefit is the trip to Vegas. Still, it also carries the most considerable cost, as it poses the most significant risk: if she loses, she could incur even more debt. That would put her further from her goal of beginning to accumulate assets, which would have to be postponed until she could eliminate both the new debt and her existing debt.

Thus, she would have to increase her income and decrease her expenses. Continuing what she does now would no longer be an option because the new debt increases her expenses, creating a budget deficit. Her only alternative to increase her income would be to take the second job she had initially rejected due to its implicit cost. She would probably have to reduce expenses as well, an idea she initially had rejected as unreasonable. Thus, the risk of the Vegas option is that it could force her to choose alternatives that she had initially rejected as too costly (see Figure 1.4.5).

Figure 1.4.5 : Considering Risk in Alice's Choice

The Vegas option becomes the least desirable when its risk is factored into the calculations of its costs, especially when compared with its benefits.

The obvious risk is that Alice may lose wealth, but choosing to gamble in Vegas will limit future choices, too. Without including risk as a cost, the Vegas option looks attractive. That is, of course, why Vegas exists. However, when risk is considered, and the decision involves thinking strategically not only about immediate consequences but also about the choices it will preserve or eliminate, that option can be viewed in a very different light (Table 1.4.6).

Table 1.4.6 : Alice's Choices: Benefits and More Costs

Choices	Benefit	Explicit Cost	Implicit Cost	Strategic Cost
Continue	Reduce debt	None	None	Preserves alternatives
Second Job	Reduce debt and increase surplus a little (more income)	None	Give up leisure pursuits	Preserves alternatives
Vegas	Eliminate debt and increase surplus a lot (no debt payments)	Airfare and hotel in Vegas	Risk of increased deficit and debt	Eliminate alternatives

You may sometimes choose an alternative with less apparent benefit than another, but also with less risk. You may sometimes choose an alternative that provides less immediate benefit but more choices later. Risk itself is a cost, and choice is a benefit, and they should be included in your assessment.

Summary

- Financial planning is a recursive process that involves
  - defining goals
  - assessing the current situation
  - identifying choices
  - evaluating choices
  - choosing
- Choosing further involves assessing the resulting situation, redefining goals, identifying new options, evaluating these options, and so on.
- Goals are shaped by current and expected circumstances, family structure, career, health, and larger economic forces.
- Depending on the factors that shape them, goals can be categorized as short-term, intermediate, or long-term.
- Choices will allow for faster or slower progress toward goals and may lead to regression from previously set goals; these goals can be eliminated.
- You should evaluate your feasible choices by calculating the benefits, explicit costs, implicit costs, and the strategic costs of each one.

Exercises

1. Assess and summarize your current financial situation. What measures are you using to describe where you are? Your assessment should include an appreciation of your financial assets, debts, incomes, and expenses.
2. Use the SMART planning model and information in this section to evaluate Alice's goals. Write your answers in your financial planning journal.
   1. Pay off student loans
   2. Buy a house and save for children's education
   3. Accumulate assets
   4. Retire
   5. Travel around the world in a sailboat
3. Identify and prioritize your immediate, short-term, and long-term goals at this time in your life. Why will you need different strategies to achieve these goals? For each goal, identify a range of alternatives for achieving it. How will you evaluate each alternative before making a decision?

4. In your personal financial journal, record specific examples of your use of the following kinds of strategies in making financial decisions:
    1. Weigh costs and benefits
    2. Respond to incentives
    3. Learn from experience
    4. Avoid a feared consequence or loss
    5. Avoid risk
    6. Throw caution to the wind
5. On average, would you rate yourself as more of a rational or non-rational financial decision maker?

1.5: Financial Planning Professionals

Learning Objectives

- Identify the professions of financial advisors.
- Discuss how training and compensation may affect your choice of advisor.
- Describe the differences between objective and subjective advice and how that may affect your choice of advisor.
- Discuss how the kind of advice you need may affect your choice of advisor.

A multitude of **financial advisors** (such as accountants, investment advisors, tax advisors, estate planners, or insurance agents) can help with financial planning. They possess diverse training and qualifications, varying educational backgrounds, and distinct approaches to financial planning. To have a set of initials after their name, all have met educational and professional experience requirements and have passed exams administered by professional organizations, testing their knowledge in the field. Table 1.5.1 provides a perspective on the industry classifications of financial planning professionals.

Table 1.5.1 : Industry Classifications of Financial Planning Professionals.

	Function	Certification
Certified Public Accountant CPA	Qualified to audit publicly traded corporations. Often does accounting for individuals, especially tax accounting. Frequently helps with financial planning and advising, especially tax planning	Certified by the American Institute of Certified Public Accountants (AICPA)
Certified Financial Planner CFP (recognized globally)	Trained to assist with all aspects of the financial planning process	Certified by the Certified Financial Planner Board of Standards, Inc.
Chartered Financial Consultant ChFC	Trained to assist with aspects of the personal financial planning process relating to life insurance	Chartered by The American College
Chartered Life Underwriter CLU	Trained to structure and sell life insurance	Chartered by The American College
Accredited Financial Counselor AFC	Assists with financial planning	Certified by the Association for Financial Counseling and Planning Education (AFCPE)
Accredited Estate Counselor AEC	Specializes in the disposal of assets and wealth after someone's death	Certified by the National Association of Estate Planners and Councils
Registered Investment Adviser RIA	Advises on investment management	Registered with the Securities and Exchange Commission (U.S. government agency)
Enrolled Agent EA	Advises on tax issues	Certified by the Internal Revenue Service (of the U.S.)

Certifications are valuable because they demonstrate training and experience in a specific aspect of financial planning. However, when seeking advice, it is essential to understand the advisor's interests and how they align with your own. It is essential to understand the origin of your information and advice, and how that influences the quality of the information and advice. Specifically, how is the advisor compensated?

Some advisors simply offer advice and get paid for it. Others sell a product, such as a specific investment, mutual fund, or life insurance policy, and they receive payment when it is sold. Others sell a service, such as brokerage or mortgage servicing, and get paid when the service is rendered. Although all may be highly ethical and well-intentioned, when choosing a financial planning advisor, it is essential to be able to distinguish among them.

Some financial professionals have a fiduciary duty, which means they are legally required to act in the best interest of their clients. This duty includes being honest, prioritizing the client's needs, and avoiding conflicts of interest. Fiduciaries must clearly explain any fees or potential conflicts they may have. Common fiduciaries include investment advisers, retirement plan managers, and people who manage mutual funds. Working with a fiduciary can give you more peace of mind, because their advice must focus on helping you, not on making money for themselves.

Sometimes, a friend or family member who knows you well and has your best interests in mind may be a terrific resource for information and advice; however, they may not be as objective or knowledgeable as a disinterested professional. It is beneficial to diversify your sources of information and advice, utilizing both professional and amateur advisors, as well as subjective and objective perspectives. As always, diversification decreases risk.

Now you know a bit about the planning process, the personal factors that affect it, the larger economic contexts, and the business of financial advising. The next steps in financial planning involve details, particularly how to organize your financial information to assess your current situation and how to start evaluating your alternatives.

References to Professional Organizations

The references that follow provide information for further research on the professionals and professional organizations mentioned in the chapter.

- The American Institute of Certified Public Accountants (AICPA) (www.aicpa-cima.com/home)
- The Association of Chartered Certified Accountants (ACCA) (www.accaglobal.com/us/en.html)
- The Chartered Financial Analyst (CFA) Institute (www.cfainstitute.org)
- The Certified Financial Planner Board of Standards (www.cfp.net)
- The Association for Financial Counseling and Planning Education (AFCPE) (www.afcpe.org)
- The National Association of Estate Planners and Councils (NAEPC) (www.naepc.org)
- The U.S. Securities and Exchange Commission (SEC) (www.sec.gov)
- The Internal Revenue Service (IRS) (www.irs.gov)

Summary

- Financial advisors may work as accountants, investment advisors, tax advisors, estate planners, or insurance agents.
- You should always understand how your advisor is trained and how that may affect the kind of advice you receive.
- You should always understand how your advisor is compensated and how that may be related to the kind of advice that you receive.
- You should diversify your sources of information and advice by using both subjective advisors (friends and family) and objective, professional advisors. Diversification, as always, reduces risk.

Exercises

1. Where do you get your financial advice? Identify all the sources. In what circumstances might you seek a professional financial advisor?
2. Watch Financial Planners Explained in 3 Minutes (www.youtube.com/watch?v=GZtfYKmE-bw). Which advice about getting financial advice do you find most valuable? Share your views with classmates. Also, view the 5:32-minute video from the Today Show on how to know if you need a financial advisor (www.youtube.com/watch?v=WAPnGu8rzhA).
3. Explore the following links for more information on financial advisors:
   a. National Association of Personal Financial Advisors (NAPFA) (www.napfa.org)
   b. U.S. Department of Labor Bureau of Labor Statistics on the job descriptions, training requirements, and earnings of financial analysts (www.bls.gov/ooh/business-and-financial/financial-analysts.htm) and personal financial advisors (www.bls.gov/ooh/business-and-financial/personal-financial-advisors.htm).
   c. *Investopedia* guidelines for choosing a financial advisor (www.investopedia.com/terms/f/financial-advisor.asp).

CHAPTER OVERVIEW

2: Basic Ideas of Finance

This chapter introduces the basic financial and accounting categories of revenues, expenses, assets, liabilities, and net worth as tools to understand their relationships, which in turn helps organize financial thinking. It also introduces the concepts of opportunity costs and sunk costs as implicit but critical considerations in financial thinking.

2.1: Introduction
2.2: Income and Expenses
2.3: Assets
2.4: Debt and Equity
2.5: Income and Risk

2.1: Introduction

There is no trick to managing personal finances. Making good financial decisions is largely a matter of understanding how the economy works, how money flows through it, and how people make financial decisions. The better your understanding, the better your ability to plan, capitalize on opportunities, and avoid disappointments. Life can never be planned entirely, of course, and the best-laid plans do go awry, but anticipating risks and protecting against them can minimize exposure to the inevitable mistakes and "the hazards and vicissitudes"[1] of life.

[1] Franklin D. Roosevelt, remarks when signing the Social Security Act, August 14, 1935. Retrieved from the Social Security Administration archives, http://www.socialsecurity.gov/history/fdrstmts.html#signing. www.ssa.gov/history/fdrstmts.html#signing.

2.2: Income and Expenses

Learning Objectives

1. Identify and compare the sources and uses of income.
2. Define and illustrate the budget balances that result from the uses of income.
3. Outline the remedies for budget deficits and surpluses.
4. Define opportunity costs and sunk costs, and discuss their effects on financial decision-making.

Personal finance is the process of managing one's finances to support a life and a way of living. Just as a business must be financed - its buildings, equipment, use of labor and materials, and operating costs must be paid for - so must a person's possessions and living expenses. Just as a business relies on its revenues from selling goods or services to finance its costs, so a person relies on income earned from selling labor or capital to finance costs. You need to understand this financing process and the terms used to describe it. In the next chapter, you'll look at how to account for it.

Where Does Income Come From?

Income is what is earned or received in a given period. There are various terms for income because there are multiple ways to earn it. Income from employment or self-employment is wages or salary. Deposit accounts, such as savings accounts, earn interest, which can also be generated through lending. Owning stock entitles the shareholder to a dividend, if there is one. Owning a piece of a partnership or a privately held corporation entitles one to a draw.

The two fundamental ways of earning income in a market-based economy are by selling labor or selling capital. Selling labor means working, either for someone else or for yourself. Income comes in the form of a paycheck. Total compensation may include other benefits, such as retirement contributions, health insurance, or life insurance. Labor is sold in the labor market.

Selling capital means investing: taking excess cash and selling it or renting it to someone who needs **liquidity** (access to cash). Lending is renting out capital; the interest is the rent. You can lend privately by direct arrangement with a borrower, or you can lend through a public debt exchange by buying corporate, government, or government agency bonds. Investing in or buying corporate stock is an example of selling capital in exchange for a share of the company's future value.

You can invest in various other types of assets, including antiques, art, coins, land, or commodities such as soybeans, live cattle, platinum, or light crude oil. The principle is the same: investing is essentially renting capital or selling it for an asset that can be resold later, generate future income, or both. Capital is sold in the capital market and lent in the credit market - a specific part of the capital market (just like the dairy section is a specific part of the supermarket). Table 2.2.1 shows the sources of income.

Table 2.2.1 : Sources of Income

	Work	Invest	Lend
Trade	Sell Labor	Sell Capital	Rent Capital
Return/ Income	Wages or Salary	Profit or Dividend Capital Gain (Loss)	Interest
Market	Labor Market	Capital Market	Credit Market

In the labor market, the price of labor is the wage that an employer (buyer of labor) is willing to pay to the employee (seller of labor). For any given job, that price is determined by many factors. The nature of the work determines the education and skills required, and the price may also reflect other factors, such as the job's status or desirability.

In turn, the skills required and the attractiveness of the work determine the supply of labor for that particular job - the number of people who could and would want to do the job. If the supply of labor exceeds the demand, meaning there are more people available to work at a job than are needed, then employers will have more hiring choices. That labor market is a buyers' market, and the buyers can hire labor at lower prices. If fewer people are willing and able to do a job than there are jobs available, then that labor market is a seller's market, and workers can sell their labor at higher prices.

Similarly, the fewer skills required for the job, the more people will be able to do it, creating a buyer's market. The more skills required for a job, the fewer people there will be to do it, and the more leverage or advantage the seller has in negotiating a price.

People pursue education to enhance their skills and, therefore, become more competitive in the labor market.

When you are starting your career, you are usually in a buyer's market (unless you have some unusual gift or talent), if only because of your lack of experience. As your career progresses, you have more (and perhaps more varied) experience and presumably more skills, and so can sell your labor in more of a seller's market. You may change careers or jobs more than once, but you would hope to do so to your advantage — that is, constantly gaining bargaining power in the labor market.

Many people love their work for many reasons other than the pay, however, and choose it for those rewards. Labor is more than a source of income; it is also a source of many intellectual, social, and other personal gratifications. Nevertheless, your labor is also a tradable commodity and has a market value. The personal rewards of your work may ultimately determine your choices, but it is essential to be aware of the market value of those choices as you make them.

Your ability to sell labor and earn income reflects your situation in the labor market. Earlier in your career, you can expect to earn less than you will as your career progresses. Most people would like to reach a point where they no longer have to sell their labor at all. They hope to retire someday and pursue other hobbies or interests. They can retire if they have alternative sources of income, such as earnings from savings and capital sales.

Capital markets exist so that buyers can buy capital. Businesses often require capital and have limited options for raising it. Sellers and lenders (investors), on the other hand, have many more choices of how to invest their excess cash in the capital and credit markets, so those markets are much more like sellers' markets. The following are examples of ways to invest in the capital and credit markets:

- Buying stocks
- Buying government or corporate bonds
- Lending a mortgage

Where Does Income Go?

Expenses are costs for items or resources that are used up or consumed in the course of daily living. Expenses recur (i.e., they occur repeatedly) because essential items such as food, housing, clothing, energy, and other necessities are used up daily.

When income is less than expenses, you have a **budget deficit** - too little cash to provide for your wants or needs. A budget deficit is not sustainable; it is not financially viable. The only choices are to eliminate the deficit by (1) increasing income, (2) reducing expenses, or (3) borrowing to make up the difference. Borrowing may seem like the easiest and quickest solution, but borrowing also increases expenses, because it creates an additional expense: interest. Unless income can also be increased, borrowing to cover a deficit will only increase it.

Better, although usually harder, choices are to increase income or decrease expenses. Table 2.2.2 shows the choices created by a budget deficit.

Table 2.2.2 : Budget Deficit

Income Less Than Expenses = Budget Deficit		
1. Reduce Expenses	= consume less	= reduce budget deficit
2. Increase Income	= sell more labor or capital	= reduce budget deficit
3. Borrow	= increase (interest) expenses	= increase budget surplus

When income for a period exceeds expenses, a **budget surplus occurs**. That situation is sustainable and remains financially viable. You could choose to decrease income by, say, working less. More likely, you would use the surplus in one of two ways: consume more or save it. If consumed, the income is gone, although presumably you enjoyed it.

If saved, however, the income can be stored, perhaps in a piggy bank or cookie jar, and used later. A more profitable way to save is to invest it in some way - deposit it in a bank account, lend it with interest, or trade it for an asset, such as stocks, bonds, or real estate. Those ways of saving are ways of selling your excess capital in the capital markets to increase your wealth. The following are examples of savings:

1. Depositing into a savings account at a bank
2. Contributing to a retirement account
3. Purchasing a certificate of deposit (CD)

4. Purchasing a government savings bond
5. Depositing into a money market account

Table 2.2.3 shows the choices created by a budget surplus.

Table 2.2.3 : Budget Surplus

Income Greater Than Expenses = Budget Surplus		
1. Increase Expenses	= consume more	= reduce budget surplus
2. Reduce Income	= sell less labor or capital	=reduce budget surplus
3. Save and Invest	= increase income	= increase budget surplus

Opportunity Costs and Sunk Costs

In personal finance, there is always an opportunity cost. You always want to make a choice that creates more value than cost, and therefore, you always want the opportunity cost to be less than the benefit from trade. You bought the jacket instead of the boots because you decided that having the jacket would bring more benefit than the cost of not having the boots. You believed your benefit would be greater than your opportunity cost.

Opportunity costs affect not only consumption decisions but also financing decisions, such as whether to borrow or to pay cash. Borrowing has obvious costs, whereas paying with your own cash or savings seems costless. Using your cash does have an opportunity cost, however. You lose any interest you may have earned on your savings, and you lose liquidity.

When buyers and sellers make choices, they weigh opportunity costs and sometimes regret them, especially when the benefits from trade are disappointing. Regret can color future choices. Sometimes regret can keep us from recognizing **sunk costs**.

Sunk costs are costs that have already been spent; that is, whatever resources you traded are gone, and there is no way to recover them. Decisions, by definition, can be made only about the future, not about the past. A trade, when it's over, is over and done, so recognizing that sunk costs are truly sunk can help you make better decisions.

Unlike a price tag, opportunity cost is not obvious. You tend to focus on what you are getting in the trade, not on what you are *not* getting. This tendency is a cheerful aspect of human nature, but it can be a weakness in the kind of strategic decision-making that is so essential in financial planning. Human nature may also cause you to focus too much on sunk costs, but no amount of relish or regret can change past decisions. Learning to recognize sunk costs is important in making sound financial decisions.

Summary

- It is essential to comprehend the sources (incomes) and uses (expenses) of funds, as well as the resulting budget deficit or budget surplus.
- Wages or salary are income from employment or self-employment; interest is earned by lending; a dividend is the income from owning corporate stock; and a draw is income from a partnership.
- Deficits or surpluses need to be addressed, which means making informed decisions about how to manage them.
- Increasing income, reducing expenses, and borrowing are three common ways to address budget deficits.
- Spending more, saving, and investing are three ways to deal with budget surpluses.
- Opportunity costs and sunk costs are hidden expenses that affect financial decision-making.

Exercises

1. Where does your income come from, and where does it go? Analyze your income inflow from all sources and expenditure outflow for a month, quarter, or year. After analyzing your numbers and converting them to percentages, show your results in two figures, using proportions of a dollar bill to show where your income comes from and proportions of another dollar bill to show how you spend your income. How would you like your income to change? How would you like to see your distribution of expenses change? Use your investigation to develop a rough personal budget.
2. Examine your budget and distinguish between wants and needs. How do you define a financial need? What are your fixed expenses, or costs you must pay regularly each week, month, or year? Which of your budget categories must you provide for first before satisfying others? To what extent is each of your expenses discretionary, under your control in terms of

spending more or less for that item or resource? Which of your expenses could you reduce if you had to or wanted to for any reason?

3. If you had a budget deficit, what could you do about it? What would be the best solution for the long term? If you had a budget surplus, what could you do about it? What would be your best choice, and why?
4. You need a jacket, boots, and gloves, but the jacket you want will use up all the money you have available for outerwear. What is the opportunity cost of buying the jacket? What is your sunk cost if you buy the jacket? How can you modify your consumption to minimize the opportunity cost? If you buy the jacket but find that you need the boots and gloves, how could you modify your budget to compensate for your sunk cost?

2.3: Assets

Learning Objectives

1. Identify the purposes and uses of assets.
2. Identify the types of assets.
3. Explain the role of assets in personal finance.
4. Explain how a capital gain or loss is created.

As defined earlier in this chapter, an asset is any item with economic value that can be converted to cash. Assets are resources that can be used to generate income, reduce expenses, and store value. The following are examples of tangible (material) assets:

- Car
- Savings account
- Wind-up toy collection
- Money market account
- Shares of stock
- Forty acres of farmland
- Home

Assets can be used to store wealth, generate income, and mitigate future expenses.

Assets Store Wealth

If the asset is worth more when it is resold than it was when it was bought, then you have earned a **capital gain**: The investment has not only stored wealth but also increased it. Of course, things can go the other way too: the investment can decrease in value while it is owned and be worth less when resold than when it was bought. In that case, you have a **capital loss**. The investment not only did not store wealth, but it also lost some. Table 2.3.1 shows how capital gains and losses are created.

Table 2.3.1 : Gains and Losses

Buy lower	then sell higher	Capital GAIN
Buy higher	then sell lower	Capital LOSS

The better investment asset is one that increases in value by generating a capital gain during the time it is stored.

Assets Create Income

Some assets not only store wealth but also create income. An investment in an apartment house stores wealth and creates rental income, for example. An investment in a share of stock stores wealth and may also generate dividend income. A deposit in a savings account stores wealth and creates interest income. Some investors prioritize increasing asset value, while others focus on generating income from their investments.

Assets Reduce Expenses

Some assets are used to reduce living expenses. Purchasing an asset and using it may be cheaper than arranging for an alternative. Sometimes an asset may be expected to both store wealth and reduce future expenses. Table 2.3.2 shows the roles of assets in reducing expenses, increasing income, and storing wealth.

Table 2.3.2 : Assets and the Roles of Assets

Asset	Reduce Expenses	Increase Income	Store Wealth
Car	Yes	No	No
Savings Account	No	Yes	Yes
Money Market Account	No	Yes	Yes
Home	Yes	No	Yes

Asset	Reduce Expenses	Increase Income	Store Wealth
Rental Property	No	Yes	Yes
Investment in Bonds	No	Yes	Yes
Investment in Stocks	No	Yes	Yes

The choice of investment assets depends on your belief in their ability to store and increase wealth, create income, or reduce expenses. Ideally, your assets will store and increase wealth while increasing income or reducing expenses. Otherwise, acquiring the asset will not be a productive use of liquidity. Additionally, in this case, the opportunity cost will be greater than the benefit from the investment, as there are many assets to choose from.

Summary

- Assets are items with economic value that can be converted to cash. You use excess liquidity or surplus cash to purchase an asset and store wealth until you resell it.
- An asset can create income, reduce expenses, and store wealth.
- To have value as an investment, an asset must either store wealth or create income (reduce expenses); ideally, assets can do both.
- Whatever the type of asset you choose, investing in assets or selling capital can be more profitable than selling labor.
- Selling an asset can result in a capital gain or capital loss.
- Selling capital means trading in the capital markets, a seller's market. You can do this only if you have a budget surplus, or an excess of income over expenses.

Exercises

1. Record your answers to the following questions in your personal finance journal. What are your assets? How do your assets store your wealth? How do your assets make income for you? How do your assets help you reduce your expenses?
2. List your assets in the order of their cash or market value (most valuable to least valuable). Then list them in terms of their degree of liquidity. Which assets do you think you might sell in the next ten years? Why? What new assets do you think you would like to acquire and why? How could you reorganize your budget to make it possible to invest in new assets?

2.4: Debt and Equity

Learning Objectives

1. Define equity and debt.
2. Compare and contrast the benefits and costs of debt and equity.
3. Illustrate the uses of debt and equity.
4. Analyze the costs of debt and equity.

Buying capital, that is, borrowing, enables you to invest without first owning capital. By using other people's money to finance the investment, you get to use an asset before owning it free and clear, assuming you can repay it out of future earnings. Buying capital gives you equity, borrowing capital gives you debt, and both kinds of financing have costs and benefits. When you buy or borrow liquidity or cash, you become a buyer in the capital market.

The Costs of Debt and Equity

You can buy capital from other investors in exchange for an ownership share or **equity**, which represents your claim on any future gains or income. If the asset is productive, it will store wealth, generate income, or reduce expenses. The equity holder, shareholder, or owner enjoys benefits in proportion to their share of the asset. If the asset loses value, the owner bears a portion of the loss in proportion to their share of the asset. The **cost of equity** occurs when you share the benefits from the investment.

Borrowing is essentially renting someone else's money for a specified period, resulting in **debt**. During that period, rent or **interest** must be paid, which is a **cost of debt**. When that period expires, all the capital (the **principal** amount borrowed) must be paid back. The investment's earnings must be enough to cover the interest, and its growth in value must be enough to return the principal. Thus, debt is a liability, an obligation for which the borrower is liable.

In contrast, the cost of equity may need to be paid only if income or wealth increases, and even then, it can be deferred. From the buyer's point of view, purchasing liquidity through borrowing (debt) has a more immediate impact on income and expenses. Interest must be added as an expense, and repayment must be anticipated.

Table 2.4.1 shows the implications of equity and debt as the sources of capital.

Table 2.4.1 : Sources of Capital

	Equity	Debt
Trade	Buy Capital	Borrow Capital
Cost/Expense	Share Profits and Gains	Pay Interest
Market	Capital Market	Credit Market

The Uses of Debt and Equity

Debt is a means of making an investment that would otherwise be unattainable. You incur debt when you buy an asset (e.g., a house, a car, or corporate stock) that you couldn't buy without borrowing. If that asset is expected to provide sufficient benefit (i.e., increase value, generate income, or reduce expenses) to compensate for its additional costs, then the debt is worthwhile. However, if debt creates additional expense without enough additional benefit, then it is not worth it. The problem is that costs are usually known up front, but benefits are not. That adds a dimension of risk to debt, which is another factor in assessing whether it's desirable.

Debt may also be used to cover a budget deficit, or the excess of expenses over income. However, in the long run, the cost of the debt will increase expenses that are already too big, which is what created the deficit in the first place. Unless income can also be increased, debt can only aggravate a deficit.

The Value of Debt

The value of debt includes the benefits of acquiring the asset sooner rather than later, which debt financing enables. One example of the value of debt is using debt to finance an education. Education is valuable because it offers numerous benefits that can be enjoyed throughout a lifetime. One benefit is an increase in potential earnings in wages and salaries. The demand for educated or

more skilled employees is generally greater than for uneducated or less-skilled employees. Education helps create a more valuable and, thus, higher-priced employee.

It makes sense to maximize your value by becoming educated as soon as possible. That way, you have as long as possible to benefit from the increased income. It even makes sense to invest in an education before you sell your labor because the opportunity cost of going to school (in this case, the “lost” wages of not working) is lowest. Without income or savings (or very little) to finance your education, typically, you borrow. Debt enables you to use the value of education to enhance your income; income will then help you pay back your debt.

The alternative would be to work, save, and then get an education, but you would be earning income less efficiently until you completed your education, and then you would have less time to earn your return. Waiting decreases the value of your education, that is, its usefulness, throughout your lifetime.

In these examples (Table 2.4.2), debt creates a cost, but it reduces expenses or increases income to offset that cost. Debt allows this to happen sooner than it otherwise could, enabling you to realize the maximum benefit from the investment. In such cases, debt is worth it.

Table 2.4.2 : Debt: Uses, Value, and Cost

Debt	Debt Used to Finance	Value	Cost Paid from
Credit Cards	Living Expenses	Convenience	Income
Auto Loan	Car	Reduce Expenses	Income
Mortgage	Home	Reduce Expenses	Income
College Loan	Education	Increase (Future) Income	Future Income

Summary

- Financing assets through equity means sharing ownership and any associated gains or losses.
- Financing assets through borrowing and creating debt means taking on a financial obligation that must be repaid.
- Both equity and debt have costs and value.
- Both equity and debt enable you to use an asset sooner than you otherwise could and therefore to reap more of its rewards.

Exercises

1. Read about the founding of Google (www.foxbusiness.com/technology/how-google-was-founded), including information about their initial public offering (www.finance.yahoo.com/news/day-market-history-google-ipo-105500069.html) in August 2004. How did the young entrepreneurs Larry Page and Sergey Brin use equity and debt to make their business successful and increase their personal wealth?
2. Record your answers to the following questions in your personal finance journal. What equity do you own? What debt do you owe? In each case, what are your equity and debt financing options? What do they cost you? How do they benefit you?
3. Watch What Everyone's Getting Wrong About Student Loans (www.youtube.com/watch?v=wzY-b2Vj9Ug) (3:45 minutes) and How to Pay for College (www.youtube.com/watch?v=L6cjyTaExCQ) (10:32 minutes). Students fear incurring debt for their education or later struggling to repay student loans.
    1. What are practical financial planning tips to take advantage of debt financing for your education?
    2. If payments on student loans become overwhelming, what should you do to avoid default?

[1] The *Investopedia* Team. If You Had Invested Right After Google's IPO. *Investopedia*, August 13, 2015. www.investopedia.com/articles/active-trading/081315/if-you-would-have-invested-right-after-googles-ipo.asp.

2.5: Income and Risk

Learning Objectives

1. Describe how sources of income may be diversified.
2. Describe how investments in assets may be diversified.
3. Explain the use of diversification as a risk management strategy.

Personal finance is not only about getting what you want; it is also about protecting what you have. Since the way to accumulate assets is to create surplus capital by having an income larger than expenses, and since you rely on income to provide for living expenses, you also need to think about protecting your income. One way to do so is through **diversification**, or spreading the risk.

Diversification is often discussed in terms of investment decisions, but diversification of income sources works similarly and makes sense for the same reasons. If sources of income are diverse, in number and kind, and one source of income ceases to be productive, then you still have others to rely on.

Mark has a checking account, an online money market account, and a balanced portfolio of stocks. If his stock portfolio lost value, he would still have the value in his money market account.

A better way to diversify sources of income is to sell both labor *and* capital. Then you are trading in different markets, and are not totally exposed to risks in either one. In Mark's case, if all his income were to dry up, he would still have his investments, and if all his investments lost value, he would still have his paycheck and other sources of income. To diversify to that extent, you need surplus capital to trade. This brings us full circle to Adam Smith, quoted at the beginning of this chapter, who said, essentially, "It takes money to make money."

Summary

Diversifying sources of income in both the labor market and the capital markets is the best hedge against risks in any one market.

Exercises

Record your answers to the following questions in your personal finance journal:

1. How can you diversify your sources of income to spread the risk of losing income?
2. How can you diversify your investments to spread the risk of losing return on investment?

CHAPTER OVERVIEW

3: Financial Statements

This chapter continues with the discussion of organizing financial data to help in decision making. It introduces basic analytical tools that can be used to clarify personal financial statements.

3.1: Introduction
3.2: Accounting and Financial Statements
3.3: Comparing and Analyzing Financial Statements
3.4: Accounting Software - An Overview

3.1: Introduction

Since the first shepherds counted their sheep, there has been accounting.

In financial planning, assessing your current situation is crucial for determining an effective financial plan. This assessment serves as the starting point for any strategy. It becomes the mark from which any progress is measured, the principal from which any return is calculated. It can determine the practical or realistic goals to have and the strategies to achieve them.

Understanding the current situation is not only a matter of measuring it, but also of putting it in perspective and context relative to your own past performance and future goals. Determine how your current position is relative to the realities in the economic world around you. Tools for understanding your current situation are your accounting and financial statements.

3.2: Accounting and Financial Statements

Learning Objectives

1. Distinguish between accrual and cash accounting.
2. Compare and contrast the three common financial statements.
3. Identify the results shown on the income statement, balance sheet, and cash flow statement.
4. Explain the calculation and meaning of net worth.
5. Trace how a bankruptcy can occur.

The method of accounting universally used in business today is known as **accrual accounting**, in which events are accounted for even if cash does not change hands. That is, transactions are recorded at the time they occur rather than when payment is actually made or received. Anticipated or preceding payments and receipts (cash flows) are recorded as accrued or deferred. Accrual accounting is the opposite of **cash accounting**, in which transactions are recognized only when cash is exchanged.

Accrual accounting defines earnings as an economic event signified by an exchange of goods rather than by an exchange of cash. In this way, accrual accounting allows for the separation in time of the exchange of goods and the exchange of cash. A transaction can be completed over time and distance, which allows for extended and extensive trade. Another advantage of accrual accounting is that it provides a business with a more accurate picture of its current financial situation.

In personal finance, it almost always makes more sense to use cash accounting to define and account for events when cash changes hands. In personal finance, incomes and expenses are noted when cash is received or paid, or when the cash flows.

The Accounting Process

Financial decisions result in transactions, or actual trades that involve buying, selling, investing, or borrowing. The accounting process records these transactions, documenting what has been received and what has been given up to obtain it, as well as what flows in and what flows out.

In business, accounting journals and ledgers are designed to record transactions as they happen. In personal finance, a bank account record typically tracks most transactions, with statements from banks or investment accounts providing records of the remaining transactions. Periodically, transaction information is summarized in financial statements, making it readily understandable.

Bookkeeping - the process of recording what, how, and by how much a transaction affects the financial situation - is how events are recorded. Since the advent of accounting software, bookkeeping, like long division and spelling, has become somewhat obsolete, although human judgment is still required. What is more interesting and useful are the summary reports that can be produced once all this information is recorded: the income statement, cash flow statement, and balance sheet.

Income Statement

The **income statement** summarizes incomes and expenses over a period of time. In business, income is the value of what is sold, expenses are the costs incurred in earning that income, and the difference is profit. In personal finance, income is what is earned as wages or salary and as interest or dividends, and expenses are the costs of things consumed in the course of daily living: the costs of sustaining *you* while you earn income. Thus, the income statement measures what you have earned and the cost of living associated with those earnings. The difference is personal surplus, which, if accumulated as investments, becomes your wealth.

The income statement clearly shows the relative size of your income and expenses. If income is greater than expenses, there is a surplus, and that surplus can be used to save or to spend more (and create more expenses). If income is less than expenses, then there is a deficit that must be addressed. If the deficit continues, it creates debts - unpaid bills - that must eventually be paid. Over the long term, a deficit is not a viable scenario.

The income statement can also be useful for its level of detail. You can see which of your expenses consumes the greatest portion of your income or which expense has the greatest or least effect on your surplus or deficit. To reduce expenses, consider identifying which ones would have the greatest impact or free up more income if they were reduced. If you want to increase income, you can see how much more that would buy you in terms of your expenses (Table 3.2.1). For example, consider Alice's situation per year, as shown in the following table.

Figure 3.2.1 : Alice's Situation (in Dollars)

Gross wages	$ 44,650
Income taxes and deductions	$ 8,930
Rent expense	$ 10,800
Living expenses	$ 14,400

In addition, she had car payments of $2,400 and student loan payments of $7,720. Each loan payment covers the interest expense and partial repayment of the loan. The interest is an expense representing the cost of borrowing, and thus the cost of owning the car and pursuing education. The repayment of the loan is not an expense, but rather a return of something that was borrowed. In this case, the loan payments break down as follows (Table 3.2.2).

Table 3.2.2 : Alice's Loan Payments (Annually)

	Interest	Debt Repayment
Car Loan	$ 240	$ 2,160
Student Loan	$ 4,240	$ 3,480

Breaking down Alice's living expenses in more detail and adding in her interest expenses, Alice's income statement would look like this (Table 3.2.3).

Table 3.2.3 : Alice's Income Statement for the Year 2023

Gross wages		$ 44,650
Income taxes and deductions	$ 8,930	
Disposable income		$ 35,720
Rent expense	$ 10,800	
Food	$ 3,900	
Car expenses (gas, insurance, repairs)	$ 3,600	
Clothing	$ 1,800	
Cell phone	$ 1,200	
Internet and streaming services	$ 1,200	
Entertainment, travel, etc.	$ 2,700	
Total living expenses		$ 25,200
Car loan interest	$ 240	
Student loan interest	$ 4,240	
Total interest expenses		$ 4,480
Net income		$ 6,040

Alice's **disposable income**, or income to meet expenses after taxes have been accounted for, is $35,720. Alice's net income, or net earnings or surplus, is the remaining income after all other expenses have been deducted, in this case, $6,040.

Now Alice has a much clearer view of what's going on in her financial life. She can see, for example, that living expenses take the biggest bite out of her income and that rent is the biggest single expense. If she wanted to decrease expenses, finding a cheaper place to live would make the most impact on her bottom line. It might make more sense to make many small changes (cutting back on a few expenses) rather than one large change. She could begin by cutting back on items that she feels are least necessary or that she could most easily live without. Perhaps she could do with less entertainment, clothing, or travel, for example. Whatever choices

she subsequently made would be reflected in her income statement. The value of the income statement lies in presenting income and expenses in detail for a specific period.

Cash Flow Statement

The **cash flow statement** shows how much cash came in, where it came from, how much cash went out, and where it went over a period of time. This differs from the income statement because it may include cash flows that are not from income and expenses. Examples of such cash flows would be receiving repayment of money that you loaned, repaying money that you borrowed, or using money in exchanges such as buying or selling an asset.

The cash flow statement is important because it can show how well you manage liquidity, as well as your net income. Liquidity is nearness to cash, and liquidity has value. An excess of liquidity can be sold or lent, creating additional income. A lack of liquidity must be addressed by buying it or borrowing, creating additional expense.

Considering Alice's situation, she has two loan repayments that are not expenses and therefore are not included on her income statement. However, these payments reduce her liquidity, making it more difficult for her to generate excess cash. Her cash flow statement looks like this (Table 3.2.4).

Table 3.2.4 : Alice's Cash Flow Statement for the Year 2023

Cash from gross wages	$ 44,650
Cash paid for:	
Income taxes and deductions	$ 8,930
Rent expense	$ 10,800
Food	$ 3,900
Car expenses (gas, insurance, repairs)	$ 3,600
Clothing	$ 1,800
Cell phone	$ 1,200
Internet and streaming services	$ 1,200
Entertainment, travel, etc.	$ 2,700
Car loan interest	$ 240
Student loan interest	$ 4,240
Cash for repayment of car loan	$ 2,160
Cash for repayment of student loan	$ 3,480
Net cash flow	$ 400

As with the income statement, the cash flow statement is more useful if it includes subtotals for the different types of cash flows, as defined by their sources and uses. The cash flows from income and expenses are **operating cash flows**, or cash flows that are a consequence of earning income or paying for the costs of earning income. The loan repayments are **cash flows from financing** assets or investments that will increase income. In this case, cash flows from financing include repayments on the car and the education. Although Alice doesn't have any in this example, there could also be **cash flows from investing**, from buying or selling assets. **Free cash flow** is the cash available for investment or financing decisions after accounting for operational expenses and debt obligations. It is calculated as cash flow from operations less debt repayments.

The most significant difference between the three categories of cash flows (operating, investing, or financing) is whether the cash flows are expected to recur regularly. Operating cash flows recur regularly; they are the cash flows resulting from income and expenses or consumption; therefore, they can be expected to occur in every year. Operating cash flows may vary in different periods, but they occur consistently in every period. Investing and financing cash flows, on the other hand, may or may not recur and often are unusual events. Typically, for example, you would not borrow, lend, buy, or sell assets on a yearly basis. Here is how Alice's cash flows would be classified (Table 3.2.5).

Table 3.2.5 : Alice's Cash Flow Statement for the Year 2023

Cash from gross wages	$ 44,650	
Cash paid for:		
Income taxes and deductions	$ 8,930	
Rent expense	$ 10,800	
Food	$ 3,900	
Car expenses	$ 3,600	
Clothing	$ 1,800	
Cell phone	$ 1,200	
Internet and streaming services	$ 1,200	
Entertainment, travel, etc.	$ 2,700	
Car loan interest	$ 240	
Student loan interest	$ 4,240	
Operating cash flows		$ 6,040
Cash for repayment of car loan	$ 2,160	
Cash for repayment of student loan	$ 3,480	
Financing cash flows		$ 5,640
Net cash flow		$ 400

This cash flow statement more clearly shows how liquidity is created and where liquidity could be increased. If Alice wanted to create more liquidity, it is obvious that eliminating those loan payments would be a big help: Without them, her net cash flow would increase by more than 3,900 percent.

Balance Sheet

In business or personal finance, a critical piece in assessing the current situation is the balance sheet. Often referred to as the “statement of financial condition,” the **balance sheet** is a snapshot of what you have and what you owe at a given point in time. Unlike the income or cash flow statements, it is not a record of performance over a period of time, but simply a statement of where things stand at a certain moment.

The balance sheet is a list of assets, debts or liabilities, and equity or net worth, along with their corresponding values. In business, assets are resources that can be used to create income, while debt and equity are the capital that finances those assets. Thus, the value of the assets must equal the value of the debt and the equity. In other words, the value of the business's resources must equal the value of the capital it borrowed or bought to get those resources.

$$\text{assets} = \text{liabilities} + \text{equity}$$

In business, the **basic accounting equation** is as absolute as the law of gravity. It simply must always be true, because if there are assets, they must have been financed somehow - either through debt or equity. The value of that debt and equity financing must equal or balance the value of the assets it bought. Thus, it is called the “balance” sheet because it *always* balances the debt and equity with the value of the assets.

In personal finance, assets are also things that can be sold to create liquidity. To satisfy or repay debts, liquidity is needed. Because your assets are what you use to satisfy your debts when they become due, the value of the assets should be greater than the value of your debts. That is, you should have more to work with to meet your obligations than you owe.

The difference between what you have and what you owe is your **net worth**. Net worth is the share that you own of everything that you have. It is the value of what you have *net of* (less) what you owe to others. Whatever asset value is left over after you meet your debt obligations is your own worth. It is the value of what you have that you can claim free and clear. Your net worth is essentially your financial equity or ownership in your own life. Here, too, the personal balance sheet must balance, because if

$$\text{assets} - \text{debts} = \text{net worth}$$

then it should also be

$$\text{assets} = \text{debts} + \text{net worth}$$

Alice could write a simple balance sheet to see her current financial condition. She has two assets (her car and her savings account) and she has two debts (her car and student loans) (Table 3.2.6).

Table 3.2.6 : Alice's Balance Sheet, December 31, 2023

Assets		Liabilities	
Car	$ 5,000	Car Loan	$ 2,700
Savings	$ 250	Student Loan	$ 53,000
Total	$ 5,250	Total	$ 55,700
		Net Worth	-$ 50,450

Not only does Alice's balance sheet present her with a much clearer picture of her financial situation, but it also lists a dismaying prospect: She seems to have a negative net worth. **Negative net worth** results whenever the value of debts or liabilities is greater than the assets' value (Table 3.2.7).

Table 3.2.7 : Relationship between Assets, Liabilities, and Net Worth

IF	THEN	AND
liabilities < assets	assets - liabilities > 0	net worth > 0 (net worth is positive)
liabilities > assets	assets - liabilities < 0	net worth < 0 (net worth is negative)

Negative net worth implies that the assets don't have enough value to satisfy the debts. Since debts are obligations, this would cause some concern.

Net Worth and Bankruptcy

In business, when liabilities exceed the assets available to meet them, the business has negative equity and is considered bankrupt. In that case, it may go out of business, selling all its assets and giving whatever it can to its **creditors** or lenders, who will have to settle for less than what they are owed. More often, the business continues to operate in bankruptcy, if possible, and must still repay its creditors, although perhaps under somewhat easier terms. Creditors (and the laws) allow these terms because creditors would rather receive payment in full later than receive less now or not at all.

In personal finance, personal **bankruptcy** may occur when debts exceed the value of assets. However, because creditors would rather be paid eventually than never, the person in bankruptcy is usually allowed to continue earning income in the hopes of repaying the debt later or on easier terms. Often, the bankrupt is forced to liquidate (sell) some or all of its assets. When a person files for bankruptcy in the U.S. Bankruptcy Court, they are asking the court to eliminate debt or approve a repayment plan. A bankruptcy case starts when the debtor (the person or entity filing for bankruptcy) files a petition with the court. An individual, a spouse, a corporation, or another entity can file a petition. All bankruptcy cases are handled in federal courts under rules outlined in the U.S. Bankruptcy Code.

Because debt is both a legal and an economic obligation, the laws governing bankruptcies vary from state to state in the United States and differ in other countries. The use of another's property or wealth is a serious responsibility, so debt is a solemn obligation.

However, Alice's case is not as dismal as it looks, because Alice has an “asset” not listed on her balance sheet: her education. It is not listed on her balance sheet because the value of her education, like the value of any asset, derives from its usefulness, which has not yet occurred but will happen over her lifetime. It will happen in her future, based on how she chooses to use her education to increase her income and wealth. It is difficult to assign a monetary value to her education at this time. Alice knows what she paid for her education, but, sensibly, its real value is not its cost but its potential return, or what it can help her earn as she puts it to use in the future.

Current studies indicate that a college education has economic value, as college graduates typically earn more over their lifetime than high school graduates. Recent estimates put that difference at approximately $1,000,000. [1] So, if Alice assumes that her education will be worth $1,000,000 in extra income over her lifetime, and she includes that asset value on her balance sheet, then it would look more like this (Table 3.2.8):

Table 3.2.8 : Alice's Balance Sheet (revised), December 31, 2023

Assets		Liabilities	
Car	$ 5,000	Car Loan	$ 2,700
Savings	$ 250	Student Loan	$ 53,000
Education	$ 1,000,000	Total	$ 55,700
Total	$ 1,005,250	Net Worth	$ 949,550

This looks much better, but it's not sound accounting practice to include an asset—and its value—on the balance sheet before it exists. After all, education generally pays off, but until it does, it hasn't yet, and there is a chance, however slim, that it won't for Alice. A balance sheet is a snapshot of one's financial situation at a particular point in time. At this specific time, Alice's education has value, but its amount is unknown.

However, it is easy to see that the only thing that creates negative net worth for Alice is her student loan. The student loan causes her liabilities to exceed her assets - and if that were paid off, her net worth would be positive. Given that Alice is just starting her adult earning years, her situation seems quite reasonable.

Summary

- Three commonly used financial statements are the income statement, the cash flow statement, and the balance sheet.
- Results for a period are shown on the income statement and the cash flow statement. Current point-in-time conditions are reflected on the balance sheet.
- The income statement lists income and expenses.
- The cash flow statement categorizes three types of cash flows: operating (recurring), financing (non-recurring), and investing (non-recurring).
- The balance sheet lists assets, liabilities (debts), and net worth.
- Net worth = assets − debts.
- Bankruptcy occurs when an individual or entity has a negative net worth, or when their debts exceed their assets.

Exercises

1. Prepare a personal income statement for the past year, using the same format as Alice's income statement in this chapter. Include all relevant categories of income and expenses. What does your income statement tell you about your current financial situation? For example, where does your income come from, and where does it go? Do you have a surplus of income over expenses? If so, what are you doing with the surplus? Do you have a deficit? What can you do about that? Which of your expenses has the most significant effect on your bottom line? What is the most significant expense? Which expenses would be easiest to reduce or eliminate? How else could you reduce expenses? Realistically, how could you increase your income? How would you like your income statement for the next year to look?

2. Using the format for Alice's cash flow statement, prepare your cash flow statement for the same one-year period. Include your cash flows from all sources, in addition to your operating cash flows - the income and expenses that appear on your income statement. What, if any, were the cash flows from financing and the cash flows from investing? Which of your cash flows are recurring, and which are nonrecurring? What does your cash flow statement tell you about your current financial situation? If you wanted to increase your liquidity, what would you try to change about your cash flows?
3. Now prepare a balance sheet, again based on Alice's form. List all your assets, liabilities, and debts, and your equity from all sources. What does the balance sheet show about your financial situation at this moment in time? What is your net worth? Do you have positive or negative net worth at this time, and what does that mean? To increase your liquidity, how would your balance sheet need to change? What would be the relationship between your cash flow statement and your budget?
4. Read the *Investopedia* article Net Worth: What It Is and How to Calculate It (www.investopedia.com/terms/n/networth.asp) and determine your net worth. How does your net worth compare to that of other Americans in your age and income brackets?
5. The Small Business Administration's Personal Financial Statement (www.sba.gov/document/sba-form-413-personal-financial-statement) combines features of an income statement and a balance sheet. You would fill out a similar form if you applied for a personal or business loan at a bank or mortgage lender. Compare and contrast the SBA form with the statements you already created for this chapter's exercises.

[1] Michael T. Nietzel, "College Degrees Lead To $14.2 Trillion Gain In Career Earnings, Study Finds", *Forbes*, March 4, 2024. www.forbes.com/sites/michaeltnietzel/2024/03/01/college-degrees-lead-to-142-trillion-gain-in-career-earnings-study-finds.

3.3: Comparing and Analyzing Financial Statements

Learning Objectives

1. Explain the use of common-size statements in financial analysis.
2. Discuss the design of each common-size statement.
3. Demonstrate how changes in the income and cash flow statements may explain changes in the balance sheet.
4. Identify the purposes and uses of ratio analysis.
5. Describe the value of comparing financial statements over time.

Financial statements are valuable summaries of financial activities because they organize information, making it easier to see and understand. Each one (the income statement, cash flow statement, and balance sheet) conveys a different aspect of the financial picture; put together, the picture is pretty complete. The three provide a summary of earnings and expenses, cash flows, and assets and debt.

Since the three statements offer different kinds of information, it is sometimes useful to examine each in the context of the others and to consider specific items within the larger context. The purpose of financial statement analysis is to create comparisons and contexts to gain a better understanding of the financial picture.

Common-Size Statements

On **common-size statements**, each item's value is listed as a percentage of another. This comparison shows the relative size and significance of items (see Table 3.3.1). On the income statement, each income and expense is listed as a percentage of the total income. This illustrates the contribution of each type of income to the total, thereby demonstrating the diversity of income sources. It also illustrates the burden of each expense on total income, showing how much income is required to support each expense.

On the cash flow statement, each cash flow can be listed as a percentage of total positive cash flows, again highlighting the relative significance and diversification of cash sources, as well as the relative size of each cash use.

On the balance sheet, each item is listed as a percentage of total assets, indicating the relative significance and diversification of assets, and highlighting the use of debt as a financing source for these assets.

Table 3.3.1 : Common Common-Size Statements

	Income Statement	Cash Flow Statement	Balance Sheet
Items as a % of	Total Income	Total Positive Cash Flows	Total Assets

Common-Size Income Statement

Alice can analyze a **common-size income statement** by examining her expenses as a percentage of her income and comparing the size of each expense to a common denominator: her total income. This shows her how much of her income is allocated to each expense proportionally (Table 3.3.2).

Table 3.3.2 : Alice's Common-Size Income Statement for the Year 2023

Gross wages		$ 44,650		100.00%
Income taxes and deductions	$ 8,930		20.00%	
Disposable income		$ 35,720		80.%
Rent expense	$ 10,800		24.19%	
Food	$ 3,900		8.73%	
Car expense	$ 3,600		8.06%	
Clothing	$ 1,800		4.03%	
Cell phone	$ 1,200		2.69%	

Gross wages		$ 44,650		100.00%
Internet and streaming services	$ 1,200		2.69%	
Entertainment, travel, etc.	$ 2,700		6.05%	
Total living expenses		$ 25,200		56.44%
Car loan interest	$ 240		0.54%	
Student loan interest	$ 4,240		9.50%	
Total interest expense		$ 4,480		10.03%
Net income		$ 6,040		13.53%

Seeing the common-size statement as a tree map makes the relative size of the slices even clearer (Figure 3.3.3).

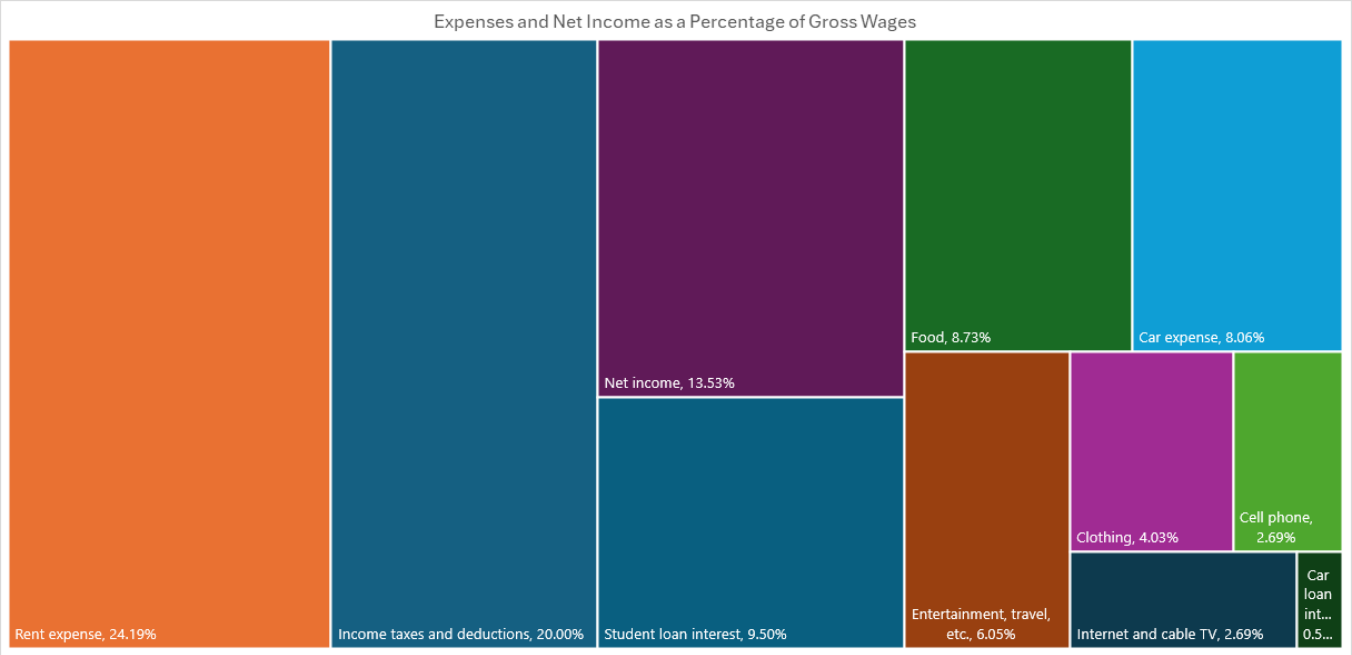

Figure 3.3.3 : Tree Map of Alice's Common-Size Income Statement for the Year 2023

The most significant portion of Alice's wages is spent on rent, followed by food, car expenses, and entertainment. Her income tax expense is a big use of her wages, but it is unavoidable and non-discretionary. Ranking expenses by size offers a fascinating insight into lifestyle choices. It is also valuable in framing financial decisions, as it highlights which expenses have the greatest impact on income and thus on the resources available for making informed financial decisions. If Alice wanted more discretionary income to make different choices, she could easily see that reducing rent expenses would have the most impact on freeing up some of her wages for other uses.

Common-Size Cash Flow Statement

Looking at Alice's negative cash flows as percentages of her positive cash flow (on the cash flow statement), or the uses of cash as percentages of the sources of cash, creates the **common-size cash flows**. As with the income statement, this provides Alice with a clearer and more immediate view of the largest uses of her cash (Tables 3.3.4 and 3.3.6).

Table 3.3.4 : Alice's Common-Size Cash Flow Statement for the Year 2023

Cash from gross wages	$ 44,650		100.00%
Cash paid for:			

	Cash from gross wages	$ 44,650		100.00%
.	Income taxes and deductions	$ 8,930		-20.00%
.	Rent expense	$ 10,800		-24.19%
.	Food	$ 3,900		-8.73%
.	Car expenses	$ 3,600		-8.06%
.	Clothing	$ 1,800		-4.03%
.	Cell phone	$ 1,200		-2.69%
.	Internet and streaming services	$ 1,200		-2.69%
.	Entertainment, travel, etc.	$ 2,700		-6.05%
.	Car loan interest	$ 240		-0.54%
.	Student loan interest	$ 4,240		-9.50%
.	Operating cash flows		$ 6,040	-13.53%
.	Cash for repayment of car loan	$ 2,160		-4.84%
.	Cash for repayment of student loan	$ 3,480		-7.79%
.	Financing cash flows		$ 5,640	-12.63%
.	Net cash flow		$ 400	0.00%

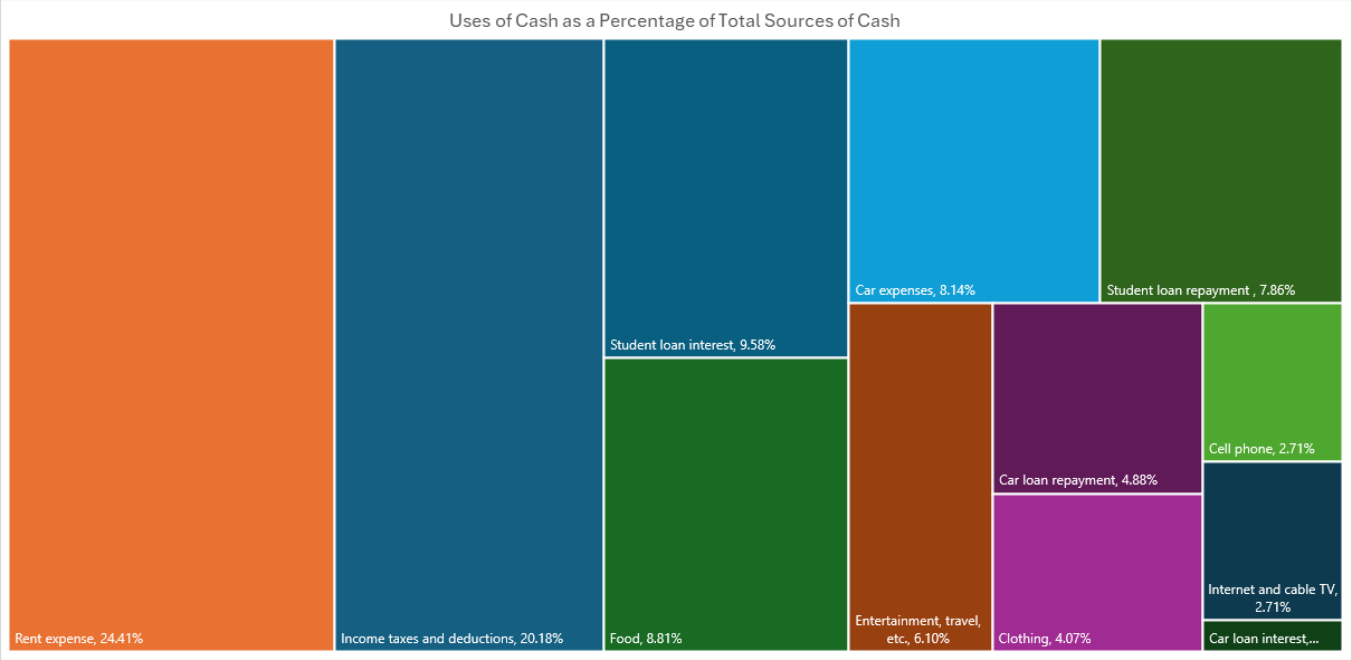

Figure 3.3.5 : Treemap of Alice's Common-Size Cash Flow Statement

Again, rent is the biggest discretionary use of cash for living expenses, but debts demand the most significant portion of cash flows. Repayments and interest together account for 30 percent of Alice's cash, which is equivalent to the amount she pays for rent and food. Eliminating those debt payments would create substantial liquidity for Alice.

Common-Size Balance Sheet

On the balance sheet, examining each item as a percentage of total assets enables the measurement of how much of the assets' value is allocated to cover each debt, or how much of the assets' value is claimed by each debt (Figure 3.3.6).

Figure 3.3.6 : Alice's Common-Size Balance Sheet, December 31, 2023

Assets			Liabilities		
Car	$ 5,000	95.00%	Car Loan	$ 2,700	51.00%
Savings	$ 250	5.00%	Student Loan	$ 53,000	1,010.00%
Total	$ 5,250	100.00%	Total	$ 55,700	1,061.00%
			Net Worth	-$ 50,450	-961.00%

This **common-size balance sheet** makes "oversized" items more apparent. For example, it is immediately apparent that Alice's student loan exceeds her asset value, resulting in a negative net worth. Diversification reduces risk, so it is advisable to diversify the sources of income and assets you can utilize to create value.

For example, Alice has only two assets, and one, her car, accounts for 95 percent of the value of her assets. If something were to happen to her car, her assets would lose 95 percent of their value. Her asset value would be less exposed to risk if she had other assets.

Likewise, both her income and her positive cash flows come from only one source, her paycheck. Because her positive net earnings and positive net cash flows depend on this one source, she is exposed to risk, which she could decrease by diversifying her sources of income. She could diversify by adding earned income, such as taking on a second job, or by creating investment income. To create investment income, however, she needs to have a surplus of liquidity, or cash, to invest.

Relating the Financial Statements

Common-size statements put the details of the financial statements in clear contrast relative to a common factor for each statement, but each financial statement is also related to the others. Each is a piece of a larger picture, and as important as it is to see each piece, it is also essential to see that larger picture. To make sound financial decisions, you need to be able to foresee the consequences of a decision and understand how it may affect the various aspects of the broader picture.

There are many other possible scenarios and transactions. Still, you can begin to see that the balance sheet at the end of a period is changed from what it was at the beginning of the period by what happens during the period, and what happens during the period is shown on the income statement and the cash flow statement.

The significance of these relationships becomes even more important when evaluating alternatives for financial decisions. When you understand how the statements are related, you can use that understanding to project the effects of your choices on different aspects of your financial reality and see the consequences of your decisions.

Ratio Analysis

Creating ratios is another way to see the numbers in relation to each other. Any ratio shows the relative size of the two items compared, just as a fraction compares the numerator to the denominator or a percentage compares a part to the whole. The percentages on the common-size statements are ratios, although they only compare items within a financial statement. Ratio analysis is used to make comparisons across statements.

The **financial ratios** you use depend on the perspective you need or the question(s) you need answered. Some of the more common ratios (and questions) are presented in the following chart (Table 3.3.8).

Table 3.3.8 : Common Personal Financial Ratios

Ratio	Calculation	Question it helps to answer
Net income margin	Net income Total income	How much income is used up by expenses?

Ratio	Calculation	Question it helps to answer
Return on assets	Net income / Total assets	How big is the income supporting the assets?
Return on net worth	Net income Net worth	How big is income relative to net worth?
Debt to assets	Total debt Total assets	How much asset value is financed by debt? Or how much asset value is there to satisfy debt?
Total debt	Total debt Net worth	How large is debt relative to net worth?
Interest coverage	Income before interest Interest expense	How well does income cover interest expenses?
Cash flow to income	Net cash flow Net income	How much do payments for investments and financing take from income?
Cash flow to assets	Net cash flow Total assets	How much cash flow supports assets?
Free cash flow	Free cash flow Net cash flow	How much cash is left to invest after covering living expenses and debt repayments?

These ratios all get "better" or show improvement as they get bigger, with two exceptions: debt-to-assets and total debt. Those two ratios measure levels of debt, and the smaller the ratio, the less the debt. Ideally, the two debt ratios would be less than one. If your debt-to-assets ratio is greater than one, then debt is greater than assets, and you are insolvent. If the total debt ratio is greater than one, then debt is greater than net worth, and you "own" less of your assets' value than your creditors do.

Some ratios will naturally be less than one, but the bigger they are, the better. For example, net income margin will always be less than one because net income will always be less than total income (net income = total income − expenses). The larger the ratio, and the fewer expenses that are deducted from the total income, the better.

Some ratios should be greater than one, and the bigger they are, the better. For example, the interest coverage ratio should be greater than one, because you should have more income to cover interest expenses than you have interest expenses, and the more you have, the better. Table 3.3.9 suggests what to look for in the results of your ratio analyses.

Table 3.3.9 : Results of Ratio Analysis

Ratio	Calculation	Question it helps to answer	Better as it gets
Net income margin	Net income - Total income	How much income is used up by expenses?	Bigger Will be <1
Return on assets	Net income - Total assets	How big is the income supporting the assets?	Bigger
Return on net worth	Net income Net worth	How big is income relative to net worth?	Bigger
Debt to assets	Total debt Total assets	How much asset value is financed by debt? Or how much asset value is there to satisfy debt?	Smaller Should be <1
Total debt	Total debt- Net worth	How large is debt relative to net worth?	Smaller Should be <1
Interest coverage	Income before interest Interest expense	How well does income cover interest expenses?	Bigger Should be>1

Ratio	Calculation	Question it helps to answer	Better as it gets
Cash flow to income	Net cash flow Net income	How much do payments for investments and financing take from income?	Bigger
Cash flow to assets	Net cash flow / Total assets	How much cash flow supports assets?	Bigger
Free cash flow	Free cash flow Net cash flow	How much cash is left to invest after covering living expenses and debt repayments?	Bigger

While you may have a pretty good "feel" for your situation just by paying the bills and living your life, it so often helps to have the numbers in front of you. Here is Alice's ratio analysis for 2023 (Table 3.3.10).

Table 3.3.10 : Alice's Ratio Analysis, 2023

Ratio	Calculation	Result
Net income margin	Net income + Total assets	0.1353
Return on assets	Net income + Net worth	1.1505
Return on net worth	Total debt + Total assets	-0.1197
Debt to assets	Total debt + Net worth	10.6095
Interest coverage	Income before interest + interest expense	2.3482
Cash flow to income	Net cash flow + Net income	0.0662
Cash flow to assets	Net cash flow + Total assets	0.0762
Free cash flow	Free cash flow + Net cash flow	1.0000

The ratios that involve net worth—return-on-net-worth and total debt—are negative for Alice, because she has negative net worth, as her debts are larger than her assets. She can see how much larger her debt is than her assets by looking at her debt-to-assets ratio. Although she has a lot of debt (relative to assets and net worth), she can earn enough income to cover the cost of interest expense, as shown by the interest coverage ratio.

Alice has good earnings. Her income exceeds her assets. She can live efficiently. Her net income is a healthy 13.53 percent of her total income (net income margin), which means that her expenses are only 86.47 percent of it. Still, her cash flows are significantly lower (cash flow to income), meaning that a substantial portion of her earnings is used up in making investments or, in Alice's case, debt repayments. Her debt repayments don't leave her with much free cash flow; that is, cash flow which is not used up on living expenses or debts.

Examining the ratios, it becomes even more apparent how substantial—and yet subtle—a burden Alice's debt is. In addition to giving her a negative net worth, it prevents her from increasing her assets and creating a positive net worth, as well as potentially generating more income, by obligating her to use up her cash flows. Debt repayment keeps her from being able to invest.

Comparisons over Time

Another useful way to compare financial statements is to examine how the situation has evolved. Comparisons over time provide insights into the effects of past financial decisions and changes in circumstances. That insight can guide you in making future financial decisions, particularly in foreseeing the potential costs or benefits of a choice. Looking backward can be very helpful in looking forward.

Fast-forward ten years: Alice is now in her early thirties. Her career has progressed, and her income has grown. She has paid off her student loan and has started saving for retirement, as well as possibly a down payment on a house.

A comparison of Alice's financial statements shows the change over the decade, both in absolute dollar amounts and as a percentage (see Table 3.3.11 , Table 3.3.12 , and Table 3.3.13). In this example, the assumption is that inflation has not significantly increased during the decade.

Table 3.3.11 : Alice's Income Statements: Comparison Over Time

For the Year Ending	12/31/2023	12/31/2033	Change	% Change
Gross wages	$ 44,650	$ 74,000	$ 29,350	65.73%
Income taxes and deductions	$ 8,930	$ 18,500	$ 9,570	107.17%
Disposable income	$ 35,720	$ 55,500	$ 19,780	55.38%
Rent expense	$ 10,800	$ 18,000	$ 7,200	66.67%
Food	$ 3,900	$ 3,900		0.00%
Car expenses	$ 3,600	$ 3,600		0.00%
Clothing	$ 1,800	$ 1,800		0.00%
Cell phone	$ 1,200	$ 1,200		0.00%
Internet and streaming services	$ 1,200	$ 1,200		0.00%
Entertainment travel, etc.	$ 2,700	$ 5,200	$ 2,500	92.59%
Total living expenses	$ 25,200	$ 34,900	$ 9,700	38.49%
Car loan interest	$ 240	$ 757	$ 517	215.42%
Student loan interest	$ 4,240		-$ 4,240	-100.00%
Total interest expenses	$ 4,480	$ 757	-$ 3,723	-83.10%
Net income	$ 6,040	$ 19,843	$ 13,803	228.53%

Table 3.3.12 : Alice's Cash Flow Statements: Comparison Over Time

For the Year Ending	12/31/2023	12/31/2033	Change	% Change
Cash from gross wages	$ 44,650	$ 74,000	$ 29,350	65.73%
Cash paid for:				
Income taxes and deductions	-$ 8,930	-$ 18,500	-$ 9,570	107.17%
Rent expense	-$ 10,800	-$ 18,000	-$ 7,200	66.67%
Food	-$ 3,900	-$ 3,900		0.00%
Car expenses	-$ 3,600	-$ 3,600		0.00%
Clothing	-$ 1,800	-$ 1,800		0.00%
Cell phone	-$ 1,200	-$ 1,200		0.00%
Internet and cable TV	-$ 1,200	-$ 1,200		0.00%
Entertainment, travel, etc.	-$ 2,700	-$ 5,200	-$ 2,500	92.59%
Car loan interest	-$ 240	-$ 757	-$ 517	215.42%
Student loan interest	-$ 4,240		$ 4,240	-100.00%

For the Year Ending	12/31/2023	12/31/2033	Change	% Change
Operating cash flows	-$ 6,040	$ 19,843	$ 13,803	228.53%
Cash invested in 401k		-$ 3,000	-$ 3,000	100.00%
Cash invested in car		-$ 6,300	-$ 6,300	100.00%
Investing cash flows		-$ 9,300	-$ 9,300	100.00%
Cash for repayment of car loan	-$ 2,160	-$ 4,610	-$ 2,450	113.43%
Cash for repayment of student loan	-$ 3,480			-100.00%
Financing cash flows	-$ 5,640	-$ 4,610	$ 1,030	-18.26%
Net cash flow	$ 400	$ 5,933	$ 5,533	1383.25%

Table 3.3.13 : Alice's Balance Sheets: Comparison Over Time

As of	12/31/2023	12/31/2033	Change	% Change
Assets				
Cash/checking		$ 5,000	$ 5,000	100.00%
Savings	$ 250	$ 250		0.00%
Money market		$ 2,600	$ 2,600	100.00%
Retirement 401(k)		$ 13,000	$ 13,000	100.00%
Retirement IRA		$ 7,400	$ 7,400	100.00%
Car	$ 5,000	$ 15,000	$ 10,000	200.00%
Total assets	$ 5,250	$ 43,250	$ 38,000	723.81%
Liabilities				
Car loan	$ 2,700	$ 4,610	$ 1,910	70.74%
Student loan	$ 53,000		-$ 53,000	-100.00%
Total liabilities	$ 55,700	$ 4,610	-$ 51,090	-91.72%
Net worth	-$ 50,450	$ 38,640	$ 89,090	

Starting with the income statement, Alice's income has increased. Her income tax withholding and deductions have also increased, but she still has higher disposable income (Net or take-home pay). Many of her living expenses have remained consistent; rent and entertainment have increased. Interest expense on her car loan has increased, but since she has paid off her student loan, that interest expense has been eliminated, so her total interest expense has decreased. Overall, her net income or personal surplus, which she clears after covering her living expenses, has almost doubled.

Her cash flows have also improved. Operating cash flows, like net income, have almost doubled, primarily due to the elimination of student loan interest payments. The improved cash flow allowed her to make a down payment on a new car, invest in her retirement, make the payments on her car loan, and still increase her net cash flow by a factor of ten.

Alice's balance sheet is most telling about the changes in her life, especially her now positive net worth. She has more assets. She has begun saving for retirement and has more liquidity, distributed in her checking, savings, and money market accounts. Since she has less debt, because she paid off her student loan, she now has a positive net worth.

Comparing the relative results of the common-size statements provides an even deeper view of the relative changes in Alice's situation (Table 3.3.14 , Table 3.3.15 , and Table 3.3.16).

Table 3.3.14 : Comparing Alice's Common-Size Statements for 2023 and 2033: Income Statements

For the Year Ending	12/31/2023	12/31/2033
Gross wages	100.00%	100.00%
Income taxes and deductions	20.00%	25.00%
Disposable income	80.00%	75.00%
Rent expense	24.19%	24.32%
Food	8.73%	5.27%
Car expenses	8.06%	4.86%
Clothing	4.03%	2.43%
Cell phone	2.69%	1.62%
Internet and streaming services	2.69%	1.62%
Entertainment, travel, etc.	6.05%	7.03%
Total living expenses	56.44%	47.16%
Car loan interest	0.54%	1.02%
Student loan interest	9.50%	0.00%
Total interest expenses	10.03%	1.02%
Net income	13.53%	26.81%

Table 3.3.15 : Comparing Alice's Common-Size Statements for 2023 and 2033: Cash Flow Statements

For the Year Ending	12/31/2023	12/31/2033
Cash from gross wages	100.00%	100.00%
Cash paid for:		
Income taxes and deductions	-20.00%	-25.00%
Rent expense	-24.19%	-24.32%
Food	-8.73%	-5.27%
Car expenses	-8.06%	-4.86%
Clothing	-4.03%	-2.43%
Cell phone	-2.69%	-1.62%
Internet and streaming services	-2.69%	-1.62%
Entertainment, travel, etc.	-6.05%	-7.03%
Car loan interest	-0.54%	-1.02%
Student loan interest	-9.50%	0.00%
Operating cash flows	13.53%	26.81%
Cash invested in 401(k)	0.00%	-4.05%
Cash invested in car	0.00%	-8.51%

For the Year Ending	12/31/2023	12/31/2033
. Investing cash flows	0.00%	-12.57%
. Repayment of car loan	-4.84%	-6.23%
. Repayment of student loan	-7.79%	0.00%
. Financing cash flows	-12.63%	-6.23%
. Net cash flow	0.90%	8.02%

Figure 3.3.16 : Comparing Alice's Common-Size Statements for 2023 and 2033: Balance Sheets

As of	12/31/2023	12/31/2033
Assets		
Cash/checking	0.00%	11.56%
Savings	4.76%	0.58%
Money market	0.00%	6.01%
Retirement 401(k)	0.00%	30.06%
Retirement IRA	0.00%	17.11%
Car	95.24%	34.68%
Total Assets	100.00%	100.00%
Liabilities	0.00%	0.00%
Car loan	51.43%	10.66%
Student loan	1009.52%	0.00%
Total Liabilities	1060.95%	10.66%
Net worth	-960.95%	89.34%

Although income taxes and rent have increased as a percentage of income, living expenses have decreased, showing real progress for Alice in raising her standard of living: it now costs her less of her income to sustain herself. Interest expense has decreased substantially as a portion of income, resulting in a net income or personal profit that is not only larger, but is larger relative to income. More of her income is profit, left for other discretionary uses.

The change in operating cash flows confirms this. Although her investing activities now represent a significant use of cash, her need to use cash in financing activities, specifically debt repayment, is substantially less, resulting in a substantial increase in her net cash flow. The cash that used to have to go toward supporting debt obligations now goes toward building an asset base, some of which (her retirement) may provide income in the future.

Changes in the balance sheet reveal a more diversified and, therefore, less risky asset base. Although almost half of Alice's assets are restricted for a specific purpose, such as her retirement, she still has significantly more liquidity and a higher proportion of liquid assets. Debt has fallen from ten times the assets' value to one-tenth of it, creating positive net worth for Alice.

By analyzing over time, you can spot trends that may occur too slowly or too subtly to notice in daily life, but which may become significant over time. You would want to keep a closer eye on your finances than Alice does, however, and review your situation at least every year.

Summary

- Each financial statement shows a piece of the larger picture. Financial statement analysis puts the financial statement information into context, making it sharper in focus.
- Common-size statements show the size of each item relative to a common denominator.
- On the income statement, each income and expense is shown as a percentage of total income.
- On the cash flow statement, each cash flow is shown as a percentage of the total positive cash flow.
- On the balance sheet, each asset, liability, and net worth is shown as a percentage of total assets.
- The income and cash flow statements explain the changes in the balance sheet over time.
- Ratio analysis is a way of creating a context by comparing items from different statements.
- Comparisons made over time can demonstrate the effects of past decisions to understand the significance of future decisions better.
- Financial statements should be analyzed at least annually.

Exercises

1. Prepare common-size statements for your income statement, cash flow statement, and balance sheet. What do your common-size statements reveal about your financial situation? How will your common-size statements influence your personal financial planning?
2. Calculate your debt-to-income ratio and other ratios using online financial tools. According to the calculation, are you carrying a healthy debt load? Why, or why not? If not, what can you do to improve your situation?
3. If you increase your income and assets, and reduce your expenses and debt, your personal wealth and liquidity will grow. In your personal financial journal, outline a general plan for how you would use or allocate your growing wealth to reduce your expenses and debt further, to acquire more assets or improve your standard of living, and to increase your real or potential income further.

3.4: Accounting Software - An Overview

Learning Objectives

1. Identify the uses of personal finance software.
2. List the common features of personal financial software.
3. Demonstrate how actual financial calculations may be accomplished using personal financial software.
4. Discuss how personal financial software can assist in your personal financial decisions.

Many software products are available to help you organize your financial information to be more useful in making financial decisions. They are designed to make the record-keeping aspects of personal finance - the collection, classification, and sorting of financial data - as easy as possible. The programs are also designed to produce summary reports (e.g., income statements, cash flow statements, and balance sheets) as well as many calculations that may be useful for various aspects of financial planning. For example, financial planning software is available for managing education and retirement savings, as well as debt and mortgage repayment, and for creating income and expense budgets.

Collecting the Data

Most software programs have been designed to resemble a checkbook, which is what some people use to keep track of their personal financial records. This type of user interface is designed to be recognizable and familiar, much like the manual record-keeping you already do.

When you enter or import your financial data into the program, the software does the bookkeeping. Most personal financial transactions happen as cash flows through a checking account, so your account statement becomes the primary source of data.

Data for other transactions, such as income from investments or changes in investment value, are usually received from periodic statements issued by investment managers, such as banks where you have savings accounts; brokers or mutual fund companies that manage investments; or employers' retirement account statements.

Most versions of personal financial software allow you to download account information directly from the source—your bank, broker, or employer—which saves you from manually entering the data into the program. Aside from providing convenience, downloading directly should eliminate human error in transferring the data.

Reporting Results and Planning Ahead

All personal financial software generates the essential summary reports—the income statement, cash flow statement, and balance sheet—that show the results of financial activity for the period. Most will also report more specific aspects of activities, such as listing all transactions for a particular income or expense.

Most will provide separate reports on activities that have some tax consequences, as users always need to be aware of their tax obligations and the tax implications of financial decisions. Some programs, especially those produced by companies that also sell tax software, allow you to export data from your financial software to your tax program, which makes tax preparation - or at least tax record keeping - easier. In some programs, you need to identify which activities are taxable and flag them accordingly. Some programs already recognize this information, while others may still require you to provide tax information.

All programs allow you to play "what if": a marvelous feature of computing power and the virtual world in general, and certainly helpful when it comes to making financial decisions. All programs include a budgeting feature that allows you to foresee or project possible scenarios and gauge your ability to live with them. This feature is particularly useful when budgeting for income and living expenses. (Budgeting is discussed more thoroughly in Chapter 5.) Most programs have features that allow you to project the results of savings plans for education or retirement. None can dictate the future, or allow you to, but they can certainly help you gain a better perspective.

Security, Benefits, and Costs

Programs are designed to be installed on a computer or smartphone, or run from a web browser. Product and service providers are very concerned with security.

As with all Internet transactions, be aware that the more data is transferred, downloaded, or exported over the Internet, the greater the risk of exposure to theft. Personal financial data theft is a serious and growing problem worldwide, and security systems work diligently to keep up with the ingenuity of hackers. The convenience gained by having your bank, brokerage, tax preparer, and so on accessible to you (and your data accessible to them) or your data accessible to you wherever you are must be weighed against the increased exposure to data theft.

Keeping digital records of your finances may be more secure than storing them in shoe boxes or files, which are exposed to risks such as fire, flood, and theft. Digital records are often easily retrievable because the software organizes them systematically for you. Space is not a practical issue with digital storage, so that records may be kept longer. As with anything digital, however, you must be diligent about backing up your data, although many programs will do that automatically or regularly prompt you to do so. Hard copy records must be disposed of periodically, and judging how long to keep them is always difficult. Throwing them in the trash may be risky because of “dumpster diving,” a well-known method of identity theft, so documents with financial information should always be shredded before disposal.

Personal financial software is typically reasonably priced, with many programs selling for under $100. Buying the software typically costs less than hiring an accountant or financial planner for an hour of expertise. While software cannot replace financial planning professionals who provide valuable judgment, it can allow you to hire them only for their judgment and not have to pay them to collect, classify, sort, and report your financial data.

Applications will not improve your financial situation, but they can enhance the organization of your financial data on a monthly and yearly basis, providing you with a much clearer view and, almost certainly, a better understanding of your situation.

Application Selection

The personal finance application ecosystem is constantly evolving with the introduction of new applications, features, and payment models. Start with an internet search for "free personal finance software" or "free personal finance app" and compare the results to your personal goals and needs.

Summary

- Personal finance software applications offer convenience and tools for collecting, categorizing, organizing, reporting, and securing financial data, enabling you to better assess your current situation.
- To help you better evaluate your choices, personal finance software provides calculations for projecting information such as the following:
  - Education savings
  - Retirement savings
  - Debt repayment
  - Mortgage repayment
  - Income and expense budgeting

Exercises

1. Explore free online resources for developing and comparing baseline personal financial statements. PCMag (www.pcmag.com) is a good resource.
2. Compare and contrast the features of popular personal financial planning software, such as Quicken, NerdWallet, and Rocket Money. In your personal finance journal, record your findings. Which tool, if any, would be your first choice, and why?
3. Read Managing Money: Six Principles of Personal Finance (www.schwab.com/learn/story/managing-money-six-principles-personal-finance) from financial services firm Charles Schwab and answer these questions:
   1. What are the six principles of personal finance described in this video?
   2. How is each principle relevant to you and your personal financial situation?
   3. Are you already following one or more of these principles?
4. If you have an hour and want to preview the rest of this text, watch The Basics of Personal Finance and Budgeting (www.youtube.com/watch?v=Ov_rEK_IGtw) (51:41 minutes) from Wayne State University. This video begins by acknowledging the impact of home mortgage redlining (www.investopedia.com/terms/r/redlining.asp) on the racial wealth

gap that exists in the United States today.

CHAPTER OVERVIEW

4: Time Value of Money

This chapter introduces the cornerstone concept that a dollar today is not the same as a dollar tomorrow. It demonstrates how interest, compounding, and discounting underpin every major financial decision, from loans to retirement planning. More than just formulas, the article presents TVM as a way of evaluating value across time and enabling informed tradeoffs.

4.1: Introduction
4.2: Liquidity - A Bridge Between Wealth and Choice
4.3: Time and Money - Why Waiting Changes Everything
4.4: Simple Interest - Today's Dollar vs. Tomorrow's Dollar
4.5: Compounding - When Your Interest Starts Earning Interest
4.6: Annuities - A Stream of Payments Over Time
4.7: Amortization - Breaking Down Big Payments Over Time
4.8: Putting It All Together

4.1: Introduction

Financial decisions are always about the future. No matter how much we analyze the outcomes of past decisions, the past is sunk - it can be studied and understood, but it can't be changed. Instead, decisions are made for the future, a place full of uncertainty.

When we evaluate our options, we're forced to speculate - not just about what will happen, but also about the value of what happens. Will the result be worth it? How much risk are we taking on? How might the passage of time change what we gain or lose?

Time plays a dual role: It introduces uncertainty (risk) while also creating opportunities. And just as every opportunity comes with a cost, every financial choice comes with trade-offs. Understanding how time influences these decisions—and learning to measure its risks, opportunities, and costs—will help you make smarter financial choices in the future.

4.2: Liquidity - A Bridge Between Wealth and Choice

Learning Objectives

- Define liquidity and explain its role in financial decision-making.
- Differentiate between liquid and illiquid assets and identify the associated trade-offs.
- Evaluate how liquidity supports opportunity, stability, and autonomy. (Applying, Evaluating)

Why is liquidity valuable?

When planning for the future, one of the first things to consider is liquidity - how easily money can be accessed and used. Time plays a key role here: It impacts not just whether we'll see the benefits or costs of a decision, but also what those benefits or costs are worth.

When your money is liquid, you have options. You can spend it, save it, or invest it without delay or additional effort. But when money isn't liquid - when it's "frozen" - it's harder to use, and that reduces its value. Transforming frozen wealth into liquid wealth often comes at a cost:

1. Transaction Costs: Fees or hassles associated with accessing the money.
2. Opportunity Costs: What else could you have done with the time or resources?
3. Risk: What if the money isn't accessible, or it costs more than expected to "thaw" it?

Cash for Cars

Imagine you own a car you no longer drive. That car represents wealth, but it's not liquid - you can't use it to buy groceries or pay for a last-minute trip with friends. To make that wealth liquid, you'd need to sell the car, and that takes time and effort:

- You'd need to find a buyer.
- You might lower the price to make a quick sale.
- You may miss out on other opportunities while going through the process.

By the time you turn the car into cash, its value to you may already be reduced because of transaction costs (the hassle or fees involved), opportunity costs (the time lost), and risk (what if no one buys it?).

This is why cash, or liquid money, is so valuable. You can use it instantly without delay, additional cost, or uncertainty.

Time and Liquidity: The Role of Cash Flows

When we look at money through the lens of time, liquidity becomes even more important.

Money in the Past: It's already spent. Those cash flows are "sunk" - they can't be used, changed, or recovered.
Money in the Present: It's liquid - it's ready to use. You can spend it, save it, or invest it today.
Money in the Future: It's not yet liquid. You can't use it right now, which means you're separated from it by time.

The further into the future that cash flow is expected to arrive, the greater the costs of being separated from it:

1. **Opportunity Cost**: If you had the money now, you could spend it, save it, or invest it and benefit immediately. Waiting costs you.
2. **Risk**: The future is uncertain. Will you actually receive the money? If so, how much will it be worth by then?

Simply put, time creates distance between you and your ability to use your money. And that distance costs you.

Why This Matters in Financial Decisions

Every financial decision involves trade-offs over time:

- Saving for college or retirement
- Investing in a business
- Deciding whether to spend or save today

These decisions depend on future cash flows—the money you expect to have later. But to truly understand the value of those future amounts, you need to compare them to today's dollars.

This is where the concept of the **time value of money (TVM)** comes in:

Future amounts are worth less than today's dollars due to opportunity cost, risk, and the time value of money.

In the next section, we'll explore how simple interest allows us to bring those future values back to today, and how waiting changes everything.

Summary

Liquidity is more than convenience—it's freedom. This section reframes liquidity not as a technical measure, but as a practical reflection of choice. Cash in hand isn't just about security; it enables timely action. A pile of bricks may be valuable, but a checking account lets you choose dinner, relocate, or respond to a medical bill. Liquidity puts your plans in motion.

- Liquidity is the ease of converting assets into spendable funds.
- Liquid wealth may feel less impressive than long-term investments, but it grants immediate freedom.
- Illiquid assets (such as property) may appreciate, but they can't cover next Friday's expenses without proper planning.

Liquidity isn't about fear—it's about flexibility. This section lays the foundation for understanding why time and access matter in personal finance.

Exercises

1. Can you think of something valuable you own that would be hard to convert into cash? What makes it illiquid?
2. Why might someone choose to keep a large amount of money in an illiquid form like real estate or collectibles?
3. Rank the following items from most to least liquid: savings account, house, stocks, art collection. Justify your rankings.

4.3: Time and Money - Why Waiting Changes Everything

Learning Objectives

- Explain the concept of the Time Value of Money (TVM).
- Compare how the value of money changes over time in different financial contexts.
- Apply simple interest reasoning to determine present or future value.

Is a dollar today the same as a dollar tomorrow?

At first glance, you might think, “Of course it is!” But what if time changes the value of money? Suddenly, the answer isn’t so simple. Let’s take it a step further: What if it’s not a dollar today versus a dollar *tomorrow*, but a dollar today versus a dollar a *year from now*?

Your instinct might be to prefer the dollar today, and there’s a good reason for that. Time has a powerful influence on the value of money.

Time Changes Everything: Inflation and Earning Potential

Time works in two powerful ways when it comes to money. On one hand, it can quietly erode the value of money. Over time, prices tend to rise, meaning that a dollar today may not buy as much in the future. Think about this: If lunch costs $10 today, it might cost $12 next year. That difference is the result of something called inflation—an invisible force that reduces the purchasing power of your money. A dollar next year simply won’t stretch as far as a dollar tomorrow.

But time also creates opportunity. Money today has the potential to grow through savings or investment. For example, if you put $1 into a savings account earning 5 percent interest, it could become $1.05 next year. This ability for money to increase in value over time is what we call earning potential.

Introducing Shopping Power: Today Dollars vs. Tomorrow Dollars

So, what does this all mean for the money in your pocket? Think of it as shopping power - what your money can buy. Time changes that power. If prices rise due to inflation, your shopping power shrinks. But if your money grows through savings or investment, your shopping power expands.

Imagine you have $100 today. You could use it today to buy concert tickets for an unforgettable experience. Or you could wait a year. If ticket prices rise to $110, you’ll need more money to buy the same experience. On the other hand, if you save or invest your $100, it could grow to $110 or more, allowing you to afford the tickets, and maybe even have a little left over.

Digging Deeper: How Inflation and Interest Compete

Inflation and interest rates often feel like two forces pulling in opposite directions. Inflation reduces the value of your money over time, while interest (or investment returns) increases it. The key is to make sure your money grows faster than inflation. Curious about how these forces interact? Try using an online financial calculator to see the effect of different inflation and interest rates on savings.

This idea - money today being different from money tomorrow - is at the heart of personal finance. Economists and professionals call these concepts Present Value (PV) and Future Value (FV). For now, think of them as ‘today dollars’ and ‘tomorrow dollars.’ Understanding this distinction helps you make smarter financial decisions.

Summary

Time alters value. This section introduces the foundational insight behind all financial modeling: a dollar today is worth more than a dollar tomorrow. The reason is opportunity; money today can be used, saved, or invested. Delaying access requires compensation.

- The time value of money (TVM) reflects the principle that money now is more valuable than money later.
- Interest earned over time compensates for waiting.

- Simple interest helps quantify how much present value a future dollar holds and how much future value a dollar today might have.

The section emphasizes intuitive understanding: students are not expected to memorize formulas, but to recognize how value changes with time and why waiting introduces cost.

? Exercises

1. Why might a dollar today be worth more to you than a dollar tomorrow? Can you think of examples from your life where this is true?
2. Imagine you have $100 today. Would you spend it on something you enjoy now, or would you save it for the future? What factors would influence your decision?
3. If inflation causes prices to rise by 3 percent each year, how much will $100 today be worth in shopping power one year from now?

4.4: Simple Interest - Today's Dollar vs. Tomorrow's Dollar

Learning Objectives

- Describe interest as compensation for deferring the use of money.
- Differentiate between simple and compound interest.
- Apply interest calculations to measure future or present value.

A Graduation Gift

Let's say your grandparents want to gift you $1,000 for graduation next year. They face two options:

Set aside $1,000 today and let it grow with simple interest for one year.
Work backward to decide how much they need to set aside today to ensure you receive exactly $1,000 next year.

By exploring both options, we'll see why today's dollar isn't quite the same as tomorrow's dollar.

Future Value: How Much Will You Have?

Your grandparents decide to set aside $1,000 today in a simple interest account that earns 5 percent per year. How much will it be worth when you graduate next year?

Here's the idea:

At the end of the year, the interest you earn is calculated based on the amount you have deposited.

The formula for simple interest is:

$$FV = PV \times (1 + r)$$

Where:

PV = Present value (amount today) = $1,000

r = Interest rate = 5% = 0.05

Plugging in the numbers:

$FV = 1,000 \times (1 + 0.05)$

$FV = 1,000 \times (1.05)$

$FV = 1,050$

Result: At graduation, you'll receive $1,050. The additional $50 represents the interest earned over one year.

Present Value Example: How Much Should They Set Aside Today?

Now, suppose your grandparent changes their mind and decides they want to set aside an amount today that will grow to exactly $1,000 in one year. How much would they need to deposit now?

Here's the idea: We're bringing tomorrow's dollar back to today's value - a process called "discounting."

The formula for present value (PV) is:

$$PV = \frac{FV}{(1 + r)}$$

Where:

FV = Future value = $1,000

r = Interest rate = 5% = 0.05

Plugging in the numbers:

PV = 1,000/(1+0.05)

PV = 1,000/(1.05)

PV = 952.38

Result: To ensure you receive $1,000 at graduation, your grandparents would need to set aside approximately $952.38 today.

Digging Deeper: Using FV/PV Calculators and Excel

You don't need to do these calculations by hand - online tools and Excel spreadsheets can handle them for you! Here's how:

Online Calculators:

Search for "Future Value Calculator" or "Present Value Calculator" online.

Enter the values: PV, FV, interest rate (r), and the number of periods (1 year in this case).

Excel Formulas:

Future Value: Use the formula `=FV(rate, nper, pmt, pv)`

Example: `=FV(5%, 1, 0, -1000)` → Returns $1,050

Present Value: Use the formula `=PV(rate, nper, pmt, fv)`

Example: `=PV(5%, 1, 0, -1000)` → Returns $952.38

Tip: In Excel, enter interest rates as decimals (5% = 0.05) and be mindful of positive and negative signs when entering amounts.

Today's Dollar vs. Tomorrow's Dollar

What does this tell us?

- The future value shows how money today grows into tomorrow's dollars with interest.
- The present value indicates that tomorrow's dollars are worth less today because they have not yet earned any interest.

This simple relationship between today's value and tomorrow's value forms the foundation for everything that follows.

What if You Had to Wait Longer?

So far, we've looked at lump sums and annuities with simple, single-period interest. But what happens when the interest we earned last year starts to earn interest for us this year? That's where things get interesting - and it's what we'll explore next.

Summary

Interest is the reward (or cost) for letting time pass without spending money. When you lend money or delay your own spending, interest measures the value of that wait. This section introduces how interest works, starting with simple examples and gradually introducing formulas.

- Interest is what bridges today's dollar and tomorrow's.
- Simple interest grows in a straight line—only the principal earns interest.
- Interest lets us assign comparable value to different moments in time.

This section prepares students to interpret and calculate future and present values using interest, while still grounding the concepts in real-world decisions.

Exercises

1. Have you ever loaned money to someone (or borrowed it)? How did interest factor into the decision?
2. Why might someone prefer to accept less money today than more money in the future?
3. You invest $1,000 at 5 percent simple interest for 3 years. How much interest do you earn, and what's the total future value?

4.5: Compounding - When Your Interest Starts Earning Interest

Learning Objectives

- Explain how compound interest differs from simple interest.
- Interpret the effect of time and frequency on compounding outcomes.
- Apply compound interest formulas to solve for future or present value.

A Snowball

Compounding happens when interest isn't just earned on the original amount you invested (the principal) - it's also earned on the interest that has already accumulated. Think of it like this: It's not just your money working for you. It is your interest working for you, too. This is the power of compounding interest - your money grows faster over time because it continues to build on itself.

What Is Compounding?

Compounding occurs when the interest you earned last year begins earning interest this year. It's like a snowball rolling down a hill: as it rolls, it picks up more snow, which makes it grow bigger and faster. Let's revisit an example to make this clearer: Imagine you deposit $1,000 into an account that earns 5 percent interest per year. Here's what happens: Year 1: You earn 5 percent on $1,000 → Interest = $50 → Total = $1,050. Year 2: Now you earn 5 percent on $1,050 (not just the original $1,000). Interest = 5 percent of $1,050 = $52.50 → Total = $1,102.50. Year 3: You earn 5 percent on $1,102.50, and so on. Notice that each year, the interest grows because it's calculated on a bigger balance. This is the magic of compounding interest: Your money grows on itself.

The Formula for Future Value with Compounding

When interest compounds, we calculate the future value (FV) of a lump sum like this:

$$FV = PV \times (1 + r)^n$$

Where:

FV = Future value (amount in the future)

PV = Present value (amount today)

r = Annual interest rate (as a decimal)

n = Number of years

Plugging in the numbers:

$FV = 1,000 \times (1 + 0.05)^3$

$FV = 1,000 \times 1.1576$

$FV = 1,157.63$

What does this mean? After three years, your $1,000 has grown to $1,157.63. The extra $157.63 isn't just from the original deposit - it's also from interest earned on interest.

Why Compounding Matters: The Snowball Effect

Compounding works like a snowball rolling downhill: The longer it rolls, the bigger it grows. The key to harnessing this power is time. The more time your money has to compound, the greater its growth. Time is just as important as the interest rate when it comes to growing your money.

Summary

Compounding is the engine that powers wealth-building over time. Unlike simple interest, which pays only on the principal, compound interest rewards patience by paying on both the principal and the interest that has accumulated. The longer your money is invested, the more dramatic the growth—especially when reinvestment is frequent and uninterrupted.

- Compound interest = interest on interest.
- Time magnifies the effects of compounding dramatically.
- The earlier you start, the more time does the work for you.

This section transitions from intuition to math, showing how compound interest accelerates the process of wealth accumulation. It's not magic. It's math and time.

? Exercises

1. Why do people often underestimate how much compound interest can grow over time?
2. What does compound interest teach us about habits and timing in personal finance?
3. You invest $1,000 at 5% compounded annually for 10 years. What's the total future value?

4.6: Annuities - A Stream of Payments Over Time

Learning Objectives

- Define annuities as a stream of regular payments over time.
- Differentiate between types of annuities (ordinary vs. due) and their use cases.
- Apply annuity formulas to calculate present and future value.

Regular Payments

So far, we've explored single payments—like your grandparent setting aside money for a one-time graduation gift. But what if instead of a single lump sum, they gave you a smaller gift every year for the next four years? That's no longer just one decision about a lump sum of money. It's a series of payments made over time, and we refer to this as an annuity.

An annuity is simply a stream of equal payments made at regular intervals over time. Think of it as this:

Your grandparents are giving you $1,000 every year for four years to help you with college costs.
A subscription service where you pay $10 a month for access to a streaming platform.
A savings plan where you deposit $100 into your account at the end of every year.

The key here is that the payments are:

1. **Equal payments** - each payment is the same amount.
2. **Regular intervals** - the payments happen on a fixed schedule (monthly, annually, etc.).

Annuities in Real Life

Annuities might sound like a fancy financial term, but they're everywhere. For example, these are annuities:

Saving for a Goal: You decide to save $1,000 each year for four years to buy a car.
Receiving Payments: When you retire, you might receive equal monthly payments from your retirement fund to cover your expenses.

Whether you're the one saving or receiving, annuities are all about managing money over time - a predictable stream of payments that builds toward a goal.

Why Time Matters

Here's the catch: Even though each payment is equal, time still influences the value of those payments. Money received today is worth more than the same amount received later, thanks to inflation and opportunity cost.

To compare these payments or determine their current value, we need tools to calculate the future value (FV) and present value (PV) of annuities.

Future Value of an Annuity: Saving for a Goal

Imagine your grandparent decides to help you save for a big trip after graduation. They deposit $1,000 at the end of every year into an account that earns 5 percent interest. You'll receive four payments. How much money will you have in total after the fourth year?

To find the future value of an annuity (FVA), we add up the value of each payment as it grows with interest:

Year 1: The first $1,000 earns interest for three years.
Year 2: The second $1,000 earns interest for two years.
Year 3: The third $1,000 earns interest for one year.
Year 4: The fourth $1,000 payment doesn't earn interest; it's the final payment.

Each payment grows using the same formula for future value:

$$FV = PV \times (1 + r)^n$$

But we're summing the future values of all four payments. Instead of doing this manually, there's a formula that calculates the total Future Value of an Annuity (FVA):

$$FV_A = C \times \frac{(1+r)^n - 1}{r}$$

Where:

C = Payment amount (e.g., $1,000)

r = Interest rate (e.g., 5% = 0.05)

n = Number of periods (e.g., 4 years)

Plugging in the numbers:

$$FV_A = 1,000 \times \frac{(1+0.05)^4 - 1}{0.05}$$

$$FV_A = 1,000 \times \frac{1.2155}{0.05}$$

$$FV_A = 1,000 \times 4.31$$

$$FV_A = 4,310$$

Result: After four years, you'll have approximately $4,311 saved for your big trip.

Present Value of an Annuity: Bringing Future Payments to Today

Now let's flip the problem. Suppose your grandparent wants to give you $4,000 total over four years by making equal annual payments of $1,000 at the end of each year. Instead of setting aside $4,000 upfront, they want to know this: How much money do they need to set aside today to make these payments?

To answer this, we calculate the Present Value of an Annuity (PVA). This brings each payment back to today's value, or what we call "discounting":

The formula for the PVA is:

$$PV_A = \frac{C}{r} \times \left(1 - \frac{1}{(1+r)^n}\right)$$

Where:

C = Payment amount (e.g., $1,000)

r = Interest rate (e.g., 5 percent = 0.05)

n = Number of periods (e.g., four years)

Plugging in the numbers:

$$PV_A = \frac{1,000}{0.05} \times \left(1 - \frac{1}{(1+0.05)^4}\right)$$

$$PV_A = \frac{1,000}{0.05} \times (1 - 0.8227)$$

$$PV_A = 20,000 \times 0.1773$$

$$PV_A = 3,546$$

Result: To make four equal payments of $1,000 over four years, your grandparent would need to set aside approximately $3,546 today.

Why This Matters

Annuities are everywhere in personal finance: saving for a car, receiving retirement income, or repaying a loan. By understanding the future and present value of a stream of payments, you can plan for your goals, make better financial decisions, and compare options over time.

Future Value illustrates how regular payments accumulate into a larger amount over time, such as saving for a significant goal.

Present Value shows how to calculate the amount needed today to fund future payments, such as planning for a series of expenses.

Digging Deeper: Using Tools for Annuities

You can use online calculators or Excel spreadsheets to solve for FV and PV of annuities:

Future Value of an Annuity:

Excel formula: `=FV(rate, nper, pmt, 0, 0)`

Example: `=FV(5%, 4, -1000, 0, 0)` → Returns 4,311

Present Value of an Annuity:

Excel formula: `=PV(rate, nper, pmt, 0, 0)`

Example: `=PV(5%, 4, -1000, 0, 0)` → Returns 3,546

Tip: In Excel, payments are entered as negative numbers because they're outgoing cash flows.

What If You're the One Making the Payments?

So far, we've explored how money grows when you receive regular payments, like deposits into a savings account or gifts spread over time. But what if the payments go the other way?

Imagine you're not the one saving or receiving. Imagine you're the one repaying a loan, like for a car or a house. You're still making regular payments, but this time they work to reduce a debt.

This brings us to amortization—the process of breaking a loan into equal payments over time. While the math may look familiar, what's happening behind the scenes is a little different and fascinating.

Summary

Annuities are time-based contracts that provide regular, predictable payments in or out. Whether it's paying off a loan or receiving retirement income, annuities show up wherever money flows repeatedly. This section introduces the idea of valuing a stream, not just a lump sum, and reinforces the notion that time affects every dollar.

- An annuity is a series of equal payments over equal time intervals.
- Common examples include loan payments, lease agreements, and withdrawals from retirement accounts.
- Time and frequency affect value: an annuity due (payments at the start) is more valuable than an ordinary annuity (payments at the end).

This section highlights how to calculate annuity value using formulas, but the emphasis is still on why structure matters and how time and payment position affect outcomes.

Exercises

1. Have you ever made or received regular payments over time (e.g., subscriptions, rent, loans)? How does it feel different than a single transaction?
2. Why might a landlord prefer rent due at the start of the month rather than the end?
3. You receive $200/month for three years from an ordinary annuity. If the interest rate is 6 percent annually, what's the present value of those payments?

4.7: Amortization - Breaking Down Big Payments Over Time

Learning Objectives

- Define amortization and explain how it breaks down loan repayment.
- Interpret the changing relationship between interest and principal in an amortized loan.
- Apply amortization reasoning to explain real-world loans such as mortgages and car payments.

What Is Amortization?

While it would be fantastic if we always received lump sums or streams of payments (like annuities), there are times when we need to repay money we've borrowed. When you borrow and repay the loan with interest over time, you are amortizing it.

Amortization is how loans like car payments and mortgages work. Instead of paying back the entire loan all at once, you make predictable, equal payments over time. But here's the interesting part: While your payment stays the same, what's happening "inside" the payment - how much goes to interest and how much to the loan balance - changes every month. Amortization is the process of repaying a loan in equal payments over time. Here is what's happening inside the payment:

- **Interest**: The cost of borrowing, calculated on the remaining balance.
- **Principal**: The amount you still owe, which gets smaller as you pay it off.

Initially, most of your payment goes toward interest because you still owe a lot. But over time, as the principal shrinks, the interest becomes smaller. That leaves more of your payment to chip away at the loan balance.

An Example: Buying a Car

Let's say you borrow $20,000 to buy a car. You agree to repay the loan over five years (60 months) at an interest rate of 6 percent. Your monthly payment is calculated using this formula:

$$PMT = \frac{r \times PV}{1 - (1 + r)^{-n}}$$

Where:

P = Monthly payment

PV = Loan amount (present value) = $20,000

r = Monthly interest rate = Annual rate ÷ 12 = 0.06 ÷ 12 = 0.005

n = Total number of periods = 60 months

Plugging in the numbers:

$$PMT = \frac{0.005 \times 20,000}{1 - (1 + 0.005)^{-60}}$$

$$PMT = \frac{100}{1 - 0.7408}$$

$$PMT = \frac{100}{0.2592}$$

$$PMT = 385.54$$

Amortization in Action

Initially, most of your $385.54 payment is allocated toward paying interest. For example:

Payment 1: You owe $20,000. At 6% annual interest (0.5% per month), the interest on $20,000 is $100. The remaining $285.54 reduces your principal to $19,714.46 ($20,000 - $285.54).
Payment 2: Now that you owe $19,714.46, your interest for the month is slightly lower: $98.57 (0.5% of $19,714.46). Your payment remains the same, but more of it - $ 98.57 ($385.54 - $ 286.97) - is applied toward reducing the principal.

Over time, this pattern continues:

The interest portion of your payment gets smaller.
The principal portion gets larger.

By the end of the loan, almost all of your payment goes toward reducing the principal. This shift happens because interest is always calculated on the remaining balance, and as the balance shrinks, so does the interest.

Why Amortization Matters

Amortization lets you:

- Break big loans into manageable pieces - whether it's buying a car or owning a home.
- Understand where your payments go - how much you're paying toward interest versus principal.
- Plan for the future by predicting your payments and budgeting for long-term goals.

Digging Deeper: Amortization Schedules and Tools

You don't have to calculate amortization payments manually. Online tools and spreadsheets can do the work for you:

Amortization Calculators: Enter the loan amount, interest rate, and term to see monthly payments and breakdowns.

Excel Formula: Use `=PMT(rate, nper, pv)`

Example: `=PMT(6%/12, 60, -20000)` → Returns $385.54

Amortization schedules clearly show how each payment is divided between interest and principal. Use them to understand how loans work and make smarter borrowing decisions.

Summary

Amortization transforms large debts into manageable pieces. By breaking a loan into equal payments over time, amortization makes borrowing predictable but not always transparent. This section introduces the idea of "structured repayment," where each payment covers interest owed and reduces the remaining balance.

- Amortization is a loan repayment structure characterized by fixed payments and a gradual shift in the interest/principal components.
- Early payments are mostly interest; later ones are mostly principal.
- Common examples include mortgages, auto loans, and installment plans.

Amortization reveals how even steady payments hide changing economics. Understanding this structure helps you recognize how loans work and what makes one loan costlier than another.

Exercises

1. Have you ever paid off a loan or financed a large purchase? How did the amount you paid compare to what you borrowed?
2. Why do some people feel like they're "never making progress" early in a long-term loan?
3. You borrow $10,000 at 6 percent interest, to be repaid monthly over a five-year period. What portion of your first payment goes to interest vs. principal?

4.8: Putting It All Together

We've explored how money grows with time (through lump sums, annuities, and compounding) and how loans shrink with time (through amortization). At the heart of it all is the idea that time and money are deeply connected - whether you're saving, investing, or borrowing.

But understanding these tools is only half the journey. The real challenge—and opportunity—comes when you use them to plan for your future. Financial plans, such as budgets, enable you to take control of your money, balance what you need today with what you want tomorrow, and make more informed decisions over time.

So, how do you build a plan that works for you? That's where we're headed next.

CHAPTER OVERVIEW

5: Financial Plans - Budgets

This chapter demonstrates how organized financial data can be used to create a plan, monitor progress, and adjust personal financial goals.

5.1: Introduction to Budgets
5.2: The Budget Process
5.3: Creating the Comprehensive Budget
5.4: The Cash Budget and Other Specialized Budgets
5.5: Budget Variances
5.6: Budgets, Financial Statements, and Financial Decisions

5.1: Introduction to Budgets

Seeing the value of reaching a goal is often much easier than finding a way to achieve it. People frequently resolve to improve themselves or their lives in some way. But while they are not lacking sincerity, determination, or effort, they nevertheless fall short for want of a plan, a map, a picture of why and how to get from here to there.

Pro forma financial statements provide a look at the potential results of financial decisions. They can also be used as a tool to plan for specific results. When projected in the form of a **budget**, figures become not only an estimated result but also an actual strategy or plan, a map illustrating a path to achieve a goal. Later, when you compare actual results to the original plan, you can see how shortfalls or successes can point to future strategies.

Budgets are typically created with a specific goal in mind: to reduce living expenses, increase savings, or save for a specific purpose, such as education or retirement. While the need to do such things may be brought into sharper focus by the financial statements, the budget provides an actual plan for doing so. It is more a document of action than of reflection.

As an action statement, a budget is meant to be dynamic, a reconciliation of “facts on the ground” and “wishes.” While financial statements are summaries of historic reality, that is, of all that has already happened and is “sunk,” budgets reflect the current realities that define the next choices. A budget should never be merely followed but should constantly be revised to reflect new information.

5.2: The Budget Process

Learning Objectives

1. Trace the budget process.
2. Discuss the relationships between goals and behaviors.
3. Demonstrate the importance of conservatism in the budget process.
4. Show the importance of timing in the budget process.

The budget process is an infinite loop similar to the larger financial planning process. It involves

- defining goals and gathering data
- forming expectations and reconciling goals and data
- creating the budget
- monitoring actual outcomes and analyzing variances
- adjusting budget, expectations, or goals
- redefining goals

A review of your financial statements or your current financial condition (as well as your own ideas about how you are and could be living) should indicate immediate and longer-term goals. It may also highlight new options. For example, an immediate goal may be to lower housing expenses. In the short term, you could look for an apartment with lower rent; however, in the long run, purchasing a home may be more advantageous. This long-term goal may suggest the need to establish a savings plan for a down payment.

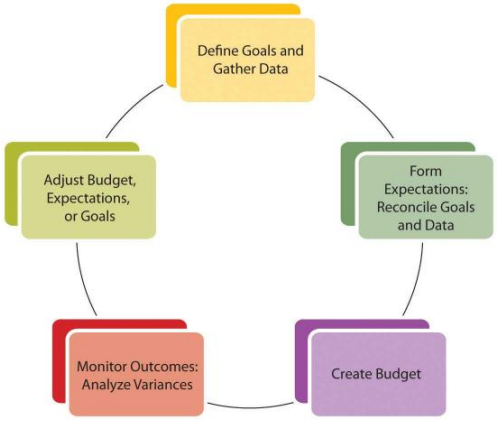

Figure 5.2.1 : The Budget Process

The process of creating a budget can be instructive. Creating a budget involves projecting realistic behavior. Your assumptions may come from your actual past behavior based on accurate records that you have gathered. If you have been using personal finance software, it has been keeping those records for you; if not, a thorough review of your bank account and investment statements will reveal that information. Financial statements are useful summaries of the information you need to create a budget.

After formulating realistic expectations based on past behavior and current circumstances, you still must reconcile your future behavior with your original expectations. For example, you may recognize that greater sacrifices need to be made, that you must change your behavior, or even that your goals are unattainable and should be more realistic, perhaps based on less desirable choices. On the other hand, this can be a process of happy discovery: Goals may be closer or require less sacrifice than you may have thought.

Whether it results in sobering dismay or ambitious joy, the budget process is one of reconciling your financial realities to your financial dreams. How you finance your life determines how you can live your life. Budgeting is a process of mapping out a life strategy. You may find it difficult to separate the emotional and financial aspects of your goals, but the more successfully you can do so, the more likely you will reach your goals.

A budget is a projection of how things should work out, but there is always some uncertainty. If the actual results are better than expected, and incomes are higher or expenses lower, expectations can be adjusted upward as a welcome accommodation to good

fortune. On the other hand, if actual results are worse than expected, if incomes are lower or expenses are higher, future budgets—and current living choices—may need to be adjusted to accommodate that situation. Those new choices are less than preferred, or you would have chosen them in your original plan.

To avoid unwelcome surprises, it is advisable to be **conservative** in your expectations, thereby maximizing the likelihood that your actual results will exceed expectations. Thus, when estimating, you should always underestimate the income items and potential gains, and overestimate the expense items and potential losses.

You will also need to determine a time period and frequency for your budget process, such as annually, monthly, or weekly. The timing will depend on the level of financial activity you have and the degree of discipline or guidance you want your budget to provide. You should assess your progress at least once a year. In general, you want to keep a manageable amount of data for any one period, so the more financial activity you have, the shorter your budget period should be.

Summary

- A budget is a process that mirrors the financial planning process.
- The process of creating a budget can suggest goals, behaviors, and limitations.
- For the budget to succeed, goals and behaviors must be reconciled.
- Budgets should be prepared conservatively, so
  - Overestimate costs.
  - Underestimate earnings.
- The appropriate time period is
  - Short enough to limit the amount of information.
  - Long enough to capture meaningful information.

Exercises

1. In your financial planning journal, begin your budgeting process by reviewing your short-term and long-term goals. What will it take to achieve those goals? What limitations and opportunities do you have for meeting them? Then gather your financial data and choose a time period and frequency for checking your progress.
2. Watch Building a Better Financial Future: Developing A Realistic Budget (www.youtube.com/watch?v=voNDemdJTi4) (2:04 minutes). Why is a budget so important in personal financial planning? What kinds of problems can you resolve by manipulating your personal budget? What types of goals can you attain through changes to your personal budget?
3. Watch and reflect on Why we make bad financial choices -- even when we know better (www.youtube.com/watch?v=caGlzR9F2zI) (3:36 minutes). Add notes in your personal finance journal reflecting on what you heard and learned.

5.3: Creating the Comprehensive Budget

Learning Objectives

1. Describe the components of the comprehensive budget and their purposes.
2. Describe the components of an operating budget.
3. Discuss the sources of recurring income and expenses.
4. Identify the factors in the operating budgeting process.
5. Identify the factors in the capital budgeting process.

Gathering data and creating a budget, with some goals already in mind, are the initial steps in the process. Understanding the format or shape of the budget will help guide you to the kind of information you need. A **comprehensive budget**, that is, a budget covering all aspects of financial life, will include projections of recurring incomes and expenses, as well as nonrecurring expenditures. (Nonrecurring income or "windfalls" should not be counted on or "budgeted for," conservatively.) Recurring incomes would be earnings from wages, interest, or dividends. Recurring expenditures may include living expenses, loan repayments, and regular savings or investment deposits. Nonrecurring expenditures may include capital improvements, such as a new roof for your house, or the purchase of durable items, like a refrigerator or a car. These are purchases that would not be made on a regular basis. A comprehensive budget diagram is shown in Figure 5.3.1 .

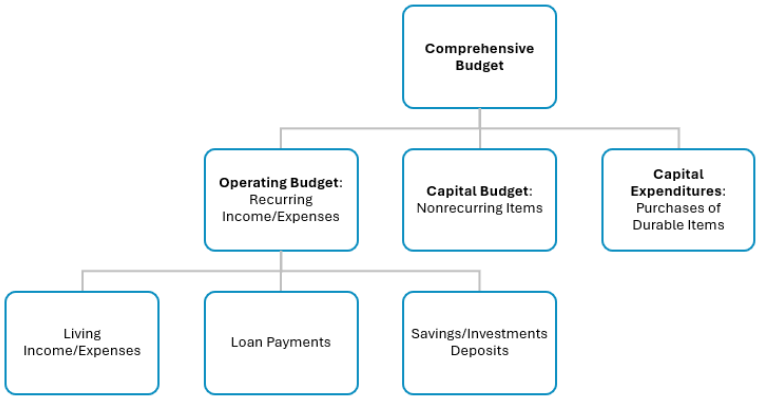

Figure 5.3.1 : Comprehensive Budget Diagram

Another distinction in recognizing recurring and nonrecurring items is the time frame for each. Recurring items require repeated attention and are therefore considered in the short term, whereas items on the capital budget may allow for long-term planning because they occur less frequently. The different time horizons for planning recurring and nonrecurring items may allow for various strategies to achieve those distinct goals.

A comprehensive budget is a combination of an **operating budget, which** focuses on short-term goals involving recurring items, and a **capital budget,** which addresses long-term goals involving nonrecurring items.

Operating Budget: Recurring Incomes and Expenditures

Recurring incomes and expenditures are usually the easiest to determine and project, as they occur consistently and have an immediate impact on your everyday life. An income statement shows income and expenses; a cash flow statement shows actual cash inflows and outflows. Recurring incomes and expenditures are planned in the context of short-term lifestyle goals or preferences.

Consider a time period that is large enough to capture relevant data. Some incomes and expenditures recur reliably but only periodically or seasonally. For example, you may pay the premium on your auto insurance policy twice per year. It is a recurring expense, but it only occurs in two months of the year, so you would need to examine expenditures over a sufficient number of months to notice it. Additionally, your heating or cooling expenses may fluctuate seasonally, resulting in higher utility expenses in some months than in others.

The time period you choose for a budget should be long enough to categorize intermittent items as recurring and nonrecurring items as unusual, yet short enough to follow and manage choices within the period. For personal budgets, a month is the most

common budget period to use, since most living expenses are paid at least monthly. However, it is best to use at least one full year's worth of data to obtain a reasonable monthly average and to identify seasonal and periodic trends as they occur.

Some items may recur, but not reliably. The frequency, amount, or both may be uncertain. Taking a conservative approach, you should include the maximum possible amount of uncertain expenses in your budget. If income occurs regularly but the amount is uncertain, conservatively include the minimum amount that is expected. If income happens irregularly, it may be better to leave it out of your budget - and your plans - since you can't "count" on it.

Consider the following example: Mark works as a school counselor, tutors on the side, does house painting in the summer, and buys and sells sports memorabilia online. In 2016, he bought an older house with a $200,000 fixed-rate mortgage at 5.75 percent. Each year, he deposits $1,000 into his retirement account and makes home improvements. He used a car loan to buy his car. Whatever cash is left after he has paid his bills is saved in a money market account that earns 3 percent interest. At the end of 2023, Mark is attempting to draft a budget for 2024. Since he bought the house, he has been keeping pretty good financial records, as shown in Table 5.3.2 .

Mark has five sources of income - some more constant, some more reliable, and some more seasonal. His counseling job provides a steady, year-round paycheck. House painting is a seasonal, although fairly reliable, source of income; however, in 2022, Mark fell from a ladder and was unable to paint for two months. Tutoring is a seasonal source of income, and since the school hired an additional counselor in 2021, his income has decreased. Memorabilia trading is a year-round but unpredictable source of income. In 2023, he made some very lucrative trades, but almost none in 2021. Interest income depends on the balance in the money market account. He would include his counseling, painting, and interest incomes in his budget, but should be conservative about including his tutoring or trading incomes.

Mark's expenses are reliable and easily predictable, with a few exceptions. His 2022 accident increased his medical expenses for that year. Both gas costs for the car and heating expenses vary with the weather and the highly volatile price of oil; in 2021, those expenses were unusually high. Property tax increased in 2023, but is unlikely to do so again for several years.

Table 5.3.2 : Mark's Financial Data, 2019 - 2023

	2019	2020 Actual	2021 Actual	2022 Actual	2023 Actual
Incomes					
Wages		$ 32,000	$ 33,500	$ 35,000	$ 36,500
Tutoring		$ 3,000	$ 400	$ 5,000	$ 500
Memorabilia Sales		$ 2,500	$ 950	$ 2,650	$ 5,300
House Painting		$ 10,000	$ 11,000	$ 4,500	$ 10,250
Interest Income		$ 180	$ 192	$ 173	$ 146
Total Income		$ 47,680	$ 49,642	$ 47,323	$ 52,696
Payroll/Income Taxes		$ 8,000	$ 8,375	$ 8,750	$ 9,125
Disposable Income		$ 39,680	$ 41,267	$ 38,573	$ 43,571
Living Expenses					
Groceries		$ 3,120	$ 3,120	$ 3,120	$ 3,120
Car-Fuel		$ 1,688	$ 1,875	$ 2,813	$ 1,500
Car-Services, etc.		$ 350	$ 350	$ 320	$ 350
Car-Insurance		$ 800	$ 800	$ 800	$ 800
Electricity		$ 780	$ 780	$ 780	$ 780
Phone/Internet		$ 1,500	$ 1,188	$ 1,188	$ 1,068
Heat		$ 1,240	$ 1,200	$ 1,990	$ 1,125

	2019	2020 Actual	2021 Actual	2022 Actual	2023 Actual
Health Insurance		$ 320	$ 335	$ 350	$ 365
Medical		$ 50	$ 50	$ 1,200	$ 50
Dental		$ 200	$ 200	$ 200	$ 200
Travel/Entertainment		$ 3,000	$ 3,000	$ 3,000	$ 3,000
Car Loan Payment		$ 3,600	$ 5,400	$ 5,400	$ 5,400
Mortgage Interest		$ 11,433	$ 11,281	$ 11,120	$ 10,950
Property Tax		$ 3,450	$ 3,450	$ 3,450	$ 4,350
Total Living Expenses		$ 31,530	$ 33,029	$ 35,761	$ 33,058
Income after Living Expenses		$ 8,150	$ 8,238	$ 2,813	$ 10,514
Interest Expense					
Capital Expenditures/ Investment					
Mortgage Principal		$ 2,573	$ 2,725	$ 2,886	$ 3,056
Free Cash Flow		$ 5,577	$ 5,513	-$ 73	$ 7,458
Retirement Account Deposit		$ 1,000	$ 1,000	$ 1,000	$ 1,000
Home Improvement		$ 4,357	$ 5,327	$ 0	$ 4,146
Savings Deposit (withdrawal)		$ 220	-$ 814	-$ 1,073	$ 2,312
Draw on (pay off) Line of Credit					
Net Cash Flow		$ 0	$ 0	$ 0	$ 0
Line of Credit					
Money Market Account Balance	$ 6,000	$ 6,400	$ 5,778	$ 4,878	$ 7,336

Using New Information and "Micro" Factors

Along with your known financial history, you should also include any new information that may change your expectations. As with any forecast, the more information you can include in your projections, the more accurate the forecast will be.

Mark knows that the hiring of a new counselor has significantly cut into his tutoring income and will likely continue to do so. He will get a modest raise in his wages, but has been notified that the co-pays and deductibles on his medical and dental insurance will increase in 2024. He has just traded in his car and gotten a new loan for a used car.

The personal or micro characteristics of your situation influence your expectations, especially if they are expected to change. Personal factors such as family structure, health, career choice, and age significantly influence financial choices and goals. If any of those factors is expected to change, your financial situation will probably change as well, and that expectation should be included in your budget projections.

For example, if you expect to increase or decrease the size of your family or household, that will affect your consumption of goods and services. If you anticipate a change in job or career, it will likely affect your income from wages. A change in health may result in working more or less and thus changing income from wages. There are many ways that personal circumstances can change, and these changes can alter your financial expectations, choices, and goals. All these projected changes need to be included in the budget process.

Using Economics and "Macro" Factors

Macro factors affecting your budget stem from the broader economic context, so understanding how incomes and expenses are generated is useful in forming accurate estimates. Incomes are created when labor or capital (liquidity or assets) is sold. The amount of income created depends on the quantity sold and the price.

The price of labor depends on the relative balance of supply and demand for labor, as reflected in unemployment rates. The price of liquidity depends on the relative supply and demand for capital reflected in interest rates. In turn, unemployment rates and interest rates are influenced by the complex and dynamic economy.

The economy tends to behave cyclically. If the economy is in a period of contraction or recession, demand for labor is lower, competition among workers is higher, and wages are unlikely to rise. As unemployment rises, especially if you are working in an industry that is cyclically contracting with the economy, wages may become unreliable or increasingly risky if there is a risk of losing your job. Interest rates are generally more volatile and difficult to predict, but they tend to fall during periods of contraction and rise during periods of expansion. A budget period is usually short, so economic factors will not vary widely enough to affect projections over that brief period. Still, those economic factors should inform your estimates of potential income.

Expenses are incurred when a quantity of goods or services is consumed at a specific price. That price depends on the relative supply and demand for those goods and services, as well as the broader context of price levels in the economy. Inflation decreases the value of our currency, thereby reducing the purchasing power of goods and services. Again, as a rule, the budget period should be short enough so that changes in purchasing power do not significantly affect the budget; still, these changes should not be ignored. Price levels are much quicker to change than wage levels, so it is quite possible to have a rise in prices before an increase in wages, which decreases the real purchasing power of your paycheck.

If you have a variable rate loan - that is, a loan for which the interest rate may be adjusted periodically - you are susceptible to interest rate volatility. You should be aware of that particular macro factor when creating your budget.

Macroeconomic factors are challenging to predict, as they reflect complex scenarios; however, news about current and expected economic conditions is readily available in the media every day. A good financial planner will also track the economic indicators and forecasts. You will have a fairly concrete idea of where the economy is in its cycle and how that affects you simply by seeing how your paycheck covers your living expenses (e.g., filling up your car with gas or shopping for groceries). Figure 5.3.3 shows the relationship between personal history, microeconomic factors, and macroeconomic factors.

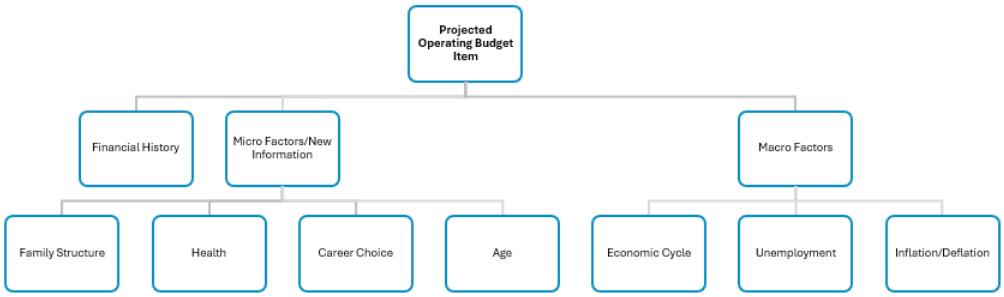

Figure 5.3.3 : Factors for Determining a Projected Operating Budget Item

Using his history, current information, and understanding of current and expected macroeconomic factors, Mark has compiled the budget shown in Table 5.3.4 .

To project his income, Mark relied on his most recent information to estimate his wages and tutoring income. He used the minimum income from the past four years for memorabilia sales, which is conservative and reasonable given its volatility. His painting income is less volatile, so his estimate is an average, excluding the unusual year of his accident. Interest income is based on his current money market account balance, which is adjusted for an expected drop in interest rates.

Mark expects his expenses to remain the same as they were in 2019, since his costs and consumption are not expected to change. However, he has adjusted his medical and dental insurance and his car loan payments based on his new knowledge (Table 5.3.4).

The price of gas and heating oil has been extraordinarily volatile during this period (2019-2023), affecting Mark's gas and heating expenses. Therefore, he bases his estimates on his expected consumption and the current price. He knows he drives an average of about 15,000 miles per year and that his car gets about 20 miles per gallon. He estimates his gas expense for 2024 by guessing that since oil price levels are about where they were in 2021, gas will cost, on average, what it did then, which was $2.50 per gallon. He will buy, on average, 750 gallons per year (15,000 miles ÷ 20 mpg), so his total expense will be $1,875. Mark also knows that he uses 500 gallons of heating oil each year. Estimating heating oil prices at 2021 levels, his cost will be about the same as it was then, or $1,200.

Mark knows that the more knowledge and information he can bring to bear, the more accurate and useful his estimates are likely to be.

Table 5.3.4 : Mark's 2024 Budget

	2019	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Budget
Incomes						
Wages		$ 32,000	$ 33,500	$ 35,000	$ 36,500	$ 38,000
Tutoring		$ 3,000	$ 400	$ 5,000	$ 500	$ 0
Memorabilia Sales		$ 2,500	$ 950	$ 2,650	$ 5,300	$ 950
House Painting		$ 10,000	$ 11,000	$ 4,500	$ 10,250	$ 10,417
Interest Income		$ 180	$ 192	$ 173	$ 146	$ 49
Total Income		$ 47,680	$ 49,642	$ 47,323	$ 52,696	$ 49,416
Payroll/Income Taxes		$ 8,000	$ 8,375	$ 8,750	$ 9,125	$ 9,500
Disposable Income		$ 39,680	$ 41,267	$ 38,573	$ 43,571	$ 39,916
Living Expenses						
Groceries		$ 3,120	$ 3,120	$ 3,120	$ 3,120	$ 3,120
Car-Fuel		$ 1,688	$ 1,875	$ 2,813	$ 1,500	$ 1,875
Car-Services, etc.		$ 350	$ 350	$ 320	$ 350	$ 350
Car-Insurance		$ 800	$ 800	$ 800	$ 800	$ 800
Electricity		$ 780	$ 780	$ 780	$ 780	$ 780
Phone/Internet		$ 1,500	$ 1,188	$ 1,188	$ 1,068	$ 1,068
Heat		$ 1,240	$ 1,200	$ 1,990	$ 1,125	$ 1,200
Health Insurance		$ 320	$ 335	$ 350	$ 365	$ 760
Medical		$ 50	$ 50	$ 1,200	$ 50	$ 50
Dental		$ 200	$ 200	$ 200	$ 200	$ 500
Travel/Entertainment		$ 3,000	$ 3,000	$ 3,000	$ 3,000	$ 3,000
Car Loan Payment		$ 3,600	$ 5,400	$ 5,400	$ 5,400	$ 5,988

	2019	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Budget
Mortgage Interest		$ 11,433	$ 11,281	$ 11,120	$ 10,950	$ 10,769
Property Tax		$ 3,450	$ 3,450	$ 3,450	$ 4,350	$ 4,350
Total Living Expenses		$ 31,530	$ 33,029	$ 35,761	$ 33,058	$ 34,610
Income after Living Expenses		$ 8,150	$ 8,238	$ 2,813	$ 10,514	$ 5,305
Interest Expense						$ 321
Capital Expenditures/Investment						
Mortgage Principal		$ 2,573	$ 2,725	$ 2,886	$ 3,056	$ 3,226
Free Cash Flow		$ 5,577	$ 5,513	-$ 73	$ 7,458	$ 1,748
Retirement Account Deposit		$ 1,000	$ 1,000	$ 1,000	$ 1,000	$ 1,000
Home Improvement		$ 4,357	$ 5,327	$ 0	$ 4,146	$ 15,000
Savings Deposit (withdrawal)		$ 220	-$ 814	-$ 1,073	$ 2,312	-$ 7,385
Draw on (pay off) Line of Credit						$ 6,870
Net Cash Flow		$ 0	$ 0	$ 0	$ 0	$ 3
Line of Credit						$ 6,870
Money Market Account Balance	$ 6,000	$ 6,400	$ 5,778	$ 4,878	$ 7,336	$ 0

Capital Budget: Capital Expenditures and Investments

The income, or **free cash flow**, that remains after paying living expenses and debt obligations is cash available for capital expenditures or investment. Capital expenditures are usually part of a long-term plan for building an asset base. Investment may also be part of a longer-term plan to build an asset base or to achieve a specific goal, such as financing education or retirement.

Long-term strategies are based on expected changes to the micro factors that shape goals. For example, you want to save for retirement because you anticipate aging and not being as willing or able to sell labor. Expanding or shrinking the family structure may create new savings goals or a change in housing needs, indicating a shift in the asset base (e.g., buying or selling a house).

Some changes will eliminate a specific goal. A child finishing college, for example, ends the need for education savings. Some changes will emphasize the necessity of a goal, such as a decline in health that underscores the need to save for retirement. As personal factors change, you should reassess your longer-term goals and the capital expenditures associated with those goals, because long-term goals and thus capital expenditures may also change in response.

While many personal factors are relatively predictable over the long term (e.g., you will get older, not younger), the macroeconomic factors that will occur simultaneously are much harder to predict. Will the economy be expanding or contracting

when you retire? Will there be inflation or deflation? The further (in time) you are from your goals, the harder it is to predict those factors and the less relevant they are to your budgeting concerns. As you approach your goals, macro factors become increasingly influential in assessing your progress toward them. This was discussed in detail in Chapter 4.

Since long-term strategies unfold over time, you should utilize the relationship between time and value to calculate capital expenditures and track progress toward long-term goals. Long-term goals are often best achieved through a progression of steady and even steps; for example, a savings goal is typically reached by a series of regular and consistent deposits. You can also determine if your goal is too modest or too ambitious and should be adjusted in terms of the time required to reach it or the rate at which you achieve it.

Capital expenditures may be a one-time investment, like a new roof. A capital expenditure may also be a step toward a long-term goal, like an annual savings deposit. That goal should be assessed with each budget, and that "step" or capital expenditure should be reviewed. Figure 5.3.5 shows the relationship of factors used to determine the capital budget.

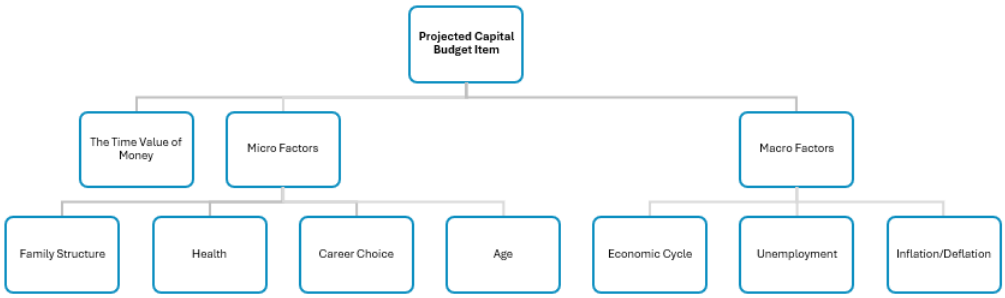

Figure 5.3.5 : Factors for Determining the Projected Capital Budget Item

Mark's 2024 budget (shown in Table 5.3.4) projects a decline in income and disposable income, along with an increase in living expenses, resulting in less free cash flow for capital expenditures or investments. He knows that his house needs a new roof (estimated cost: $15,000) and was hoping to have it done in 2024. However, that capital expenditure would create a negative net cash flow, even if he also uses the savings from his money market account. Mark's budget shows that both his short-term lifestyle preferences (projected income and expenses) and progress toward his longer-term goals (property improvement and savings) cannot be achieved without some changes and choices. What should those changes and choices be?

Summary

- A comprehensive budget consists of an operating budget and a capital budget
- The operating budget accounts for recurring incomes and expenses
- Recurring incomes result from selling labor and/or liquidity
- Recurring expenses result from the consumption of goods and/or services
- Recurring incomes and expenses
  - satisfy short-term, lifestyle goals
  - create free cash flow for capital expenditures
- The capital budget accounts for capital expenditures or nonrecurring items
- Capital expenditures are usually part of a longer-term plan or goal
- Projecting recurring incomes and expenses involves using
  - financial history
  - new information and microeconomic factors
  - macroeconomic factors
- Different methods may be used to project different incomes and expenses depending on the probability, volatility, and predictability of quantity and price
- Projecting capital expenditures involves using the following:
  - New information and microeconomic factors
  - Macroeconomic factors are harder to predict for a longer period, and are therefore less relevant
  - The relationships described by the time value of money

Exercises

1. Using Mark's budget sheet as a guide, adapt the budget categories and amounts to reflect your personal financial realities and projections. Develop an operating budget and a capital budget, distinguishing recurring incomes and expenses from nonrecurring capital expenditures. On what basis will you make projections about your future income and expenses?
2. How does your budget sheet relate to your income statement, your cash flow statement, and your balance sheet? How will you use this history to develop a budget to reach your short-term and long-term goals?

5.4: The Cash Budget and Other Specialized Budgets

Learning Objectives

1. Discuss the use of a cash budget as a tool for effective cash management.
2. Explain the value of the cash budget in clarifying risks and opportunities.
3. Explain the purpose of a specialized budget, including a tax budget.
4. Demonstrate the importance of including specialized budgets in the comprehensive budget.

The Cash Budget

When cash flows are not periodic, meaning they are influenced by seasonality or a frequency different from the budgetary period, a closer examination of cash flow management can be beneficial. Although cash flows may be sufficient to cover expenses for the entire year, there may still be timing differences. For example, cash flows from income may be less frequent than cash flows for expenses. Cash flows may be seasonal, whereas expenses tend to be more regular. Most expenses must be paid monthly, and if some income cash flows occur less frequently or only seasonally, there is a risk of running out of cash in a particular month. For cash flows, timing is everything.

A good management tool is the cash budget, which is a detailed breakdown of budget items by month. Irregular cash flows can be allocated to specific months when they are expected to occur, allowing you to see the effects of cash flow timing more clearly. Mark's cash budget for 2024 is in the spreadsheet shown in Table 5.4.1 .

Table 5.4.1 : Mark's Cash Budget

	2024 January	2024 February	2024 March	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Incomes												
Wages	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167
Tutoring	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Memorabilia Sales	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79
House Painting						$ 3,472	$ 3,472	$ 3,472				
Interest Income	$ 4	$ 25	$ 36	$ 45	$ 57	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Total Income	$ 4,118	$ 3,271	$ 3,281	$ 3,291	$ 3,303	$ 6,718	$ 6,718	$ 6,718	$ 3,246	$ 3,246	$ 3,246	$ 3,246
Payroll/Income Taxes	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792	$ 792
Disposable Income	$ 4,910	$ 4,062	$ 4,073	$ 4,083	$ 4,094	$ 7,510	$ 7,510	$ 7,510	$ 4,038	$ 4,038	$ 4,038	$ 4,038
Living Expenses												
Groceries	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260	$ 260
Car-Fuel	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156	$ 156

	2024 January	2024 February	2024 March	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Car-Services, etc.	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29	$ 29
Car-Insurance		-$ 400						-$ 400				
Electricity	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65	$ 65
Phone/Cable/Internet	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89	$ 89
Heat	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100	$ 100
Health Insurance	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63	$ 63
Medical	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4	$ 4
Dental	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42	$ 42
Travel/Entertainment	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250	$ 250
Car Loan Payment	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499	$ 499
Mortgage Interest	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897	$ 897
Property Tax										-$ 4,350		
Total Living Expenses	$ 2,455	$ 2,055	$ 2,455	$ 2,455	$ 2,455	$ 2,455	$ 2,455	$ 2,055	$ 2,455	-$ 1,895	$ 2,455	$ 2,455
Income after Living Expenses	$ 7,365	$ 6,117	$ 6,528	$ 6,538	$ 6,549	$ 9,965	$ 9,965	$ 9,565	$ 6,493	$ 2,143	$ 6,493	$ 6,493
Interest Expense						-$ 49	-$ 27	-$ 7	-$ 9	-$ 40	-$ 43	-$ 46
Capital Expenditures/Investment												
Mortgage Principal	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270	$ 270

	2024 January	2024 February	2024 March	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Free Cash Flow	$ 7,634	$ 6,387	$ 5,798	$ 6,808	$ 6,819	$ 10,186	$ 10,208	$ 9,827	$ 6,754	$ 2,372	$ 6,719	$ 6,716
IRA Deposit			-$ 1,000									
Retirement Account Deposit					-$ 15,000							
Home Improvement	$ 7,634	$ 6,387	$ 5,798	$ 6,808	-$ 34,126							
Savings Deposit (withdrawal)					$ 10,525	-$ 3,250	-$ 3,275	-$ 2,890	$ 180	$ 4,765	$ 415	$ 417
Draw on (pay off) Line of Credit												
Net Cash Flow	$ 0	$ 0	$ 0	$ 0	$ 36,470	$ 6,936	$ 6,933	$ 6,937	$ 6,934	$ 7,137	$ 7,134	$ 7,133
Line of Credit			$ 27,216		$ 10,525	$ 7,275	$ 4,000	$ 1,110	$ 1,290	$ 6,055	$ 6,470	$ 6,887
Money Market Account Balance	$ 14,971	$ 21,383		$ 34,069	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0

Mark's original annual budget (Table 5.4.1) indicates that although his income is sufficient to cover his living expenses, it does not generate enough cash to support his capital expenditures, specifically, to repair the roof. His cash flow would fall short by about $6,870, even after he uses the cash from his savings (the money market account). If he must make the capital expenditure this year, he can finance it with a **line of credit**—a loan where money can be borrowed as needed, up to a limit, and repaid as desired, with interest paid only on the outstanding balance. Using the line of credit, Mark would create an extra $321 of interest expense for the year.

The alternative cash budget (Table 5.4.2) shows a more detailed and slightly different story. Because of Mark's seasonal income, if he has the roof fixed in May, he will need to borrow $10,525 in May (before he has income from painting). Then he can pay that balance down until October, when he will need to extend it again to pay his property tax. By the end of the year, his outstanding debt will be slightly more than initially shown, with an ending balance of $6,887. However, his total interest expense will be slightly lower - only $221 - as the loan balance (and therefore the interest expense) will be lower in some of the months he has the loan.

The cash (monthly) budget shows a different story than the annual budget because of the seasonal nature of Mark's income. Since he plans to make capital expenditures before earning income from painting, he has to borrow more—and assume more risk—than indicated initially.

The cash budget may reveal risks, but it also highlights remedies that may not be immediately apparent. In Mark's case, it is clear that the capital expenditure cannot be financed without some external source of capital, most likely a line of credit. He would have to pay interest on that loan, creating an additional expense. That expense would be proportional to the amount borrowed and the duration for which it is borrowed. In his original plan, the capital expenditure was scheduled for May, and Mark would have had to borrow approximately $10,525, paying interest for the next seven months of the year. However, delaying the capital expenditure until October would cost him less, because he would have to borrow less and would be paying interest for fewer months. An alternative cash budget illustrating this scenario is shown in Table 5.4.2 .

Table 5.4.2 : Mark's Alternative Cash Budget

	2024 January	2024 February	2024 March	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Incomes												
Wages	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167
Tutoring	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Memorabilia Sales	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79
House Painting						$ 3,472	$ 3,472	$ 3,472				
Interest Income	$ 12	$ 12	$ 10	$ 8	$ 8	$ 8	$ 13	$ 19	$ 24	$ 0	$ 0	$ 0
Total Income	$ 3,258	$ 3,257	$ 3,256	$ 3,254	$ 3,254	$ 6,726	$ 6,731	$ 6,737	$ 3,269	$ 3,246	$ 3,246	$ 3,246
Payroll/Income Taxes	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792
Disposable Income	$ 2,466	$ 2,466	$ 2,465	$ 2,462	$ 2,462	$ 5,934	$ 5,940	$ 5,945	$ 2,578	$ 2,454	$ 2,454	$ 2,454
Living Expenses												
Groceries	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260
Car-Fuel	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156
Car-Services, etc.	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29
Car-Insurance		-$ 400						-$ 400				
Electricity	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65
Phone/Cable/Internet	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89
Heat	-$ 200	-$ 200	-$ 200							-$ 200	-$ 200	-$ 200
Health Insurance	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63

	2024 January	2024 February	2024 March	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Medical	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4
Dental	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42
Travel/Entertainment	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250	-$ 250
Car Loan Payment	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499
Mortgage Interest	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897
Property Tax										-$ 4,350		
Total Living Expenses	-$ 2,555	-$ 2,955	-$ 2,555	-$ 2,355	-$ 2,355	-$ 2,355	-$ 2,355	-$ 2,755	-$ 2,355	-$ 6,905	-$ 2,555	-$ 2,555
Income after Living Expenses	$ 89	$ 489	$ 90	$ 107	$ 107	$ 3,579	$ 3,585	$ 3,190	$ 123	-$ 4,451	-$ 101	-$ 101
Interest Expense						$ 0	$ 0	$ 0	$ 0	-$ 38	-$ 41	-$ 44
Capital Expenditures/Investment												
Mortgage Principal	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270
Free Cash Flow	-$ 358	-$ 759	-$ 360	-$ 162	-$ 163	$ 3,309	$ 3,315	$ 2,920	-$ 147	-$ 4,759	-$ 412	-$ 414
IRA Deposit			-$ 1,000									
Retirement Account Deposit										-$ 15,000		
Home Improvement	-$ 358	-$ 759	-$ 1,360	-$ 162	-$ 163	$ 3,309	$ 3,315	$ 2,920	-$ 147	-$ 14,029		
Savings Deposit (withdrawal)										$ 5,730	$ 412	$ 415

	2024 January	2024 February	2024 March	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Draw on (pay off) Line of Credit												
Net Cash Flow	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 1
Line of Credit					$ 0	$ 0	$ 0	$ 0	$ 0	$ 5,730	$ 6,142	$ 6,557
Money Market Account Balance	$ 6,978	$ 6,230	$ 4,881	$ 4,726	$ 4,571	$ 7,886	$ 11,214	$ 14,153	$ 14,029	$ 0	$ 0	$ 0

Delaying the capital expenditure until October would also allow the money market account to build value, as Mark's seasonal income would be deposited during the summer, which would finance more of the capital expenditure. He could borrow less, ending the year about $6,557 short, and his interest expense would be only $123 because he has borrowed less and because he can wait until October to borrow, thus paying interest for only three months of the year.

Timing matters for cash flows not only because you need to get cash before you spend it, but also because time affects value. It is always better to have liquidity sooner and hang onto it longer. A cash budget provides a much more detailed look at these timing issues, and the risks and opportunities of cash management that you may otherwise have missed.

Other Specialized Budgets

A cash flow budget is a budget that projects a specific aspect of your finances, that is, the cash flows. Other types of **specialized budgets** focus on a specific financial aspect or goal. A specialized budget is ultimately included in the comprehensive budget, as it is a part of total financial activity. It typically focuses on a specific activity in greater detail, such as the impact of owning and maintaining a particular asset or pursuing a specific activity. You create a budget for that asset or that activity by segregating its income and expenses from your comprehensive budget. It is possible to make such a focused budget only if you can identify and separate its financial activity from the rest of your financial life. If so, you may want to track an activity separately that is directly related to a specific goal.

For example, suppose you decide to take up weekend backpacking as a recreational activity. You will try it for two years and then decide whether to continue. Aside from assessing the enjoyment it gives you, you also want to evaluate its impact on your finances. Typically, weekend backpacking requires specialized equipment and clothing, travel to a hiking trail access or campground, and perhaps lodging and meals: capital investment (in the equipment) and then recurring expenses. You may want to create a separate budget for your backpacking investment and expenses to assess the value of this new recreational activity.

One common type of specialized budget is a **tax budget**, which includes activities, such as incomes, expenses, gains, and losses, that have direct tax consequences. A tax budget can be useful in planning for or anticipating an event that will have significant tax consequences, such as income from self-employment; the sale of long-term or short-term assets such as a stock, business, or real estate; or a gift of significant wealth or the settling of an estate.

While it can be valuable to isolate and identify the effects of a specific activity or the progress toward a specific goal, that activity or that goal is ultimately just a part of your larger financial picture. Specialized budgets should remain an integral part of your comprehensive financial planning.

Summary

- The cash flow budget is an alternative format used as a cash management tool that provides
  - more detailed information about the timing and amounts of cash flows
  - a clearer view of risks and opportunities
- Specialized budgets focus on a specific asset or activity
- A tax budget is commonly used to track taxable activities
- Eventually, specialized budgets need to be included in the comprehensive budget to have a complete perspective

Exercises

1. When is a cash flow budget a useful alternative to a comprehensive budget?
2. Create a specialized budget and a tax budget from your comprehensive budget.

5.5: Budget Variances

Learning Objectives

1. Define and discuss budget variances.
2. Identify the importance of budget-monitoring activities.
3. Analyze budget variances to understand their causes, including possible changes in micro or macro factors.
4. Analyze budget variances to identify potential remedies and assess their feasibility.

A **budget variance** occurs when the actual results of your financial activity differ from your budgeted projections. Since your expectations were based on knowledge from your financial history, micro- and macroeconomic factors, and new information, any variance is likely due to either an inaccurate estimate or a change in one or more of those factors that was unexpected. If your estimate was inaccurate—perhaps you had overlooked or ignored a factor—knowing that can help you improve. If one or more of those factors have changed unexpectedly, then identifying the cause of the variance creates new information to help assess your situation. At the very least, variances will alert you to the need for adjustments to your budget and to the appropriate choices.

Once you have created a budget, your financial life continues. As actual data replace projections, you must monitor the budget compared to your actual activities so that you will notice any serious variances or deviations from the expected outcomes detailed in the budget. Your analysis and understanding of variances constitute new information for adjusting your current behavior, preparing the next budget, or perhaps realistically reassessing your behavior or original goals.

The sooner you notice a budget variance, the sooner you can analyze it and, if necessary, adjust for it. The sooner you correct the variance, the less it costs. For example, perhaps you have had a little trouble living within your means, so you have created a budget to help you do so. You have worked out a plan so that total expenses are equal to total income. In your original budget, you expected to incur a certain expense for gas, which you calculated based on your mileage and the current price of gas. You are following your budget and going along just fine. Suddenly, the price of gas goes way up, and so does this monthly expense. That means you'll have to

- spend less on other expenses to keep your total expenses within your budget
- lower your gas expense by driving less, and/or
- increase your income to accommodate this higher expense

In the short term, monitoring your gas expense alerts you to a need to change your financial behavior by driving less, spending less on other things, or earning more. In the long run, if you find this increased expense intolerable, you will make different choices to avoid it. Perhaps you would consider buying a more fuel-efficient or electric car, or adjust your lifestyle to require less driving. The number and feasibility of your choices will depend on your desire for that particular budget item. But if you hadn't been paying attention and had not been monitoring your budget against the real outcomes as they occurred, you would not have been aware that any change was needed. You would have found yourself with a surprising budget deficit.

It bears repeating that once you have identified a significant budget variance, you must analyze its cause so that you can address it effectively.

Income comes from the sale of labor (wages) or liquidity (interest or dividends). If income deviates from its projection, it is because

- a different quantity of labor or liquidity was sold at the expected price (e.g., you had fewer house painting contracts than usual but kept your rates the same)
- the expected quantity of labor or liquidity was sold at a different price (e.g., you had the usual number of contracts but earned less from them), or
- a different quantity of labor or liquidity was sold at a different price (e.g., you had fewer contracts and charged less to be more competitive)

Expenses result from consuming goods or services at a price. If an expense deviates from its projected outcome, it is because

- a different quantity was consumed at the expected price (e.g., you did not use as much gas)
- an expected quantity was consumed at a different price (e.g., you used as much gas, but the price of gas fell), or
- a different quantity was consumed at a different price (e.g., you used less gas and bought it for less)

Isolating the cause of a variance is useful because different causes will dictate different remedies or opportunities. For example, if your gas expense has increased, is it because you are driving more miles or because the price of gas has gone up? You can't control the price of gas, but you can control the miles you drive. Isolating the cause allows you to identify realistic choices. In this case, if the variance is too costly, you will need to address it by somehow driving fewer miles or arranging for less expensive transportation.

If your income falls, is it because your hourly wage has fallen or because you are working fewer hours? If your wage has fallen, you need to try to increase it either by negotiating with your employer or by seeking a new job at a higher wage. Your success will depend on the demand in the labor market and on your value as a labor supplier.

If you are working fewer hours, it may be because your employer is offering you less work or because you have chosen to work fewer hours. If the problem is with your employer, you may need to renegotiate your position or find a new one. However, suppose your employer is reducing labor demand due to decreased market demand. In that case, that may be attributed to an industry or economic cycle, which could impact your ability to make that change.

If it is your choice of hours that has caused the variance, perhaps that is due to personal factors, such as aging or the need for more care and attention for your dependents. Some personal factors can be resolved to allow you to work more, but others cannot be controlled. If you are able, you might simply choose to work more.

Identifying *why* you are deviating from your budget is crucial in determining remedies and choices. Putting those causes in the context of the micro- and macroeconomic factors that affect your situation will help identify feasible choices. Figure 5.5.1 shows these factors.

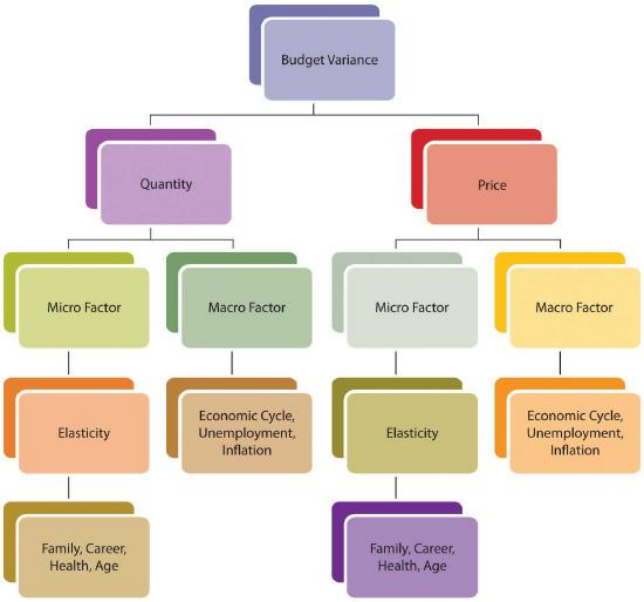

Figure 5.5.1 : The Factors of a Budget Variance

After three months, Mark decides to review his budget variances to ensure he's on track. His actual results for January - March 2024 are detailed in Table 5.5.2 .

Table 5.5.2 : Mark's Actual Income and Expenditures, January - March 2024

	2024 January Actual	2024 February Actual	2024 March Actual
Incomes			
Wages	$ 3,167	$ 3,167	$ 3,167
Tutoring	$ 400	$ 400	$ 400
Memorabilia Sales	$ 450	$ 450	$ 450
House Painting			
Interest Income	$ 31	$ 34	$ 34

	2024 January Actual	2024 February Actual	2024 March Actual
Total Income	$ 4,047	$ 3,960	$ 4,801
Payroll/Income Taxes	-$ 792	-$ 792	-$ 792
Disposable Income	$ 3,256	$ 3,169	$ 4,009
Living Expenses			
Groceries	-$ 260	-$ 260	-$ 260
Car-Fuel	-$ 156	-$ 156	-$ 156
Car-Services, etc.	-$ 29	-$ 29	-$ 29
Car-Insurance		-$ 400	
Electricity	-$ 65	-$ 65	-$ 65
Phone/Internet	-$ 89	-$ 89	-$ 89
Heat	-$ 200	-$ 200	-$ 200
Health Insurance	-$ 63	-$ 63	-$ 63
Medical	-$ 4	-$ 4	-$ 4
Dental	-$ 42	-$ 42	-$ 42
Travel/Entertainment	$ 0	$ 0	$ 0
Car Loan Payment	-$ 499	-$ 499	-$ 499
Mortgage Interest	-$ 897	-$ 897	-$ 897
Property Tax			
Total Living Expenses	-$ 2,305	-$ 2,305	-$ 2,305
Income after Living Expenses	$ 951	$ 464	$ 1,704
Interest Expense			
Capital Expenditures/Investment			
Mortgage Principal	-$ 270	-$ 270	-$ 270
Free Cash Flow	$ 681	$ 194	$ 1,435
Retirement Account Deposit			-$ 1,000
Home Improvement			
Savings Deposit (withdrawal)	$ 681	$ 194	$ 435
Draw on (pay off) Line of Credit			
Net Cash Flow	$ 0	$ 0	$ 0
Line of Credit			
Money Market Account Balance	$ 8,048	$ 8,275	$ 8,774

How will Mark analyze the budget variances he finds? In Mark's case, the income variances are positive. He has picked up a couple of tutoring clients who have committed to lessons through the end of the school year in June; this new information can be used to adjust income. His memorabilia business has performed well; although sales volume has not increased, the memorabilia market appears to be up, and prices are better than expected. The memorabilia business is cyclical; economic expansion and increases in disposable incomes enhance that market. However, given the volatility of prices in that market and the fact that there has been no increase in sales volume (Mark is not doing more business, just more lucrative business), Mark will not make any adjustments going forward. Interest rates have risen. Mark can use that macroeconomic news to adjust his expected interest income.

His expenses are as expected. The only variance is the result of Mark's decision to cut his travel and entertainment budget for this year (i.e., giving up his vacation) to offset the costs of the roof. He is planning that capital expenditure for October, which (as seen in the previous section) will actually make it cheaper to do. His adjusted cash budget is shown in Table 5.5.3 .

Table 5.5.3 : Mark's Adjusted Cash Budget for 2024

	2024 January Actual	2024 February Actual	2024 March Actual	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Incomes												
Wages	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167	$ 3,167
Tutoring	$ 400	$ 400	$ 400	$ 400	$ 400	$ 400	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33
Memorabilia Sales	$ 450	$ 360	$ 1,200	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79	$ 79
House Painting						$ 3,472	$ 3,472	$ 3,472				
Interest Income	$ 31	$ 34	$ 34	$ 15	$ 15	$ 16	$ 23	$ 29	$ 34	$ 0	$ 2	$ 2
Total Income	$ 4,047	$ 3,960	$ 4,801	$ 3,660	$ 3,661	$ 7,134	$ 6,741	$ 6,747	$ 3,280	$ 3,246	$ 3,248	$ 3,248
Payroll/Income Taxes	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792	-$ 792
Disposable Income	$ 3,256	$ 3,169	$ 4,009	$ 2,869	$ 2,870	$ 6,343	$ 5,949	$ 5,955	$ 2,488	$ 2,454	$ 2,456	$ 2,456
Living Expenses												
Groceries	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260	-$ 260
Car-Fuel	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156	-$ 156
Car-Services, etc.	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29	-$ 29
Car-Insurance		$ 400						-$ 400				
Electricity	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65	-$ 65
Phone/ Internet	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89	-$ 89
Heat	-$ 200	-$ 200	-$ 200							-$ 200	-$ 200	-$ 200

	2024 January Actual	2024 February Actual	2024 March Actual	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Health Insurance	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63	-$ 63
Medical	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4	-$ 4
Dental	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42	-$ 42
Travel/Entertainment	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Car Loan Payment	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499	-$ 499
Mortgage Interest	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897	-$ 897
Property Tax										-$ 4,350		
Total Living Expenses	-$ 2,305	-$ 2,705	-$ 2,305	-$ 2,105	-$ 2,105	-$ 2,105	-$ 2,105	-$ 2,505	-$ 2,105	-$ 6,655	-$ 2,305	-$ 2,305
Income after Living Expenses	$ 951	$ 464	$ 1,704	$ 764	$ 765	$ 4,238	$ 3,844	$ 3,450	$ 383	-$ 4,201	$ 151	$ 151
Interest Expense						$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Capital Expenditures/Investment												
Mortgage Principal	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270	-$ 270
Free Cash Flow	$ 681	$ 194	$ 1,435	$ 494	$ 495	$ 3,968	$ 3,575	$ 3,181	$ 114	-$ 4,471	-$ 119	-$ 119
IRA Deposit			-$ 1,000									
Home Improvement										-$ 15,000		
Savings Deposit (withdrawal)	$ 681	$ 194	$ 435	$ 494	$ 495	$ 3,968	$ 3,575	$ 3,181	$ 114	-$ 19,471	-$ 119	-$ 119

	2024 January Actual	2024 February Actual	2024 March Actual	2024 April	2024 May	2024 June	2024 July	2024 August	2024 September	2024 October	2024 November	2024 December
Draw on (pay off) Line of Credit										$ 0		
Net Cash Flow	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Line of Credit					$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0
Money Market Account Balance	$ 8,047	$ 8,275	$ 8,744	$ 9,253	$ 9,763	$ 13,747	$ 17,345	$ 20,554	$ 20,702	$ 1,231	$ 1,114	$ 998

With these adjustments, Mark can avoid new debt and still support the capital expenditure of the new roof. The increased income that Mark can expect, combined with his decreased expenses (if he can maintain his resolve), can finance the project and still leave him with a bit of savings in his money market account.

This situation bears continued monitoring, however. Some improvements are attributable to Mark's efforts (cutting back on entertainment expenses, giving up his vacation, getting new tutoring clients). However, Mark has also benefited from macroeconomic factors that have shifted to his advantage (rising interest rates and rising memorabilia prices), and those factors could change again to his disadvantage. He has tried to be conservative about making adjustments from now on. Still, he should continue to keep a close eye on the situation, especially as he approaches the relatively large capital expenditure in October.

Sometimes a variance cannot be "corrected" or is due to a micro- or macroeconomic factor beyond your control. In that case, you must adjust your expectations to reality. You may need to modify expected outcomes or even your ultimate goals.

Variances are also measures of the accuracy of your projections. What you learn from them can enhance your estimates and budgeting abilities. The unexpected can always occur, but the better you can anticipate what to expect, the more accurate and useful your budget process can be.

Summary

- Recognizing and analyzing variances between actual results and budget expectations
  - identifies potential problems
  - identifies potential remedies
- The more frequently the budget is monitored, generally
  - the sooner adjustments may be made
  - the less costly adjustments are to make
- Budget variances for incomes and expenses should be analyzed to see if they are caused by a difference in
  - actual quantity
  - actual price
  - both actual quantity and actual price
- Variances also need to be analyzed in the context of micro and macro factors that may change

Exercises

You are working fewer hours, which is reducing your income from employment and causing a budget variance. If the choice is yours, what are some microeconomic factors that could be causing this outcome? If the choice is your employer's, what are

some macroeconomic factors that could be sources of the variance? What are your choices for increasing income? Alternatively, what might you change in your financial behavior, budget, or goals to improve outcomes?

5.6: Budgets, Financial Statements, and Financial Decisions

Learning Objectives

1. Describe the budget process as a financial planning tool.
2. Discuss the relationships between financial statements and budgets.
3. Demonstrate the use of budgets in assessing choices.
4. Identify factors that affect the value of choices.

Whatever type of budget you create, the budget process is a key aspect of personal financial planning, a tool that helps you make better financial decisions. Other tools include financial statements, assessments of risk and the time value of money, macroeconomic indicators, and microeconomic or personal factors. The usefulness of these tools lies in their ability to provide a clearer view of “what is” and “what is possible.” It puts your current situation and your choices into a larger context, giving you a better way to think about where you are, where you’d like to be, and how to go from here to there.

Mark must decide whether to proceed with the new roof. Assuming the house needs a new roof, his decision is only about his choice of financing. An analysis of Mark’s budget variances has shown that he can actually pay for the roof with the savings in his money market account. This means his goal is more attainable (and less costly) than in his original budget. This favorable outcome is due to his efforts to increase income and reduce expenses, as well as to macroeconomic changes that have been to his advantage. Consequently, Mark can make progress toward his long-term goal of building his asset base. He can continue saving for retirement with deposits into his retirement account and continue improving his property by installing a new roof on his house.

Because Mark is financing the roof with the savings from his money market account, he can avoid new debt and thus additional interest expense. He will lose the interest income from his money market account (which is insignificant as it represents only 0.09 percent of his total income). Still, the increases from his tutoring and sales income will offset the loss. Mark’s income statement will be virtually unaffected by the roof. His cash flow statement will show unchanged operating cash flow, a significant capital expenditure, and the use of savings.

Mark can finance this increase in asset value (his new roof) with another asset, his money market account. His balance sheet will not change substantially - value will shift from one asset to another - but the money market account earns income, which the house does not, although there may be a gain in value when the house is sold in the future.

Currently, that interest income is insignificant; however, given the prevailing trend of rising interest rates, the opportunity cost of forgoing interest income could be substantial in the future if the account balance were allowed to grow.

Moreover, Mark will be moving value from a highly liquid money market account to a less liquid house, thereby decreasing his overall liquidity. Looking ahead, this loss of liquidity could create another opportunity cost: It could narrow his options. Mark’s liquidity will be significantly depleted by the time the roofing expense is incurred, so future capital expenditures may need to be financed with debt. If interest rates continue to rise, it will make financing future capital expenditures more expensive and may cause Mark to delay or even cancel those expenditures.

However, Mark also has a very reliable source of liquidity in his earnings. His paycheck can offset this loss. If he can continue to generate free cash flow to add to his savings, he can restore his money market account and his liquidity. Mark has no dependents, so he can assume the risk of depleting his liquidity now and relying on his income to restore it later.

The opportunity cost of losing liquidity and interest income will be less than the cost of new debt and new interest expense. That is because interest rates on loans are always higher than interest rates earned on savings. Banks always charge more than they pay for liquidity. The added risk and obligation of new debt could also create opportunity costs, making it more challenging to finance future capital expenditures. Therefore, funding capital expenditure with an asset rather than a liability is less costly both immediately and in the future, as it creates fewer obligations, more opportunities, less opportunity cost, and lower risk.

The budget and financial statements enable Mark to project the effects of this financial decision within the broader context of his current financial situation and ultimate financial goals. His understanding of opportunity costs, liquidity, the time value of money, and personal and macroeconomic factors also helps him evaluate his choices and their consequences. Mark can use this decision and its results to inform his next decisions.

Financial planning is a continuous process of making financial decisions. Financial statements and budgets can summarize the current situation and project the outcomes of choices. Financial statement analysis and budget variance analysis assess the effects

of choices. Personal factors, economic factors, and the relationships of time, risk, and value affect outcomes.

Summary

- Financial planning is a continuous process of making financial decisions
- Financial statements are ways of summarizing the current situation
- Budgets are ways of projecting the outcomes of choices
- Financial statement analysis and budget variance analysis are ways of assessing the effects of choices
- Personal factors, economic factors, and the relationships of time, risk, and value affect choices, as their dynamics affect outcomes

Exercises

Analyze Mark's budget as a financial planning tool for making decisions in the following situations. In each case, how will other financial planning tools affect Mark's decisions? For each case, create a new budget showing the projected effects of Mark's decisions.

1. Mark injures himself on the cross-trainer, and the doctor recommends a course of physical therapy.
2. A neighbor and coworker suggest that he and Mark commute to work together.
3. The roofers inform Mark that his chimney needs to be repaired.
4. Mark wants to give up tutoring and put more time into his memorabilia business.
5. Mark wants to marry and start a family, and needs to know when would be a good time.

CHAPTER OVERVIEW

6: Taxes and Tax Planning

This chapter discusses the role of taxation in personal finance and its effects on earnings and accumulating wealth. Emphasis is placed on the types, purposes, and impacts of taxes; the organization of resources for information; and the areas of controversy that lead to changes in the tax rules.

6.1: Introduction
6.2: Sources of Taxation and Kinds of Taxes
6.3: The U.S. Federal Income Tax Process
6.4: Record Keeping, Preparation, and Filing
6.5: Taxes and Financial Planning

6.1: Introduction

All developed and most less-developed economies have a tax system that finances their governments, at least in part. The design of that tax system reflects the society's view of the responsibilities of government and its citizens to their government. The U.S. tax code (Internal Revenue Code) is based on the principle that everyone should contribute to their government's finances according to their ability to pay. Changes in how "everyone" is defined and how "ability to pay" is measured have led to changes in tax laws. The system keeps evolving.

In the United States, tax laws are written by Congress, and therefore, through a process of compromise. As views on government financing have changed, tax laws have been amended, refined, enacted, and repealed. The result is a tax code that can seem overly complex, unreasonable, or illogical. However, the system is based on logic and has a purpose. The better you understand the elements of the tax system, the better you will understand how to live with it and use it to your advantage.

6.2: Sources of Taxation and Kinds of Taxes

Learning Objectives

1. Identify the levels of government that impose taxes.
2. Define the different kinds of incomes, assets, and transactions that may be taxed.
3. Compare and contrast progressive and regressive taxes.

Any government that needs to raise revenue and has the legal authority to do so may tax. Tax jurisdictions reflect government authorities. Federal, state, and municipal governments impose taxes in the United States. Similarly, in many countries, there are national, provincial or state, county, and municipal taxes. Regional economic alliances, such as the European Union, may also impose taxes.

Jurisdictions may overlap. Federal, state, and local governments may all tax income. Reporting income and paying taxes can be complicated for individuals who earn income in more than one state or live in one state and work in another. Governments tax income because it is a way to tax broadly based on the ability to pay. Most adults have an income from some source, even if it is simply a government payment.

Income tax is usually a **progressive tax**: the higher the income or the more to be taxed, the greater the tax rate. The percentage of income that is paid in tax increases as income rises. Those income categories are called **tax brackets** (Table 6.2.1).

Source: Federal Income Tax Rates and Brackets (www.irs.gov/filing/federal-income-tax-rates-and-brackets)

Table 6.2.1 : U.S. Income Tax Brackets in 2023 (Single Filing Status)

If your taxable income was between			Your tax bracket is
$ 0	and	$ 11,000	10%
$ 11,001	and	$ 44,725	12%
$ 44,726	and	$ 95,375	22%
$ 95,376	and	$ 182,100	24%
$ 182,101	and	$ 231,250	32%
$ 231,251	and	$ 578,125	35%
$ 578,126	and	above	37%

Tax is levied on income from many sources:

- Wages (selling labor)
- Interest, dividends, and gains from investment (selling capital)
- Self-employment (operating a business, or selling a good or service)
- Property rental
- Royalties (rental of intellectual property)
- “Other” income, such as alimony, gambling winnings, or prizes

A **sales tax** or **consumption tax** taxes the consumption financed by income. In the United States, sales taxes are imposed by state or local governments; as yet, there is no national sales tax. Sales taxes are more efficient and fair in that consumption reflects income. Income levels determine the ability to consume and, therefore, the level of consumption. Consumption is also hard to hide, making sales tax a good way to collect taxes based on the ability to pay. Consumption taxes typically apply to all consumption, including nondiscretionary items such as food, clothing, and housing. Opponents of the sales tax argue that it is a **regressive tax**. Low-income taxpayers spend a higher percentage of their incomes on nondiscretionary purchases than those with higher incomes. Another example of a regressive tax is Social Security Taxes, also known as the Federal Insurance Contributions Act (FICA).

Excise taxes are taxes on specific consumption items such as alcohol, cigarettes, motor vehicles, fuel, or highway use. In some states, excise taxes are justified by the discretionary nature of the purchases. They may be criticized as exercises in social

engineering (i.e., using the tax code to dictate social behaviors). For example, people addicted to nicotine or alcohol tend to purchase cigarettes or liquor even if an excise tax increases their cost; therefore, they are a reliable source of tax revenue.

Property taxes are used more by local governments. State, municipal, provincial, and county taxes are all examples. Taxes are most commonly imposed on real property (land and buildings), but may also apply to personal assets (e.g., vehicles and boats). Property values theoretically reflect wealth (accrued income) and thus the ability to pay taxes. Property values are also a matter of public record (real property is deeded, boats or automobiles are licensed), which allows for more efficient tax collection.

Estate taxes are taxes on the transfer of wealth from the deceased to the living. Estate taxes are usually imposed on the very wealthiest. Because death and the subsequent dispersal of property are legally a matter of public record, estate taxes are generally easy to collect. Estate taxes are controversial because they can be seen as a tax on the very concept of ownership, particularly for incomes that have already been taxed and saved, or stored as wealth and property.

A summary of the kinds of taxes used by the three different jurisdictions is shown in Table 6.2.2 .

Table 6.2.2 : Taxes and Jurisdictions

Type of Tax	National or Federal	Provincial or State	County or Municipal
Income	✓	✓	✓
Sales		✓	✓
Excise	✓	✓	✓
Property		✓	✓

Summary

- Governments at all levels use taxes as a source of financing
- Taxes may be imposed on the following:
  - Incomes from
    - wages
    - interest, dividends, and gains
    - rental of real or intellectual property
  - Consumption of discretionary and nondiscretionary goods and services
  - Wealth from
    - asset ownership
    - asset transfer after death
- Taxes may be
  - progressive, such as the income tax, in which you pay in proportion to your income
  - regressive, such as a sales tax, in which you pay proportionally more taxes the less income you have

Exercises

1. Examine state, federal, and other tax returns you filed last year. Alternatively, estimate based on your present financial situation. On what incomes were you (or would you be) taxed? What tax bracket were you (or would you be) in? How did (or would) your state, federal, and other tax liabilities differ? What other types of taxes did you (or would you) pay and to which government jurisdictions?
2. Match the description to the corresponding tax type. (Write the number of the tax type before its description.)
   - Description:
     1. _____ tax on the use of vehicles, gasoline, alcohol, cigarettes, highways, and the like.
     2. _____ tax on the wealth and property of a person upon death.
     3. _____ tax on purchases of both discretionary and nondiscretionary items.
     4. _____ tax on wages, earned interest, capital gain, and the like.
     5. _____ tax on home and land ownership.

6. _____ tax on purchases of discretionary items.
7. _____ tax on items during their production as well as upon consumption.

- Type of Tax:
  1. Property tax
  2. Consumption tax
  3. Value-added or goods and services tax
  4. Income tax
  5. Excise tax
  6. Sales tax
  7. Estate tax

3. In your financial planning journal, record all the types of taxes you will be paying next year and to whom. How will you plan to pay these taxes? How will your tax liabilities affect your budget?
4. According to *Investopedia*, Types of Income the IRS Can't Touch (www.investopedia.com/articles/personal-finance/062716/types-income-irs-cant-touch.asp), include veteran benefits, child support, workers' compensation, and so on. Create a list of your income sources that are protected from taxation. Poll classmates about whether they think student income can be taxed. Review this article from Ramsey Solutions about Five Tax Myths (www.ramseysolutions.com/taxes/tax-myths). Is it true that students are often exempt from income taxes?

6.3: The U.S. Federal Income Tax Process

Learning Objectives

1. Identify the taxes most relevant for personal financial planning.
2. Identify taxable incomes and the schedules used to report them.
3. Calculate deductions, exemptions, and credits.
4. Compare methods of tax payment.

The U.S. government relies on an income tax. Income tax is a crucial factor in personal financial planning, as everyone has some form of income throughout their lifetime. Most states model their tax systems on the federal model or base their tax rates on federally defined income.

Figure 6.3.1 shows an individual tax return, U.S. Form 1040.

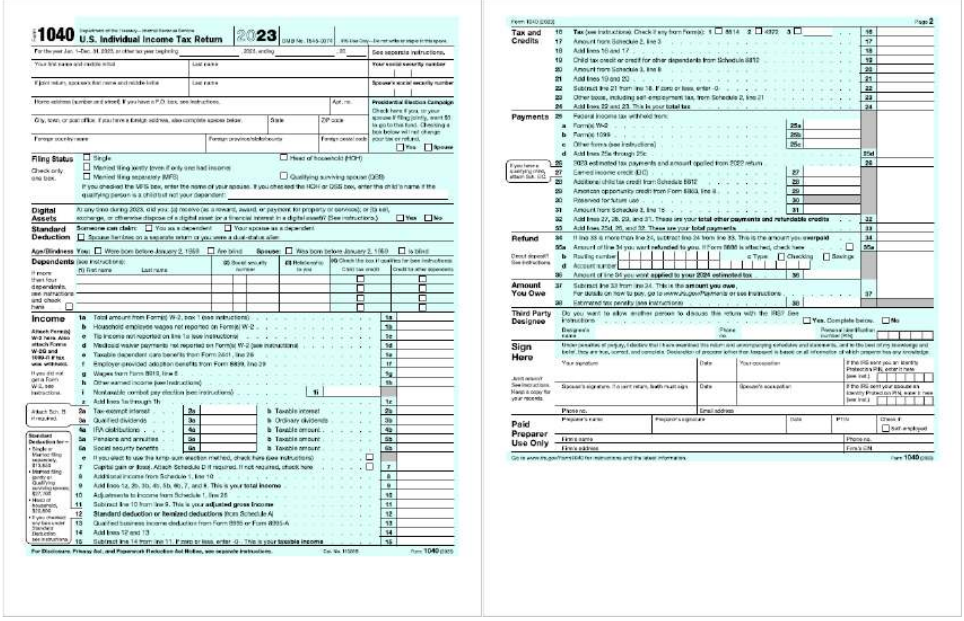

Figure 6.3.1 : U.S. Individual Tax Form 1040, 2023[1]

Taxable Entities

There are four taxable entities in the federal system: individuals or family units, corporations, nonprofit corporations, and trusts. Personal financial planning focuses on your decisions as an individual or family unit, but other tax entities can affect individual income. Corporate profit may be distributed to individuals as a **dividend**, for example. That dividend must be included in the individual's taxable income. Likewise, funds established for a specific purpose may distribute money to an individual that is taxable as individual income. A **trust** is a good example. It is a legal arrangement whereby control over property is transferred to a person or organization (the trustee) for the benefit of someone else (the beneficiary). If you are a beneficiary and received a distribution, that money is taxable as individual income.

The definition of the taxable "individual" is determined by filing status:

- Single, never married, widowed, or divorced
- Married, in which case two adults file as one taxable "individual," combining all taxable activities and incomes, deductions, exemptions, and credits
- Married filing separately, in which case two married adults file as two separate taxable individuals, individually declaring and defining incomes, deductions, exemptions, and credits
- Qualified Surviving Spouse, valid for two years following the year the spouse died, and the surviving spouse has a dependent
- Head-of-household, for a family of one adult with dependent(s)

Some taxes are levied differently depending on filing status, based on the assumption that family structure affects one's ability to pay taxes.

Not everyone who files a return pays taxes. Individuals with low incomes and tax-exempt, nonprofit corporations typically do not. Nevertheless, all potential taxpayers are required to declare their income and demonstrate their obligations to the government. For the individual, that declaration is filed on Form 1040, U.S. Individual Income Tax Return, **OR** a Form 1040-SR, U.S. Tax Return for Seniors.

Income

For individuals, the first step in the process is to calculate total income. Income may come from various sources, and each source of income must be calculated and declared. Some kinds of income have a separate form or schedule to show their more detailed calculations. The following schedules are the most common for reporting incomes separately by source.

Schedule B: Interest and Dividend Income

Interest income is income from selling liquidity. For example, the interest your savings account, certificates of deposit, and bonds earn in a year is income; however, some interest income may not be taxable. When you deposit funds, you are essentially earning interest from lending cash to a bank, a money market mutual fund, a government, or a corporation. Dividend income, on the other hand, is income from investing in the stock market. Dividends are your share of corporate profits as a shareholder, distributed in proportion to the number of shares of corporate stock you own.

Schedule C: Business Income

Business income is income from self-employment, entrepreneurial ventures, or business enterprises. For many sole proprietors and partners in a partnership, business income may be their primary source of income. Other individuals may rely on wages, but have a small business on the side for extra income. Business expenses can be deducted from business income. For example, business use of your car or home is considered a business expense. If expenses exceed income, the business is operating at a loss. Business losses can be deducted from total income, just as business income adds to total income.

The tax laws distinguish between a business and a hobby that earns or loses money. You are considered to have a business for tax purposes if you made a profit in three of the past five years, including the current year, or if you are operating as a registered business and intending to make a profit. If you are operating your own business, you must also pay self-employment tax on business income. In addition, if you are self-employed, you must pay estimated income taxes in quarterly installments based on your expected income.

Schedule SE: Self-Employment Tax

Self-employment tax is an additional tax on income from self-employment or business income earned by a sole proprietor. It represents the employer’s contribution to Social Security, the federal government's mandatory retirement savings program. Both employers and employees are required to contribute to the employee’s Social Security account. When you are both the employee and the employer, as in self-employment, you must contribute both your share and the employer's share of the contribution.

Schedule D: Capital Gains (or Losses)

Gains or losses from investments derive from changes in asset value between the asset’s original cost and its market value at the time of sale. Recurring gains or losses from investments are derived from returns on financial instruments, such as stocks and bonds. One-time gains, such as profits from the sale of a home, are also reported on Schedule D.

The tax code distinguishes between assets held for a short time (one year or less) and assets held for a long time (over a year). Short-term capital gains are taxed at a different rate than long-term capital gains (Table 6.3.2). When you invest in financial assets, such as stocks, bonds, mutual funds, property, or equipment, be sure to keep good records by noting the date when you bought them and the original price. These records establish the **cost basis** of your investments, and you will use that to calculate gains or losses when you sell them.

Source: Topic no. 409: Capital gains and losses (www.irs.gov/taxtopics/tc409)

Table 6.3.2 : Capital Gains Tax Rates

Type of Capital Asset	Holding Period	Tax Rate for Tax Year 2023
Short-term capital gains (STCG)	One year or less	Ordinary income tax at graduated tax rates

Type of Capital Asset	Holding Period	Tax Rate for Tax Year 2023
Long-term capital gains (LTCG)	More than one year	A Long-term capital gain (LTCG) rate of **0%** applies if your taxable income is less than or equal to • $44,625 for single and married filing separately; • $89,250 for married filing jointly and a qualifying surviving spouse; and • $59,750 for head of household. An LTCG rate of **15%** applies if your taxable income is • more than $44,625 but less than or equal to $492,300 for single; • more than $44,625 but less than or equal to $276,900 for married filing separately; • more than $89,250 but less than or equal to $553,850 for married filing jointly and qualifying surviving spouse; and • more than $59,750 but less than or equal to $523,050 for head of household. An LTCG rate of **20%** applies to the extent that your taxable income exceeds the thresholds set for the **15%** capital gain rate.

Schedule E: Rental and Royalty Income; Income from Partnerships, S Corporations, and Trusts

Rental or royalty income is income earned from renting an asset, such as real property or a creative work, including a book or a song. This can be a primary source of income, although many individuals rely on wages and have some rental or royalty income on the side. Homeownership may be made more affordable, for example, if the second half of a duplex you live in can be rented for extra income. Rental expenses can also be deducted from rental income, possibly creating a net loss from rental activity. Unlike a business, which must become profitable to remain a business for tax purposes, rental activities can generate losses for years. Such losses are a tax advantage, as they reduce total income.

Partnerships and S corporations are alternative business structures for businesses with one or more owners. For example, partnerships and S corporations are commonly used by professional practices, such as accounting firms, law firms, and medical practices, as well as family businesses.

The partnership or S corporation is not a taxable entity; however, the share of its profits distributed to each owner is taxable income for the owner and must be reported on Schedule E.

Schedule F: Farm Income

Farm income refers to the money earned from growing food, raising livestock, or producing related products, such as wool, for sale. Farmers have a special status in the tax code, stemming from the original agricultural basis of the U.S. economy and the strategic importance of food self-sufficiency. Thus, the tax code offers numerous exemptions that are specifically tailored to farmers.

Other Taxable and Nontaxable Income

Other taxable income includes alimony, state or local tax refunds, retirement fund distributions from individual retirement arrangements (IRAs) and/or pensions, unemployment compensation, and a portion of Social Security benefits.

Your total income is then adjusted for items that the government determines should not be taxed under certain circumstances, such as some expenses of educators, performing artists, and military reservists; savings in health savings or retirement accounts; moving

expenses; a portion of self-employment taxes; student loan interest; and alimony paid. Income that is not taxed by the U.S. government and does not have to be reported as income includes the following:

- Welfare benefits
- Interest from *most* municipal bonds
- *Most* gifts
- *Most* inheritance and bequests
- Workers compensation
- Veteran's benefits
- Federal tax refunds
- *Some* scholarships and fellowships

However, not everything you might think qualifies as non-taxable does. It is important to read tax filing instructions carefully. The government allows adjustments to be reported (or not reported) as income only under certain circumstances or up to certain income limits, and some adjustments require special forms.

The result of deducting adjustments from your total income is a calculation of your adjusted gross income (AGI). Your AGI is further adjusted by amounts that may be deducted or exempted from your taxable income and by amounts already credited to your tax obligations.

Deductions and Credits

Deductions and exemptions reduce taxable income, while credits reduce the amount of tax owed. Deductions are tax breaks for incurring certain expenditures or living in certain circumstances that the government thinks you should not have to include in your taxable income. There are deductions for age and blindness. For other deductions, you can claim a standard, lump-sum deduction, or you may choose to itemize your deductions. You can detail each deduction separately and then calculate the total. If your itemized deductions are more than your standard deduction, it makes sense to itemize.

Other deductions involve financial choices that the government encourages by offering an extra incentive in the form of a tax break. For example, home mortgage interest is a deduction that encourages home ownership; investment interest is a deduction that encourages investment; and charitable donations are deductions that encourage charitable giving.

Deductions are also created for expenditures that may be considered nondiscretionary, such as medical and dental expenses, or state and local income and property taxes. However, as with income adjustments, you must read the instructions carefully to know what expenditures qualify as deductions. Some deductions only qualify if they exceed a certain percentage of income, while others may be deducted regardless. Some deductions require an additional form to calculate specific details, such as charitable gifts not given in cash, investment interest, and certain types of mortgage interest.

After deductions are subtracted from adjusted gross income, the remainder is your taxable income. Your tax is based on your taxable income, on a progressive scale. You may have additional taxes, such as self-employment tax, and you may be able to apply credits against your taxes, such as the Child Tax Credit or the Earned Income Tax Credit for lower-income taxpayers with children.

Deductions and credits are among the most disputed areas of the tax code. Due to the depth of the dispute, they tend to change more frequently than other areas of the tax code. For example, in 2009, a credit was added to encourage first-time homebuyers to purchase a home, hoping to stimulate the residential real estate market. In 2017, Congress passed the Tax Cuts and Jobs Act, which introduced significant tax law changes, including modifications to the home mortgage deduction, charitable contributions, and a generous deduction known as the Qualified Business Income Deduction. As a taxpayer, you need to be alert to changes that may be to your advantage or disadvantage. Typically, such changes are introduced gradually, allowing you to incorporate them into your financial planning process.

Payments and Refunds

Once you have calculated your tax obligation for the year, you can compare that to any taxes you have paid during the year, and then calculate the amount still owed or the amount to be refunded to you.

You pay taxes during the tax year by having them withheld from your paycheck if you earn income through wages, or by making quarterly estimated tax payments if you have other kinds of income. When you begin employment, you fill out a Form W-4, Employee's Withholding Certificate, to determine the taxes to be withheld from your regular pay. You may adjust this amount, within limits, at any time. If you have both wages and other incomes, but your wage income is your primary source of income, you

may be able to increase the taxes withheld from your paychecks. This additional withholding could cover the taxes on your other income and help avoid making estimated payments. However, if your non-wage income is substantial, you will have to make estimated payments to avoid a penalty and/or interest.

The government requires that taxes be withheld or paid quarterly during the tax year because it uses tax revenues to finance its expenditures; it needs a steady and predictable cash flow. Steady payments also decrease the risk of taxes being uncollectible. State and local income taxes must also be paid during the tax year and are similarly withheld from wages or paid on a quarterly basis.

Besides income taxes, other taxes are withheld from your wages: payments for Social Security and Medicare. Social Security, also known as the Federal Insurance Contributions Act (FICA), and Medicare are federal government programs. Social Security is insurance against loss of income due to retirement, disability, or loss of a spouse or parent. Individuals are eligible for benefits based on their contributions (or contributions from a parent or spouse) during their working lives. Medicare finances health care for the elderly. Both programs were designed to provide minimal benefits to those no longer able to sell their labor in exchange for wage income. Under Social Security and Medicare, your contributions pay for benefits that current beneficiaries receive.

If you paid more during the tax year than your actual obligation, you are due a refund of the difference. You may have that amount directly deposited into a bank account, or the government will send you a check.

If you have paid less during the tax year than your actual obligation, you will need to pay the difference (by Direct Debit, check, or credit card) and may incur a penalty and/or interest, depending on the size of your payment.

The deadline for filing income tax returns and paying any necessary amounts is generally April 15th (or the first business day after) following the end of the tax year on December 31st. You may file a request to extend the deadline for six months to October 15th. Should you miss a deadline without filing for an extension, you will owe penalties and interest, even if your actual tax obligation results in a refund. It pays to get your return in on time.

Summary

- The most relevant tax for financial planning is income tax, as it affects taxpayers over their entire lifetime.
- Different types of income must be defined and declared on specific income tax schedules and are subject to taxation.
- Deductions and exemptions reduce taxable income.
- Credits reduce tax obligations.
- Payments are made throughout the tax year through withholding from wages or through quarterly payments.

Exercises

1. Read the IRS document defining tax liability (www.irs.gov/publications/p17#en_US_publink100031858). Do you have to file a tax return for the current year? Why or why not? (Identify all the factors that apply.) Which tax form(s) should you use?
2. Download and study the following schedules or their equivalent for the current year. In what circumstances would you have to file each one? Tentatively fill out any schedules that apply to you for the current year.
   - Schedule A (www.irs.gov/pub/irs-pdf/f1040sa.pdf)
   - Schedule B (www.irs.gov/pub/irs-pdf/f1040sb.pdf)
   - Schedule C (www.irs.gov/pub/irs-pdf/f1040sc.pdf)
   - Schedule D (www.irs.gov/pub/irs-pdf/f1040sd.pdf)
   - Schedule E (www.irs.gov/pub/irs-pdf/f1040se.pdf)
   - Schedule F (www.irs.gov/pub/irs-pdf/f1040sf.pdf)
3. Find answers to the following questions about the taxability of scholarships (www.finaid.org/scholarships/taxability/):
   1. Is financial aid for college subject to federal income tax?
   2. Can federal and state education grants be taxed as income?
   3. Are student loans taxable?
   4. When is a scholarship tax-exempt?
   5. Do you have to be in a degree program to qualify for tax exemption?
   6. When can the cost of textbooks be deducted from gross income for tax reporting purposes?
   7. Can the amount of a scholarship used for tuition be deducted?
   8. Can living expenses while on scholarship be deducted?

9. Is the income and stipend from a teaching fellowship or research assistantship tax-exempt?
10. Are the tuition, books, and stipends of ROTC students tax-exempt?

[1] IRS Form IRS Form 1040 2023. www.irs.gov/pub/irs-pdf/f1040.pdf.

6.4: Record Keeping, Preparation, and Filing

Learning Objectives

1. Identify sources of tax information.
2. Explain the importance of verifiable records and record keeping.
3. Compare sources of tax preparation assistance.
4. Trace the tax review process and its implications.

The Internal Revenue Code (IRC), the federal tax law, is written by the U.S. Congress and enforced by the Internal Revenue Service (IRS), which is a part of the U.S. Department of the Treasury. The IRS is responsible for collecting tax revenues.

To inform the public, the IRS offers over six hundred separate publications covering various aspects of the tax code. More than a thousand forms and accompanying instructions exist to file complete tax information, although most taxpayers typically file only about half a dozen forms each year. Additionally, the IRS offers online support (www.irs.gov) and telephone assistance to address questions and help with tax filing preparation.

By far, the majority of income taxes from wages are collected through withholding. For most taxpayers, wages represent the primary form of income; therefore, most of their tax payments are withheld or paid as wages are earned. Still, everyone has to file to summarize the details of the year's income for the IRS and to calculate the final tax obligation. In 2021, the IRS collected 160,824,340 individual tax returns, representing $2.1 trillion in tax revenue. [1]

Keeping Records

The individual filer must collect and report information on tax forms and schedules. Fortunately, this is not as difficult as the volume of data would suggest. Employers are required to send Form W-2 to each employee at the end of the year, detailing the total wages earned, as well as taxes and contributions withheld. If you have earned other kinds of income, your clients, customers, retirement fund, or other source of income may have to file a Form 1099 to report that income to you and the IRS. The bank or brokerage firm also reports interest and dividend income on Form 1099. The information on the W-2 and Form 1099 is reported to both the IRS and you.

Incomes may be summarized and reported to you, but only you know your expenses. Tracking expenditures, such as charitable gifts and medical expenses, is important if they are allowed as deductions, so data should be collected throughout the tax year. If you do not keep detailed records, you will have to search your banking history to identify deductible expenses for the tax year. Financial software applications can make this task easier; most allow you to flag deductible expenses during your initial setup.

You should also keep receipts of purchases that may be deductible. Credit or debit card statements and bank statements provide convenient backup proof, but save receipts in case the IRS questions the accuracy of your return. The receipts are your primary evidence of expenditures.

Tax Preparation and Filing

After you have collected the necessary information, you fill out the forms. Most taxpayers need to complete only a few schedules and forms to supplement their Form 1040. Most taxpayers have the same kinds of taxable events, incomes, and deductions every year, and generally file the same kinds of schedules and forms.

The IRS offers several electronic filing (e-filing) options (www.irs.gov/filing/individuals/how-to-file#partner), available to filers depending on their specific tax situation, including the IRS Free File Program. You may prefer to consult a professional tax preparer. Professional help is useful if you have a relatively complex tax situation, such as unusual sources of income or expenditures that may be deductible under certain circumstances. Some taxpayers use a tax preparer simply to protect against making a mistake. Filing errors, no matter how innocent, may prove costly to fix. Fees for tax preparers depend on how complex your return is, the number of forms that need to be completed, and the type of professional you consult.

Professional tax preparers may be Enrolled Agents, Certified Public Accountants (CPAs), lawyers, personal financial planners, or tax consultants. You may have an ongoing relationship with your tax preparer, who may also be your accountant or a financial planner advising you on other decisions. You might also use a tax preparer only to help you prepare and file taxes. Tax preparers may be independent practitioners who work during tax season or employees of a national chain that provides year-round tax services.

Generally, there is no standard certification to be a professional tax preparer. An enrolled agent (www.irs.gov/tax-professionals/enrolled-agents/enrolled-agent-information) is someone who has successfully passed training courses from the IRS or previously worked for the IRS. A CPA has specific training and experience in accounting. When looking for a tax preparer, your lawyer, accountant, or financial planner may be a suitable option or be able to make a recommendation. If your information is fairly straightforward, you may minimize costs by using a preparer who simply does taxes. If your situation is complex (especially if it involves other entities such as businesses or trusts, or unusual circumstances such as a gain, gift, or distribution) you may want to consult a professional with a range of expertise, such as an Enrolled Agent, CPA, or a lawyer who specializes in taxes. Many professionals also offer a “guarantee;" they will help you if the IRS questions the information on your return.

Whether you prepare your tax return by yourself or with a professional, you are the one who must sign the return and assume responsibility for its details. You should review your return with your tax preparer to ensure you understand and can explain the information accurately. You should question anything that you cannot understand or that seems contrary to your original information. You should also know your tax return because understanding how and why tax obligations are created or avoided can help you plan for tax consequences in future financial decisions.

Tax Preparation and Filing Software Apps

You may choose to prepare the return yourself using a tax preparation software app. Many are available, and several are compatible with personal financial software apps, enabling you to download or transfer data from your financial software directly into the tax software. Software applications are typically designed as a series of questions that guide you through Form 1040 and the supplemental schedules, prompting you to fill in the data based on your answers. Once you have been through the “questionnaire,” it tells you which forms were completed, and you can file them electronically with the IRS. Most programs also allow you to enter data directly into the individual forms.

Many tax preparation software packages are available, and most are reviewed in the business press or online. Start with an internet search for "free tax filing" or "free tax software," and compare the results to your personal goals and needs.

If the IRS free online filing option does not work for you, you have many other choices. Some popular programs include TurboTax, TaxSlayer, and FreeTaxUSA, but there are many others. Compare features and reviews before selecting a tool.

These tools can be useful because they automatically calculate unusual circumstances, limitations, or exceptions to rules using your complete data. Some programs even prompt you to include additional information based on the data you submit. Overlooking exemptions is a common error that software programs can help you avoid. The programs include all the necessary forms and schedules. If you prefer to file hard copy versions, you can download and print them directly from the IRS website or request that they be sent to you by calling the IRS. Once your return is completed, you must file it with the IRS, either by mail or by e-file. The latter option has become increasingly popular.

Following Up and Handing Audits

After you file your tax return, the IRS will process and review it. If you are owed a refund, it will be sent to you; if you make a payment, it will be deposited into your account. The IRS reviews returns for accuracy, based on redundant reporting and its “sense” of your data. For example, the IRS may investigate any discrepancies between the wages you report and the wages your employer reports for you. As another example, if your total wages are $23,000 and you show a charitable contribution of $20,000, that contribution seems too high for your income, although there may be an explanation.

The IRS may follow up by mail or by a personal interview. It may simply request verification of one or two items, or it may conduct a full **audit—**a thorough financial examination of your return. In any case, you will be asked to produce records or receipts that will verify your reported data. Therefore, it is essential to save a copy of your return, along with the records and receipts used to prepare it. See the IRS website (www.irs.gov/businesses/small-businesses-self-employed/irs-audits) for information on audits and recommendations for the number of years to save your tax data.

If you have a personal interview, your tax preparer may accompany you to help explain and verify your return. Ultimately, however, you are responsible for it. If you have made errors, and if those errors result in a larger tax obligation (if you owe more), you may have to pay penalties and interest in addition to the tax you owe. You may be able to negotiate a payment schedule with the IRS.

Each year, the IRS randomly chooses a certain number of returns for review and possible audit, even where no discrepancies or unusual items are noticed. The threat of a random audit may deter taxpayers from cheating or taking shortcuts on their tax returns.

Computerized recordkeeping has made it easier for both taxpayers and the IRS to collect, report, and verify tax data.

Filing Strategies

Most citizens recognize the need to contribute to the government's revenues, but they want to avoid paying more than necessary. **Tax avoidance** is the practice of ensuring that you have no excess tax obligations. Strategies for minimizing or avoiding tax obligations are perfectly legal. However, **tax evasion**, fraudulently reporting tax obligations by understating incomes and gains or overstating expenses and losses, is illegal.

The definition of expenses and the way you claim them can affect your tax rates. You may be able to deduct more expenses if you itemize your deductions than if you do not, or it may not make a difference. Also, there is some discretion in classifying expenses. For example, suppose you are a high school Spanish teacher. You also tutor students privately. You buy Spanish books to improve your language skills and to keep current with the published literature. Are the costs of those books an unreimbursed employee expense related to your job as a teacher, or are they an expense of your private tutoring business? If it is a cost of your tutoring business, you may be able to fully expense it from your business income.

There are many ideas about how to avoid an audit or what will trigger one, such as certain types of income or expenses, or filing earlier or later. In truth, with the increased sophistication of computerization, the review process is much better at noticing discrepancies and choosing audits randomly. Time and effort (and cost) invested in outsmarting a possible audit are usually wasted. The best protection against a potential audit is to have verification, such as a receipt, a bill, or a canceled check, for all the income and expenses that you report.

Summary

- Tax code information is available from the Internal Revenue Service.
- Verifiable records must be kept for all taxable incomes, expenses, and other taxable events and activities.
- Professional tax assistance and tax preparation software are readily available.
- The Internal Revenue Service reviews tax returns for errors and may conduct an informal or formal audit process to follow up.
- Tax avoidance is the legal practice of minimizing tax obligations.
- Tax evasion is the illegal process of fraudulently presenting information used in calculating tax obligations.
- Tax avoidance strategies can involve timing income and/or expenses to take advantage of changing tax circumstances.

Exercises

1. Read the article Policy Basics: Where Do Our Federal Tax Dollars Go (www.cbpp.org/research/federal-budget/where-do-our-federal-tax-dollars-go). In 2023, what were the federal government's three largest expenditures of tax dollars?
2. According to the IRS.gov article How to choose a tax return preparer (www.irs.gov/taxtopics/tc254), when should you look for a professional tax preparation service provider, and what fees should you avoid paying?
3. Gather a current sample of the kind of records you will use to calculate your tax liability this year and verify your tax return. List each type of record and identify exactly what information it will give you, your tax preparer, and the IRS about your tax situation. What additional records will you need that are not yet in your possession?
4. Do searches online to compare and contrast tax preparation software. What are the chief differences among the top three or four programs? Also, check out the IRS Free File program (www.irs.gov/filing/individuals/how-to-file#partner). Would you qualify for Free File?
5. Use your spreadsheet program to create a document that shows monthly cash flows for income and expenses to date, for which you have written records. If you continue to develop this document for the remaining months, how will it help you prepare your tax returns?
6. Research how you can reduce your tax liability and/or avoid paying taxes when you file this year.

[1] IRS, "SOI Tax Stats - Individual Statistical Tables by Filing Status", Tax Year 2021, https://www.irs.gov/statistics/soi-tax-stats-individual-statistical-tables-by-filing-status#_grp3. www.irs.gov/statistics.

6.5: Taxes and Financial Planning

Learning Objectives

1. Trace the tax effects of life stages and life changes.
2. Identify goals and strategies that provide tax advantages.
3. Identify tax advantages that may be useful in pursuing your goals.
4. Discuss the relationship of tax considerations to financial planning.

You may anticipate significant changes in income or expenses due to a change in job or career, or a change in life stage or lifestyle. Not only may the amounts of income or expenses change, but the kinds of income or expenses may change as well. Planning for changes in relation to tax obligations is an essential part of personal financial planning.

Tax Strategies and Life Stages

Although everyone is different, there is a typical pattern to aging, earning, and taxes, as shown in Table 6.5.1 .

Table 6.5.1 : Life Stages and Tax Implications

	Young Adulthood	Middle Adulthood	Older Adulthood	Retirement
Source of income	Wages	Wages/investment	Wages/investment	Investment
Asset base	None	Accumulating	Growing	Depleting
Adjusted Gross Income	Low	Higher	Highest	Lower
Deductions	Low	Higher	High	Low

In young adulthood, you rely on income from wages, and you usually have yet to acquire an asset base, so you have little income from interest, dividends, or capital gains. Your family structure does not include dependents, so you have few deductions but also low taxable income.

As you progress in your career, you can expect wages, expenses, and probably dependents to increase. You are building an asset base by buying a home, possibly saving for your children's education, or saving for retirement. Because these kinds of assets are encouraged by the government, they not only build wealth but also create tax advantages, such as the mortgage interest deduction, retirement savings exemption, or education savings exemption.

As an older adult, you may begin to build an asset base that can no longer provide these limited tax advantages, or you may create taxable income, such as interest, dividends, or rental income. In retirement, most people can anticipate a significant decrease in income from wages and a significant increase in reliance on income from investments such as interest, dividends, and capital gains. Some of those assets may be retirement savings accounts, such as an Individual Retirement Arrangement (IRA) or a 401(k), which are tax-deferred savings plans. These create tax advantages while growing, but will also cause tax obligations when income is drawn from them.

Generally, at the stages of your life when your income is higher, so are your deductions and exemptions. Deductions and exemptions will tend to decrease as your income decreases. Although your incomes change over your lifetime, your tax obligations change proportionally, so they remain relative to your ability to pay.

The tax consequences of such changes should be considered when evaluating financial strategies. Because the tax code is a matter of law, it does change, but because it is also a matter of politics, it changes slowly and only after much public discussion. You can usually be aware of any tax code changes far enough in advance to incorporate them into your planning.

Tax Strategies and Personal Financial Planning

Tax advantages are sometimes created to support personal financial strategies that encourage specific goals. In the United States, as in most developed economies, specific goals—such as homeownership, retirement savings, and education and health financing—are viewed as personal objectives that benefit both society and the individual.

In most cases, tax advantages are created to encourage progress toward those goals. For example, most people can only buy a home if they can use debt financing, which creates additional costs. So, mortgage interest, that added cost, is tax-deductible (up to a limit) to make home financing and, therefore, home ownership more affordable and attractive.

Retirement savings are encouraged, so some savings plans, such as an IRA or a **defined contribution** plan like a 401(k) or 403(b) (named for the sections of the Internal Revenue Code that represent them), offer tax advantages. The deposits made to those plans may be used to reduce taxable income, although there are limits to the amount of those deposits. There are also retirement savings strategies that do not create tax advantages, such as saving outside of a tax-advantaged account. There are limited tax-advantaged savings accounts for education savings and health care expenses as well.

When you have a choice, it makes sense to use a strategy that will allow you to progress toward your goal and realize a tax advantage. However, your enthusiasm for the tax advantage should not define your goals. Taxes affect the value of your alternatives, so recognizing tax implications should inform your choices without defining your goals.

Unanticipated events, such as an inheritance, a gift, lottery winnings, casualty and theft losses, or medical expenses, can also have tax consequences. They are often unusual (and therefore unanticipated) events, and may be unfamiliar and financially complicated. In those circumstances, it may be wise to consult an expert.

Your financial plans should reflect your vision for your life: What you want to have, how you want to get it, and how you want to protect it. You will want to be aware of tax advantages or disadvantages, but tax consequences should not drive your vision. For example, you would not buy a house only to get the mortgage interest deduction. However, if you are buying a home, you can plan to do so in the most tax-advantageous way.

Summary

- Tax strategies may need to be adjusted as life stages and family structures change.
- Some personal finance goals may be pursued in a more or less tax-advantaged way, so you should evaluate the tax effects on your alternatives.
- Tax strategies are a means to an end, that is, to achieve your personal finance goals at a minimal cost.

Exercises

1. Review your list of personal financial goals. For each goal, how does the U.S. Tax Code help or hinder you in achieving it?
2. Research online to investigate tax strategies that would benefit you in your present life stage. What tax strategies would benefit you in your next life stage?

CHAPTER OVERVIEW

7: Financial Management

This chapter offers a comprehensive framework, comprised of six interrelated components, for understanding and managing personal finances. Beginning with the core functions of money, it traces how funds move through institutions and accounts, then examines how individuals interact with financial systems through credit, savings, and debt. The final section emphasizes forward-looking strategies that align financial behavior with long-term goals.

7.1: What Money Actually Does
7.2: How Money Moves
7.3: Credit
7.4: Savings
7.5: Debt
7.6: Planning Forward

7.1: What Money Actually Does

Learning Objectives

- Describe the functions and traits that define money.
- Explain how money solves transaction complexity.
- Connect abstract economic concepts of monetary trust to real-life decision-making.

The Fiction That Works

Money is the starting point. Before we talk about saving, borrowing, or building wealth, we need to understand what money *is* and what it isn't. Most people treat it as a given, like gravity or Wi-Fi. It is always there and rarely questioned. However, upon examining its function and design, money becomes one of the most fascinating and fragile systems humans have ever created.

Before we talk about debt, credit, savings, or spending, we need to get something straight: Money isn't a thing. It's a shared idea—one so powerful and so trusted that it shapes everything around it.

Money has no value on its own. You can't eat it, wear it, or build shelter out of it. But with enough of it, you can access all those things and more. It works only because we agree it works. The dollar in your wallet, or the number on your banking app, is a promise. What gives that promise power is belief, reinforced by habit, tradition, and systems that rarely break down.

The Three Jobs Money Must Do

To understand why money matters, we have to understand what it *does*, not just for economists, but for you. Imagine trying to trade a sandwich for a haircut. Or a bus ride for two hours of babysitting. Without a common standard, every exchange would require haggling, approximating, or awkward math. Money fixes that.

In modern economies, money plays three essential roles:

- **It's a medium of exchange.** It replaces bartering and allows people to trade goods and services with confidence. You don't need your landlord to want your sourdough starter; you just need them to accept your payment.
- **It's a store of value.** You can earn money today and spend it later. Without this function, you'd have to trade your labor or goods *now*, before they spoiled or expired.
- **It's a unit of account.** You can compare prices and assign value across things that don't naturally relate, like tacos, textbooks, and car insurance.

These may sound basic, but together they explain why money is a tool for building systems, not just buying snacks. Economists refer to these as the **functions of money,** and if money fails to perform any one of them, the entire system begins to break down.

Why Trade Needed Help

Before money existed, every transaction required coincidence, timing, and negotiation. If you wanted shoes and had eggs, you needed a shoemaker who wanted eggs right away, and who thought your dozen was worth one pair of boots. That kind of direct trade is called **barter**, and while it works in very small groups with limited needs, it collapses fast under complexity.

Economists refer to this as the **double coincidence of wants**, and it's rare. Bartering breaks down when wants don't match, when goods aren't divisible, or when timing is off. You can't trade perishable goods for long-term services. You can't slice a couch in half to pay for half a haircut.

Money solves this. It acts as a neutral stand-in for value, making transactions flexible and scalable. It lets people trade asynchronously, across distances, and without needing to know or trust each other personally. It breaks open closed loops of barter and turns them into wide, open webs of exchange.

Once you see this, the purpose of money sharpens: It doesn't just enable trade; it **simplifies the transaction itself**. It makes the economy faster, broader, and more resilient. Without it, systems shrink. With it, they expand.

You don't need to memorize these terms. However, you need to understand that these functions explain *why* money matters and *how* it behaves in various financial decisions. A currency that fails at even one of these jobs loses its usefulness fast. If money can't store value, people rush to spend it. If it can't serve as a unit of account, prices make no sense. If it's not accepted in exchange, it becomes trivia, not currency.

The Traits That Make Money Work

If the functions of money explain what it *does*, then its traits explain *how* it can do those things effectively.

First: **Durability.** Money has to last. If your paycheck dissolved in the rain or your coins rusted through your pockets, it wouldn't make a reliable store of value. That's one reason societies moved beyond salt and silk.

Second: **Portability.** Imagine carrying a cow to pay your taxes. Not ideal. Money needs to be easily transferable and convenient to exchange. Paper and digital forms consistently outperform livestock.

Third: **Divisibility.** You should be able to split money into smaller pieces without losing its function. This is why a dollar breaks into cents, and why barter systems ("I'll trade you five apples for one hammer") don't scale well.

Fourth: **Scarcity.** If money were limitless, it wouldn't hold value. Consider tulip bulbs in 17th-century Holland or hyperinflation in modern Venezuela. When supply explodes, value vanishes.

When something has all four of these traits, we trust it to behave like money, even if it's just paper or pixels. Economists refer to these as the **characteristics of money**. You don't need to memorize the label, but once you've seen them in action, you'll spot why some systems work and others crumble.

Why It Matters Now

This might sound abstract, but it's not academic fluff. It's the foundation for everything else that's coming: Interest, inflation, credit, investment, and debt. None of it makes emotional or intellectual sense without understanding what money is, and what it isn't.

Think of this section as the platform you'll stand on when you look out at the financial landscape. With it, you'll see farther. Without it, everything just looks like math.

Summary

Money is more than paper—it's a social contract. To function, it must act as a

- medium of exchange
- store of value
- unit of account

But for that to work, money must be

- portable
- durable
- divisible
- scarce

This section explores how money evolved into the tool it is today and why we rely on it so deeply.

Exercises

1. What traits make your preferred form of payment feel trustworthy?
2. What happens to an economy when the public stops believing in its currency?
3. Match each function of money to a real-life scenario: buying coffee, comparing prices, saving for tuition.

7.2: How Money Moves

Learning Objectives

1. Explain the role and function of depository and non-depository institutions.
2. Describe common account types and how they facilitate everyday financial activity.
3. Demonstrate how intentional account structures can reduce friction and improve financial control.

Accounts, Institutions, and Access

When Cash Is in Control

Cash gives you access, but that access can feel like chaos when it's unmanaged. A paycheck arrives. Bills go out. There's a late-night charge at a taco truck and a scheduled transfer that hits early. Suddenly, your balance isn't what you thought, and your financial footing feels unstable.

Cash might seem neutral when it just sits there, but how and where it sits matter. When money is scattered across apps and accounts or stashed in physical form, it can't support you. It can only react to you.

Liquidity and Its Limits

Cash is liquid, but liquidity isn't everything. Liquidity means you can use money immediately. But the more liquid money is, the more vulnerable it becomes to impulse, error, or oversight.

A healthy system strikes a balance between liquidity and purpose. That starts with knowing *where* your money lives.

From Concept to Container

Money doesn't just exist; money flows. For that flow to be safe, usable, and meaningful, it requires structure. That structure is provided by financial institutions, which exist to hold and manage money on your behalf.

Broadly speaking, there are two types of financial institutions:

Depository institutions, such as banks and credit unions, accept deposits. They're in the business of holding your money, keeping it safe, and offering tools like checking accounts, savings accounts, debit cards, and personal loans. When most people say they're "going to the bank," this is what they mean. These institutions also provide access to ATM networks, fraud protection, and customer service systems that resolve disputes and help restore access when issues arise.

Non-depository institutions, such as fintech apps, digital wallets, and peer-to-peer platforms, offer financial services, but they don't hold your money directly. They typically act as interfaces or intermediaries. The money may pass through their systems, but it's held elsewhere, often in a partner bank's name, not yours. These tools can be fast, convenient, and useful, but they shift the nature of the trust required.

The difference may feel subtle, but it matters. Depository institutions take custody. Custody brings with it legal obligations, protections, and oversight. Non-depositories provide access and innovation, but without the same guarantees or regulatory framework.

Trust and Regulation: Why It Matters

We didn't always trust banks. In the early 20th century, it was common for people to lose their life savings if a bank failed. There was no safety net, just a handshake promise and a lot of risk.

That changed in 1933, with the creation of the **FDIC**—the Federal Deposit Insurance Corporation. The FDIC insures deposits at participating banks up to $250,000 per depositor, per institution. That means if your bank fails, your money is protected. Credit unions offer similar protection through the **NCUA**—the National Credit Union Administration.

These protections don't make banks infallible, but they do make the system resilient. They allow consumers to trust that a dollar in the bank today will still be there tomorrow, even if something goes wrong behind the scenes. Such trust is rare in global finance, but in the U.S., it is often taken for granted.

Non-Depository Tools: Access, Not Custody

The rise of mobile apps, peer-to-peer payments, and instant checkout options has made non-depository tools more common than ever. But it's worth asking: why do some of these apps *feel* like banks?

Part of the answer is design. They show balances. They let you "send money" or "pay bills." They even offer rewards or link to your debit card. But beneath the surface, they're structured differently. Most don't insure your balances. Many hold funds temporarily or route them through third-party institutions. If something goes wrong, your protections depend on user agreements, not federal law.

Some newer tools mimic features of banks—like deposit accounts or early paycheck access—but don't offer the same protections. Others provide a specific financial function—like Buy Now, Pay Later (BNPL), which splits a purchase into multiple payments—but lack the transparency and regulation of traditional lending. These systems are fast, sleek, and persuasive. But they often come with unclear terms, limited recourse, and little incentive to help you recover from a problem.

This doesn't mean you shouldn't use them, but it does mean you need to know what you're using. Who holds your money? What happens if the app disappears? And how quickly can you recover from a mistake?

Institutions, Interfaces, and the Flow Between Them

Your financial life operates on two layers: *where* the money lives, and *how* you access it. You might store your paycheck in a traditional bank, but interact with it through apps, cards, or platforms that create the illusion of seamless control.

That illusion can break down during a problem, such as a failed transfer, a delayed settlement, or a miscommunication between systems. To navigate this world effectively, you need to understand how transactions actually work.

When you swipe a debit card or tap to pay, you're not completing a transaction; you're initiating one. First, an **authorization is performed to verify that your account has sufficient** funds. Then comes a **settlement**, where the money is actually transferred. In the meantime, a **pending** transaction appears, but it doesn't reduce your actual balance until it is posted.

This time lag is where overdrafts happen. It's why your account can say one thing and your bank says another. Understanding this flow gives you power; it helps you stay ahead of errors, mismatches, and misfires.

Building Flow and Resilience

With the infrastructure clear, you can begin designing a system that supports your financial life. That system doesn't need to be fancy, but it does need to be intentional.

Start by assigning roles: Use a checking account for spending and deposits. Use a savings account for protection and planning. Automate what you can: paychecks, transfers, and minimum payments. Reduce your decision load so that good behavior happens by default.

But no system is perfect. Payments get missed. Cards get hacked. Apps go offline. That's why resilience matters. Turn on alerts. Keep support contact info somewhere offline. Know how to dispute charges. Build a small emergency buffer in a separate account.

Resilience isn't paranoia; resilience is strategy. It keeps the unexpected from becoming unmanageable.

The System Is the Strategy

In personal finance, structure *isn't* the opposite of freedom; it's what makes freedom possible. A well-designed system reflects personal priorities, absorbs distractions, and moves money in a way that supports goals instead of sabotaging them.

You don't need to be wealthy to benefit from structure. Structure is *how* most people build wealth: by automating savings, limiting exposure, managing cash flow, and avoiding catastrophic mistakes.

A strong system builds momentum. A strong system buys time. A strong system empowers you to act with intention rather than react in crisis.

Your money deserves a system. Build one with care, and it will return the favor.

Summary

Cash is the most immediate and visible form of money, yet it is also the most misunderstood. It offers liquidity and control, but without structure, it slips through your fingers. This section shows how to assign purpose to your cash, manage its flexibility,

and avoid letting “just in case” become “just gone.” When you manage your cash intentionally, you manage your options and your stress.

? Exercises

1. What cash habits have helped—or hurt—you in the past?
2. Why might liquidity feel safer than it really is?
3. Design a three-part cash strategy: daily use, short-term buffer, and emergency reserve.

7.3: Credit

Learning Objectives

1. Identify different types of credit and their structural features.
2. Evaluate the costs, risks, and benefits of using credit.
3. Apply maturity matching and credit management strategies to real-life decisions.

Borrowing with Strategy

What Credit Really Is

Simply put, credit is borrowed money. But it's also borrowed trust. When you use credit, you're not just spending money you don't currently have; you're promising to repay it, usually with interest, on a future schedule.

In everyday life, credit smooths the gaps. It allows you to access things, such as cars, education, or even lunch, without having to pay the full amount upfront. But credit isn't free, and it isn't magic. It has structure: principal, interest, terms, and payments. And when misunderstood, it has consequences.

To use credit well, we need to look under the hood.

The Building Blocks: Principal, Interest, Term, and Payment

Every form of credit is built from four core parts:

- **Principal** – The amount you borrow
- **Interest** – The cost of borrowing, expressed as a percentage
- **Term** – The length of time you agree to repay
- **Payment** – The amount due at each interval (usually monthly)

Together, these determine the total cost of credit. The longer the term, the more interest you usually pay. The higher the interest rate, the more expensive it is to borrow, even if the principal seems small.

Understanding these components makes it easier to compare offers, anticipate tradeoffs, and manage repayment without surprises.

Types of Credit

Credit comes in different formats depending on how it's issued and repaid:

- **Installment credit** involves borrowing a set amount and repaying it over time in fixed installments. Mortgages, auto loans, and student loans fall into this category. The terms are clear, the payments are structured, and the debt is paid off over time.
- **Revolving credit** lets you borrow up to a limit, repay what you choose, and borrow again. Credit cards are the classic example. There's flexibility but also risk. Interest is charged on what you don't repay, and balances can persist.
- **Secured credit** requires collateral, an asset that can be reclaimed if you fail to repay. This lowers the lender's risk (and your interest rate), but increases your personal exposure.
- **Unsecured credit** is based solely on trust, including your credit score, income, and credit history. Credit cards, personal loans, and most student loans are unsecured. Because there's no collateral, rates tend to be higher.

Different tools serve different goals. Choosing the right one starts with knowing what you're really borrowing and why.

Cost of Credit: Interest, APR, and Compound Trouble

Interest is the fee you pay to borrow. It's often expressed as an **APR (Annual Percentage Rate)**, which includes not just interest but also fees that affect the loan's actual cost.

Compound interest, especially on credit cards, means you're charged interest on your interest. That's how a $300 purchase can become a $500 balance if paid slowly over time.

Making only the minimum payment may feel manageable, but it dramatically increases the total cost. Your balance shrinks slowly, if at all, and the lender profits while your progress stalls.

Credit Reports and FICO Scores

Your credit behavior is recorded, scored, and shared. That record, your **credit report**, is maintained by three main bureaus: Equifax, Experian, and TransUnion. Lenders report your payments, balances, and account activity to these agencies.

From this data, your **FICO score** is calculated. Ranging from 300 to 850, it reflects your trustworthiness as a borrower. Five core components shape your score:

Payment history (35%)

On-time payments matter most.

Amounts owed (30%)

Also called utilization: how much of your available credit you're using.

Length of credit history (15%)

Older accounts show experience.

Credit mix (10%)

Having both installment and revolving accounts helps.

New credit (10%)

Opening many new accounts at once is risky.

Your FICO score influences what you can borrow, how much it will cost, and whether doors open or stay closed.

Maturity Matching: Timing Matters

Smart credit users align their purchases with how long they expect to take to pay them off. This is called **maturity matching**.

Use short-term debt (like credit cards) for short-term purchases like groceries or fuel. Use longer-term loans (like installment credit) for long-term assets like a car or education.

Problems arise when people mismatch their financial commitments, putting a wedding on a credit card and paying it off over five years, or financing a phone for 24 months when they'll upgrade in 12. You're still paying long after the value has disappeared.

Credit as a Strategic Tool: A Real SWOT Analysis

Let's examine credit with a strategic lens by identifying its Strengths and Weaknesses as well as exploring the Opportunities and Threats (SWOT Analysis) it presents:

	HELPFUL	HARMFUL
INTERNAL	**Strengths** Credit expands access. It helps build financial history, smooth income variability, and offers fraud protection and travel perks. With responsible use, it opens doors to car loans, home mortgages, and even better insurance rates.	**Weaknesses** Credit makes overspending easy. The gap between *what you can buy* and *what you can afford* becomes invisible. Interest can silently grow a balance into something unmanageable.

	Opportunities	Threats
EXTERNAL	Credit can be leveraged for major purchases, used to seize time-sensitive opportunities, or as a buffer in emergencies when cash falls short. Responsible users build positive credit signals without carrying debt.	High-interest debt, late payments, and credit dependency can trap users in long-term cycles of debt. One emergency (job loss, medical issue, identity theft) can drag down a score and raise future borrowing costs for years.

Credit is powerful, but only when used with clarity.

Building and Managing Credit Intentionally

Want to build credit from scratch or intentionally rebuild it? Here's how:

1. **Start with a secured credit card**, where your deposit becomes your credit limit. It's a training tool and trust builder.
2. **Use it monthly for small expenses**, like a streaming subscription or gas, and pay the full balance on time.
3. **Pay in full,** not just because it's responsible, but because it avoids interest, aligns with maturity matching, and sends the strongest signal to lenders.
4. **Keep your utilization low.** If you have a $1,000 limit, don't carry $700. Stay under 30%, ideally under 10%.
5. **Don't open too many accounts at once.** Every inquiry is recorded, and excessive activity can spook lenders.
6. **Use autopay wisely,** not just to avoid late fees, but to build consistency. If you're forgetful, automation is your ally.

Finally, check your credit report once a year at AnnualCreditReport.com (www.annualcreditreport.com). It's free, it's your history, and it helps you spot errors before they become problems. Your credit history is a portrait of how you manage your financial commitments. Make sure the picture is one you're proud of.

Summary

Credit is borrowed trust, not free money. It lets you act today using tomorrow's income, but that power comes at a cost. This section breaks down principal, interest, and repayment terms, introduces the FICO system, and compares credit structures. Readers explore how to use credit as a lever, not a trap, and how alignment, visibility, and responsibility shape long-term outcomes.

Exercises

1. What kind of credit do you already use? How does it shape your daily decisions?
2. What makes it hard to pay off a credit card once it starts carrying a balance?
3. Compare snowball vs. avalanche payoff methods. Which feels more motivating and why?

7.4: Savings

Learning Objectives

1. Describe why savings matter and how they protect your future self.
2. Differentiate between types of savings goals, tools, and strategies.
3. Design a layered savings strategy that aligns with your personal time frames, risk tolerance, and liquidity needs.

Paying Your Future Self

Why Save at All?

Let's start with a harsh truth: saving isn't natural. Our brains are wired for now - today's hunger, today's stress, today's temptation. So when we talk about savings, we're talking about rewiring your instincts in favor of your future self.

Think of savings as a financial time machine. It allows you to transfer money from a period when you have more than you need to a time when you might not have enough. It's how you buy groceries in July with dollars you set aside in March. It's how your fall tuition gets covered by your summer job.

Saving isn't just responsible, it's powerful. It turns uncertainty into options. It gives you room to breathe. It means your next unexpected expense doesn't have to become your next unplanned debt.

And let's be clear: S**aving is not the same as investing**. Savings are for stability. Investments are for growth. This section focuses on savings stability, but we'll talk about investing soon.

What Are You Saving *For*?

Not all savings are created equal. To make it stick, you need to connect your dollars to your goals. That's where buckets come in:

Emergency savings

For the flat tire, the lost shift, or the dental surprise

Short-term savings

For upcoming expenses: travel, textbooks, tech upgrades

Long-term savings

For dreams that need time: a house, a sabbatical, a business launch

When you name your goals, your savings start to feel less like a sacrifice and more like a strategy. You're not depriving your present - you're funding your future.

Where Does the Money Go?

Once you know *why* you're saving, the next question is *where to save*. Different tools are designed for various timeframes, levels of access, and risk levels. Let's explore the most common options:

Basic savings accounts

Safe and easy to access. Insured by the FDIC or

High-yield savings accounts

Typically online only. Same

Money market accounts

Like savings, but with limited check-writing

Certificates of Deposit (CDs)

Lock your money away for a fixed time. In

NCUA. Low interest, but low risk.	safety as basic savings, but better returns.	and higher minimum balances. Slightly better interest.	return, you receive a higher rate, but can't access the funds without incurring a penalty.

Each of these tools exists on a spectrum of **liquidity** (how quickly it can be accessed) and **yield** (how much it earns). In economic terms, we might say these tools express an inverse relationship between access and return. That's not a fluke; it's the price of patience.

This tradeoff is central to understanding your savings strategy, as your timeline influences your risk tolerance. If you need the money tomorrow, you can't afford to chase high returns. However, if your goal is a year or more away, you may be willing to accept some constraints in exchange for a little extra growth.

Laddering and Layering: Strategy in Action

One way to optimize yield without giving up all your liquidity is through **laddering**. This involves spreading your money across CDs with staggered maturity dates. For example, you put

- $500 in a 6-month CD
- $500 in a 12-month CD
- $500 in an 18-month CD

Every six months, one CD matures, giving you the option to access the cash or reinvest. Over time, this provides you with rolling access without compromising the benefits of longer-term returns. This practice mirrors a basic finance principle: reduce reinvestment risk by spreading out your decisions over time.

Layering, meanwhile, means thinking about savings like a pyramid:

- The **base layer** is your emergency fund - liquid and stable.
- The **middle layer** is short-term savings for upcoming expenses.
- The **top layer** might include CDs or money market accounts that serve longer timelines.

This layered structure reflects both purpose and priority: what is urgent, what is upcoming, and what is aspirational. It also introduces a key academic concept: the **hierarchy of needs in relation to liquidity planning**.

How Much Should You Save?

The internet loves throwing out numbers: Ten percent of your income, three months of expenses, $1,000 emergency cushion. And while those are all reasonable targets, the honest answer is more personal.

Start with what you *can save*, not what you *should save*. Automate what you can. Ten dollars a week is better than zero. Two dollars from every twenty dollars counts. It's not about reaching perfection; it's about building momentum.

And don't fall into the all-or-nothing trap. Saving doesn't mean you can't spend. It means you *choose* when to spend and on what.

As your goals grow, so can your strategy. At that point, we start to ask more technical questions: What's your timeline? What's your tolerance for delay? How will inflation or opportunity cost affect your decision? These questions aren't just academic; they shape real behavior.

Saving Isn't Passive - It's a Practice

Here's the paradox: Savings feel static, but they're dynamic. They reflect your values, your priorities, and your planning. Saving is a verb. It's something you *do*, even when you're not doing it consciously.

That's why systems help. Automation, buckets, visual reminders, and separate accounts are all systems that can be utilized. Anything that reduces friction, protects your goals, and makes it easier to say "yes" to your future self is a system you should

consider.

One day, your future self will face a challenge, an opportunity, or a turning point. You'll either have the resources to act or the regret that you didn't prepare. And that's what savings are: **a message in a bottle to the person you're becoming.**

Summary

Savings are an act of self-respect. It is an intentional investment in your future stability and freedom. This section reveals how to:

- align savings goals with timelines
- choose the right tools
- and develop habits that stick

Reframe savings not as a restriction, but as a form of resilience.

Exercises

1. What savings goals have you had in the past, and how did you pursue them?
2. What makes it hard to save consistently? Is the issue income, habits, or clarity?
3. Create a short-term savings plan by defining the goal, target amount, timeline, and account type.

7.5: Debt

Learning Objectives

1. Explain how debt structures repayment and interest over time.
2. Evaluate the cost and value of different types of debt.
3. Develop a strategy for managing or escaping high-interest debt.
4. Interpret the legal and financial implications of bankruptcy.

Digging In and Climbing Out

What Debt Really Means

Debt is money you've already spent, or promised to spend, without yet paying for it. It's the opposite of savings. Instead of giving your future self a gift, debt hands them a bill.

But debt isn't always a mistake. It's a tool, just like credit. And sometimes, it's the only way forward. Few people can buy a house, pay for college, or cover emergency surgery without borrowing. The danger isn't in using debt, it's in using it without understanding what it costs.

Debt always comes with strings. It creates an obligation, adds pressure, and limits flexibility. When used well, it can move your life forward. When misused, it can pin you in place.

How Debt Works (and Grows)

Every debt has three core parts: principal, interest, and term. Together, they shape your repayment. Most debts are paid off in monthly installments, which blend interest and principal.

Early in a loan, the majority of your payment goes to interest. Over time, this shifts, and more of the balance is allocated to the actual balance. This structure, called amortization, is predictable but often misunderstood. The borrower sees a payment going out, but the balance barely moves. That disconnect is built into the system.

Amortization tables show how this works. They list each payment, breaking it down into interest and principal. Understanding this table helps you see where your money is really going and how long you'll be in repayment.

Miss a payment, and things get worse. Late fees will apply and interest compounds. Your total cost grows. In academic terms, this isn't just a payment problem; it's a cost acceleration curve.

Good Debt, Bad Debt, and Real Life

There is a popular idea that some debt is considered "good" (such as student loans or mortgages) and some is considered "bad" (like payday loans or maxed-out credit cards). But real life is more complex.

The true measure of debt is **value over time**: What you got, what you paid, and whether the payoff justifies the pressure. Debt isn't just about interest rates; it's about outcomes.

We evaluate debt not only by its APR, but also by its **opportunity cost**, or what else those payments could be used for. A 7 percent car loan might be worth it if it helps you get to a job that pays well—but financing a luxury item that depreciates quickly? That's often just future stress disguised as a lifestyle upgrade.

When Debt Gets Out of Hand

Debt becomes dangerous when it outpaces your income, your planning, or your awareness. The warning signs aren't always dramatic; they're subtle at first. Using credit for essentials, skipping one bill to pay another, and dreading reading your account balances all signal impending financial trouble.

Academic frameworks refer to this as a **debt spiral,** where interest and fees grow faster than your payments can reduce the balance. Even when you're making progress, it can feel like you're standing still.

The earlier you intervene, the more options you have. Intervention isn't about shame, it's about strategy. That might mean contacting lenders, consolidating balances, or speaking with a nonprofit credit counselor.

The system isn't designed to call a timeout. You have to press pause yourself.

Climbing Out: Structure Over Shame

Getting out of debt isn't about guilt or grit, it's about structure. The right plan creates momentum. The wrong one creates exhaustion.

Start by listing every debt, including the balance, rate, payment, and due date. This gives you a map. From there, you can apply one of two major strategies:

Snowball

Pay off the smallest debt first for quick wins and motivation

Avalanche

Pay off the highest-interest debt first for long-term savings

Neither is "right," but they solve different problems. One builds a habit. The other saves money. Many students succeed by starting with a snowball strategy and then transitioning to an avalanche strategy as their confidence grows.

While you pay down debt, don't forget about **sinking funds**. A sinking fund is a mini-savings account set aside for *anticipated* expenses. Without them, you risk sliding back into borrowing.

Bankruptcy: Last Resort or Fresh Start?

For some, debt becomes mathematically impossible to repay. Even if you're making monthly payments, interest and fees may grow faster than your ability to reduce the balance. Imagine owing $20,000 with a 24 percent interest rate and only making minimum payments; it would take decades and cost thousands more than you borrowed.

At that point, bankruptcy becomes not just a legal option, but a necessary reset. However, like any reset, it has structure, and that structure matters.

There are two main types of personal bankruptcy in U.S. federal law:

Liquidation

Chapter 7: This process erases most unsecured debts after nonexempt assets are sold. It's fast, but not everyone qualifies. There's a means test based on your income.

Reorganization

Chapter 13: You keep your property and repay some or all of your debts through a court-supervised payment plan over 3–5 years. It offers structure for people with steady income who need breathing room.

The key legal term is **discharge**, a court order that erases qualifying debts and prevents creditors from trying to collect them. Some debts, such as recent taxes, child support, and most student loans, are not eligible for discharge.

Bankruptcy remains on your credit report for 7 to 10 years; however, its impact begins to fade earlier than most people think, especially if you establish good habits for rebuilding your credit. Bankruptcy is serious but survivable. It is not a character flaw. It is a legal tool designed to give people a second chance.

Debt-to-Income Ratio and the Limits of Leverage

In lending, one of the most important indicators is your **Debt-to-Income (DTI) Ratio,** which is calculated by dividing your total monthly debt payments by your gross monthly income. Lenders use it to determine whether you can afford to take on new debt.

But DTI isn't just for lenders. It’s for you. It's a mirror. If your DTI climbs above 36 percent, your budget is under pressure. Above 50 percent, you're likely robbing one category to cover another. At that point, debt stops being a tool and starts being a cage. When DTI rises, other things shrink, such as your ability to save, seize opportunities, and get a good night's sleep. A high DTI doesn’t just limit your loan options. It limits your life options.

Understand your DTI: How amortization slows your payoff early, how compounding punishes delay, and how opportunity cost shifts the true value of debt. These aren’t advanced theories. They’re survival skills.

Summary

Debt is more than borrowed money. It’s a commitment shaped by:

- structure
- time
- and consequence

This section examines how debt accumulates, accelerates, and how to manage or overcome it. Students learn to recognize early warning signs, evaluate repayment strategies, and understand the legal framework of bankruptcy. With the right tools, debt becomes navigable, and even reversible.

Exercises

1. What role does interest play in your current or past debt decisions? How did you understand it at the time?
2. If you had to restructure your current debt today, what would your strategy be?
3. Calculate your own DTI. What would that number say to a lender, and what does it tell you?

7.6: Planning Forward

Learning Objectives

1. Synthesize knowledge of cash, savings, credit, and debt into a personalized financial plan.
2. Evaluate your current financial situation and align your money tools with your future goals.
3. Develop a resilient, values-based plan for ongoing financial decision-making.

Putting It All Together

It's A Map, Not a Script

Personal finance doesn't come with a finish line. It's not a perfect sequence or a one-size-fits-all plan. What you've learned so far isn't a script to follow; it's a map to navigate. Cash, savings, credit, and debt are not separate chapters in your life. They're interconnected systems that shape how you move through the world.

This section will help you step back and connect the dots. You cannot predict an imaginary future where you're always prepared, perfectly disciplined, and never surprised; however, you can start building a reliable plan that will fit your actual life.

Start Where You Are

Before you plan forward, you have to take inventory. That means getting honest about your current state:

- How much cash do you have on hand?
- What are you saving for, and where does that money live?
- What credit do you have access to, and how are you using it?
- What debt are you carrying? What's the interest rate? Are you paying it down or just keeping it afloat?

You should not make judgments, but you should seek clarity. This is your financial snapshot. And it's the foundation of every move that follows.

Align Your Tools with Your Timeline

Different financial tools serve different time horizons. Once you've mapped where you are, you can start aligning your habits with your goals:

Cash	Savings	Credit	Debt
For immediate access (next 30 days)	For short to medium-term goals (3–12 months or more)	As a buffer or accelerator (but not a crutch)	Only when the value it *creates* is outweighed by the cost you *pay*

Planning is really about **assigning time to money**. That's how you reduce stress, increase flexibility, and build toward the life you actually want.

Design Your Flow

Planning isn't just about what you earn; it's about how money moves through your life. Start simple:

- What comes in each month?
- What goes out (needs, wants, debt payments, savings)?

- What gets stuck or lost in the cracks?

From there, you can start shaping a rhythm:

- Automate savings where possible
- Schedule bill payments to avoid late fees
- Set calendar reminders for financial check-ins

This isn't about micromanaging every dollar. It's about creating a **structure that supports your values** and reduces decision fatigue.

Plan for the Unexpected (and the Inevitable)

No plan survives contact with real life. But good plans bend instead of breaking. That's where emergency savings, flexibility, and habit formation play a crucial role.

You will face unexpected expenses. You will get tired of being responsible. You will be tempted to ignore it all.

That's why your plan doesn't need to be airtight. It needs to be resilient. It needs to be something you can return to, revise, and recover from.

You're not aiming for perfection. You're aiming for momentum, alignment, and the ability to act with intention.

Because in the end, personal finance isn't about having all the answers. It's about asking the right questions and having a system in place when the answers change.

Summary

This final section connects the dots. Personal finance isn't a checklist; it's a living system. Here, students learn to treat cash, savings, credit, and debt not as isolated topics, but as parts of a dynamic plan. By inventorying their current status, aligning tools with timelines, and designing intentional money flow, students shift from passive reactors to active planners.

Financial planning is less about perfection and more about rhythm, revision, and resilience. The section closes with a powerful reframing: you're not building a flawless plan. You're building the capacity to adapt when life surprises you.

Exercises

1. Can you describe how cash, credit, savings, and debt interact in your current life?
2. What part of your financial life do you currently avoid thinking about? What would change if you gave it more attention?
3. Draft a simple 30-day cash-flow statement: estimate your income, fixed expenses, variable expenses, and any planned savings or debt payments. What patterns do you notice?

CHAPTER OVERVIEW

8: Consumer Strategies

This chapter examines the overlooked yet consequential moments that precede and follow a purchasing decision. We explore how consumer behavior is shaped by psychological, environmental, and design factors, often outside conscious awareness. By tracing the arc from impulse to intention, this chapter provides critical tools to analyze, interrupt, and reshape spending patterns toward greater agency and alignment.

8.1: Framing the Terrain
8.2: Seeing the Field
8.3: In the Tunnel
8.4: After the Swipe
8.5: Tools Before the Transaction
8.6: Tools After the Transaction
8.7: Reactivation
8.8: Consumer to Strategist

8.1: Framing the Terrain

Learning Objectives

1. Recognize common psychological and interface-based tactics used to influence consumer decisions.
2. Describe the concept of agency in consumer behavior and its importance in financial decision-making.
3. Identify examples of nudges, dark patterns, and sunk cost fallacy in real-life transactions.

The Invisible Hand at the Checkout

Alex thought he was just buying lunch. Jordan thought she was just signing up for a free trial. Neither expected to be nudged, steered, or subtly manipulated. But nearly every purchase we make, whether online or offline, is shaped by forces we rarely see: pricing psychology, interface design, cognitive bias, and even the fine print of legal agreements.

Tactics Hiding in Plain Sight

Have you ever bought something just because it was "on sale," only to wonder later if you needed it at all? Tried to cancel a subscription, only to find the "Cancel" button hidden or oddly difficult to reach? Felt a vague urgency to act on a "limited time" deal, even when there was no clear deadline? You are the consumer. The entire economy revolves around your choices. And yet, many of those choices were predicted long before you made them. That contradiction (central, yet manipulated) is the heart of this section.

These aren't coincidences. They're strategies, some ancient and some coded into algorithms and user interfaces. They include dark patterns and designs that trick rather than help. They rely on powerful psychological tendencies, such as the sunk cost fallacy, which causes us to stick with bad deals simply because we've already invested something. All are crafted to influence your decisions.

What This Chapter Is (and Isn't)

This chapter isn't a buyer's checklist or a lecture on frugality. It's a map: a way to recognize how consumer environments are constructed and how you can move through them without losing your bearings.

We'll walk through core ideas, including information gaps between the seller and buyer, the true cost of ownership beyond the price tag, and the subtle signals that guide you toward specific outcomes. We'll also examine how design choices and psychological framing can influence actions in ways that appear to be free will but often aren't. Along the way, we'll develop a deeper understanding of agency. **Agency** is your ability to make informed, intentional choices about your money, despite the noise, pressure, or design nudges around you. It means understanding the options, recognizing the influences, and acting in a way that reflects your priorities, not just the path of least resistance.

Sharpening Your Tools

We'll offer something more than awareness: research habits, critical reading, digital hygiene, and, above all, conscious and empowered choice. You're up against a system designed to steer you. But with the right mindset and tools, you can steer back.

Summary

This section introduces the often-hidden forces of pricing psychology, interface design, and cognitive bias that shape consumer decisions. It positions the student at the center of an economic system built to predict and steer choices, while offering the concept of **agency** as a counterbalance. Through real-world examples and careful definitions, the chapter begins to build a vocabulary for understanding financial influence and resisting it through awareness and critical thought.

Exercises

1. List three situations from your own life where you felt subtly influenced during a purchase. Try to name the specific tactic used (e.g., urgency, default settings, interface friction).
2. Why do you think sellers often make the "Cancel" button hard to find or the "Upgrade" button extra shiny? How does this affect your sense of control?

3. Find and annotate an online shopping page or subscription sign-up form. Mark elements that reflect psychological nudges or dark patterns. What alternatives could create a more agency-driven experience?

8.2: Seeing the Field

Learning Objectives

1. Identify key design choices in the consumer environment that influence purchasing decisions.
2. Explain the concept of information asymmetry and how it shapes consumer-seller dynamics.
3. Recognize how awareness of influence and asymmetry can serve as a foundation for strategic consumer behavior.

Why is that cereal on the middle shelf?

Alex reached for the granola, which had a big red banner shouting "Heart Healthy." Jordan grabbed the bottle labeled "Dermatologist Recommended." They weren't just choosing products; they were responding to cues engineered to catch their attention. Store layouts, shelf placement, package design, even color and lighting are chosen not just to inform, but to influence.

That cereal is on the middle shelf because most shoppers don't scan the whole shelf space. Eye-level placement commands more attention, which drives more sales, and justifies the higher cost. Sugary cereals aimed at kids are placed at their eye level. Staple items may be shelved high or low, depending on whether they're expected to sell regardless of their placement. And the candy at the checkout line? That's impulse marketing at work.

These signals form what we might call the "decision environment", the context in which consumer choices take place. That environment isn't neutral. It's designed.

The Landscape of Influence

As consumers, we make our own choices, but rarely do we do so in isolation. The options we see and the way they're presented shape our decisions in ways that feel natural, not forced. "Limited-time" offers create artificial urgency. "Best value" tags signal approval without any third-party verification. All of these tactics influence what we choose and how we feel about it afterward.

This is the visible layer of consumer strategy, but beneath it lies something more profound and less obvious.

Information Asymmetry: Who Knows What?

Not all parties enter into a transaction with the same level of knowledge and understanding. This imbalance, known as **information asymmetry**, favors the party with more information. The seller may be aware of a product's long-term durability, the likelihood of price changes, or the existence of better alternatives. The buyer usually only knows the bullet points on the box.

Sellers know that most products won't fail within the covered period, but they urge customers to buy extended warranties. Most private-label items are made in the same factories as name-brand goods. Apartment listings may deliberately omit essential details. In each case, the side with more information holds the advantage. It shapes contracts, pricing, warranties, and return policies. It can lead to frustration, regret, or worse, entrapment in a deal that never favored the consumer from the outset.

Understanding these gaps is a turning point. When you recognize the asymmetry, you gain a competitive advantage. You begin to see the transaction not just as a choice, but as a negotiation. A negotiation that favors the prepared.

Strategy Starts with Sight

To navigate this landscape, you must see it clearly. Not just what's being sold, but how, where, and under what conditions. You don't have to memorize tricks or traps; you just have to realize they exist. And that awareness begins to tip the balance back in your favor. Influence isn't the enemy. It's the architecture. And learning to read that architecture is the first step toward making it work for you.

Summary

The environment in which we make purchasing decisions is rarely neutral. From shelf placement to urgency cues like "limited-time offers", consumers are constantly influenced by subtle design choices. This architecture of influence, what we call the *decision environment*, is carefully constructed to guide attention and behavior.

At a deeper level, *information asymmetry* defines many consumer transactions. One party, often the seller, holds significantly more knowledge than the buyer, including information about product quality, alternatives, or the actual value. This imbalance influences everything from pricing to post-purchase satisfaction.

Exercises

1. Can you recall a recent purchase where the layout, packaging, or labeling influenced your choice? What details stood out?
2. How might your decision-making change if you assumed that the most prominently placed product wasn't necessarily the best choice?
3. Explain information asymmetry in your own words. Then provide an example (outside of those listed) where one side in a transaction has significantly more knowledge than the other.

8.3: In the Tunnel

Learning Objectives

1. Identify common persuasive design elements used during the buying process.
2. Distinguish between dark patterns and social engineering, including their overlapping characteristics.
3. Apply awareness techniques to recognize and resist subtle manipulations in real-world purchase tunnels.

Why do I feel pressure to buy something I wasn't planning to?

Alex stood frozen at the checkout screen, watching the seconds tick down on a flashing "special offer." Jordan had clicked "accept" on an app's terms without reading a word, just to get through the signup. It wasn't that they lacked agency; they just didn't realize how many decisions were being steered.

Inside the "tunnel" of decision-making, consumers move from noticing to considering to committing. But this tunnel isn't just a helpful metaphor for sequence. It's a deliberately engineered space. It narrows your vision, accelerates your pace, and distracts your attention at just the right moments.

Scarcity, Urgency, Defaults

The sense of pressure often starts with scarcity ("Only two left in stock!") or urgency ("Offer expires in 10 minutes!"). These cues activate psychological reflexes rather than rational evaluations. We fear missing out more than we value careful comparison.

Defaults, too, play a subtle role. Pre-checked boxes opt you into services. Suggested tips start at 20 percent. Free trials convert automatically unless cancelled. None of these is accidental. These decisions are made on your behalf, unless you actively change them.

Layers of Influence

Some tactics exploit the sunk cost fallacy: Once we've invested time or effort, we feel compelled to continue. That's how "free" trials become paid subscriptions, or complicated return processes make us give up. Others lean on social proof ("This item is trending!") or authority ("Experts recommend…") to override hesitation.

Familiarity also works in the seller's favor. Brands echo previous purchases. Interfaces mimic trustworthy designs. Even the tone of the language ("just one step left!") reduces resistance. These aren't sinister in isolation. But when layered, they create a tunnel that guides rather than informs.

When Choice Isn't Clarity

Ironically, having more choices can mean having less clarity. When faced with too many options, we default to what feels familiar or easy. The illusion of abundance can feel empowering. However, it often masks the absence of meaningful choice. We're choosing among pre-framed alternatives, not building our own.

There isn't always a bright, clear line between dark patterns and social engineering.

Dark Patterns	Social Engineering
User Interface (UI)-based manipulation	Human interaction-based manipulation
Often automated and subtle	Often direct and personal
Exploits cognitive bias	Exploits trust, fear, and urgency
Common in e-commerce, sign-ups	Common in phishing, scams

They often overlap. An urgent CTA (call to action), plus a default opt-in, and a confusing layout indicate a UI dark pattern. A customer service rep who nudges you with false authority or fake consensus is using social engineering. We don't need to assign malice to every tactic; however, it's worth recognizing how these patterns shape outcomes, often in ways we don't consciously register.

Light in the Tunnel

Awareness breaks the spell. When you notice urgency cues, you can pause. When you recognize defaults, you can opt out. When you feel pressure, you can ask why.

You can still make quick choices, but now they're informed. You can trust your instincts, but now they're sharpened. Seeing the tunnel doesn't mean abandoning convenience. It means walking through it with your eyes open.

Summary

Urgency cues, scarcity messaging, and default settings are part of a design playbook that exploits how we think. These tactics often trigger our instincts rather than our reason. Other layers, such as social proof or sunk cost manipulation, deepen the influence without ever appearing coercive.

The line between a clever interface and a manipulative one can blur. Dark patterns operate through UI; social engineering relies on human cues, but both aim to steer behavior. Recognizing these influences doesn't require paranoia. It requires clarity.

Exercises

1. Can you list three tactics you've encountered that pressured you into buying faster than you intended?
2. Why does having *more* choices sometimes feel *less* empowering?
3. Contrast a dark pattern with a social engineering tactic using your own examples. Where do they overlap?

8.4: After the Swipe

Learning Objectives

1. Describe how the psychology of payment methods influences post-purchase satisfaction.
2. Recognize key elements of choice architecture and their effect on decision-making.
3. Use reflection as a post-purchase tool for identifying misalignment between values and actions.

That Didn’t Feel Right

Alex gripped the bag that contained his new wireless earbuds. He’d needed replacements, but not this model and not at this price. Meanwhile, Jordan stared at her receipt from a quick trip to the pharmacy. "I only meant to grab toothpaste," she said. "Why am I holding a bag with $34 of products?"

Neither could quite retrace their steps. The decisions had been made quickly, without friction, and somehow felt off. What had just happened?

Why do some purchases feel worse after the fact?

The cart is full. The card has been tapped. And yet something lingers: doubt, regret, or the vague sense that you were nudged, not convinced. This feeling isn’t rare. It’s a signal. One worth decoding.

Digging Deeper

From Barter to Bitcoin: The Disappearing Pain of Paying

Long before receipts and checkout counters, we exchanged goods face-to-face. Barter had weight, visibility, and tactile closure. Coins and bills continued this pattern. When you handed over cash, you felt the loss. That jolt wasn’t just economic; it was psychological. It created a pause, a friction.

Now, consider a modern transaction. You tap a phone or a card. Nothing leaves your hand. No weight changes in pockets and no coins clinking. The pain of paying has become a whisper.

This shift isn’t trivial. Digital payments, especially contactless ones, make us more likely to spend and less likely to reflect on our actions. We’re not irrational. We’re just human. When the cues of cost disappear, so does some of our restraint.

Framing, Not Forcing

Marketers don’t need to deceive to shape outcomes. They just need to frame choices. A product can be priced at $99 instead of $100 to seem cheaper. A payment can be broken into four "easy installments" to make it seem less significant. A luxury option can be placed beside a basic one to make the mid-tier feel "just right." None of these tactics is inherently dishonest, but they operate below the level of deliberate thought. They shape our perception of value, urgency, and effort. They make the path to purchase feel smoother, even when it should be steep.

That’s what economists call **choice architecture**, designing the environment in which decisions are made. And the more seamless the experience, the less likely we are to pause and reflect.

The Emotional Echo

Regret isn’t always about cost. It can stem from speed, surprise, or misalignment. "Why did I do that?" often means "That didn’t match what I really value." This is where reflection becomes a tool, rather than a punishment. If you regret a purchase, don’t just vow to “do better.” Ask what made the decision feel off. Was it the pace, the pressure, the framing, or the payment method?

Even noticing the pattern is progress.

Post-Decision Agency

Agency doesn’t end with the purchase. Many transactions include return policies, trial periods, or customer service paths. Knowing your rights isn’t just a bureaucratic matter. It’s empowering. The fine print may hide levers you can still pull.

Alex checked the retailer’s site and saw he had a 30-day window to return the earbuds. Jordan realized the toothpaste was $4, but the extra items, snack-size, impulse-priced, and unavoidable, had been strategically placed near the register. That realization alone

gave her pause.

Even when a purchase is final, the insight isn't wasted. Every decision is a data point. Together, they form a pattern, one you can study, adjust, and refine.

Reflection, Not Rumination

Here's the key: regret isn't failure. It's feedback. The goal isn't to eliminate mistakes, but to learn from them quickly and kindly. That learning sharpens instincts, not just intellect. It informs the next tunnel, the next choice, the next tap.

Seeing a pattern isn't the same as being trapped in one. And noticing friction, even after the swipe, is one way we regain traction.

Ready to Reflect?

Before you move on, ask yourself:

- What recent purchase left you feeling uncertain?
- What influenced your decision in the moment?
- What could you do next time—pause, ask, compare?

Commit to one small change. Write it down. That's your **paper trail**, your record of progress, not perfection.

Summary

Frictionless payments have reduced our natural defenses. From coins to contactless, the evolution of money has softened the "pain of paying." Today, purchases are quick, silent, and often invisible, removing important cues that once gave us pause for thought. The result is a growing gap between our intentions and our actions.

Choice architecture shapes how we spend. Marketers frame decisions through

- price anchoring
- installment payments
- product placement

Post-purchase regret presents an opportunity for reflection. Every purchase is a data point. Noticing patterns equips us to pause, ask better questions, and build traction for future decisions:

- when
- how
- why we buy

Exercises

1. Can you recall a recent purchase that felt "off"? What details do you remember about how it was presented or paid for?
2. In what ways has paying with a card or phone changed your sense of spending compared to using cash?
3. Identify two examples of **choice architecture** from your daily life. How did they influence your decisions?

8.5: Tools Before the Transaction

Learning Objectives

1. Define the role of friction, nudging, and digital hygiene in consumer behavior.
2. Identify pre-transaction cues that affect decision-making.
3. Apply intentional pauses before spending using specific techniques.

Before the Swipe

Alex stood in line at a checkout kiosk, holding a pair of noise-cancelling earbuds that had caught his eye near the front of the store. Jordan, a step behind with her own basket, leaned in. "Did you mean to buy those?" she asked, raising an eyebrow.

Alex shrugged. "Honestly, they weren't on my list. But I've been thinking about getting some. These were just there. Right price, decent brand. Seemed easy."

But maybe it was too easy.

The Pre-Transaction Space

Buying, in the modern age, has become frictionless by design. Tap-to-pay, autofill, and buy-now-pay-later all enable action before reflection. This isn't a conspiracy. But it is a system that benefits when you move quickly and uncritically.

What if we paused? Not indefinitely, but just long enough to think.

Most consumer strategy conversations focus on what happens during the purchase process. What option to choose and how to evaluate value. But there's a decisive moment that comes before that. It's the space *before* you click, tap, or swipe. A moment that, when used well, can transform your role in the transaction. That moment is where tools like **nudging awareness**, **digital hygiene**, and **frictionless design** come into play. Before we break those down, let's anchor their purpose.

The goal isn't to stop you from spending. It's about shifting how you think in the moment before you act and recognizing when the terrain is shaped to prompt a reflex rather than a reflection. It is about replacing reaction with reason.

Friction as a Feature

Convenience is often marketed as freedom, but excessive ease can dull one's awareness. When you hand over physical cash, you feel the cost. You register the transaction. Tap-to-pay and autofill options sever that tactile link. The result is less pause, less deliberation, and more impulse. That's why friction is worth designing in. Turning off one-click, removing stored cards, and closing the tab create deliberate friction. These small hurdles aren't annoyances; they're anchors. Each one asks, "A*re you sure?"* They do not block your path; they bring light to it.

Nudging Awareness

Not all influences are manipulative; however, many are designed to tilt you forward toward "yes." Countdown clocks, low-stock warnings, and prominent "buy now" buttons in a bold, contrasting color are not accidents. In behavioral science, these tactics are referred to as **nudges**. They don't remove your choices. They steer your attention and framing.

Nudges aren't inherently bad. A calorie count on a menu is a nudge. So are reminders to save or recycle. However, when nudges cluster without transparency, they create a slope, one that makes it easier to act now and more complicated to reflect later. These cues can signal when to slow down and approach the transaction with deliberation and intent.

Digital Hygiene

Most of us are familiar with the concept of digital hygiene, particularly when it comes to passwords and privacy. We spend time clearing cookies, using strong credentials, and avoiding phishing. However, there's also a consumer-facing version.

Digital hygiene for purchases means

- Pausing before clicking checkout
- Closing the tab and returning later
- Using a list and sticking to it
- Turning off one-click buying, where you can

- Reading the fine print on subscriptions and returns

These aren't huge moves. But they break the speed of the cycle. And speed, more than anything, is what many digital storefronts rely on.

A Better Way to Pause

Not every decision needs deep deliberation. However, repeated exposure to seamless transactions can train the brain to make shortcuts in every decision. When that happens, we lose not just money, but insight.

One powerful technique? The **micro-journal.** It's not a diary. It's a 20-second log. What did I just buy? Did I mean to? What was I feeling before and after? What nudges did I notice? With just a few entries, patterns emerge: purchases triggered by boredom, late-night doomscrolling, or emotional reward. That awareness becomes its own kind of friction. It is protective, and not punitive.

Framing, Not Forcing

As consumers, we ultimately make our own purchase decisions. The options we see and the way they're framed may exert a powerful influence. But influence isn't the same as compulsion. The system wants you to move fast. You don't have to. Tools like nudging awareness, friction, and digital hygiene don't eliminate convenience. They restore intention.

Summary

Modern purchases occur quickly—sometimes too quickly for deliberate thought. By focusing on the moment *before* a transaction, we can reclaim space for reflection, intention, and better decision-making. Tools like friction design, nudge awareness, and digital hygiene aren't obstacles—they're safeguards that slow the loop and protect your agency.

Key ideas to remember

- Speed favors impulse; friction favors insight
- Nudges shape choices—but awareness restores control
- Digital hygiene reduces clutter and creates clarity
- A simple journal can turn regret into recognition

Exercises

1. What common nudges or cues have influenced your spending in the last week?
2. Think of a recent purchase. What would've changed if you had waited 24 hours?
3. Set up one piece of intentional friction in your most-used shopping platform. What effect does it have?

8.6: Tools After the Transaction

Learning Objectives

1. Reflect on individual purchases to identify emotional and contextual triggers.
2. Differentiate between reactive and proactive spending tools and apply them to personal finance behavior.
3. Develop a personal strategy for integrating reflection into everyday financial habits.

After the Swipe

For Alex, the earbuds didn't break the bank. But later that night, he wondered, *"Did I really need those?*" Jordan, curious too, asked what made them appealing right then, right there. Was it the brand, the price, or the placement? The answer didn't matter as much as the process of asking, because every purchase tells a story. The more of those stories you collect, the more clearly you see the patterns behind your decisions.

That's the heart of reflection - **to reflect, recognize, and refine**. It's not about guilt. It's about insight.

The Reflective Toolkit

To build agency, you need more than awareness. You need tools not just to stop spending, but to understand what drives your spending. When do you spend and why? Below is a flexible toolkit designed to match your rhythm - daily, weekly, monthly, or whenever the moment feels right.

Each tool is simple in design but rich in potential. Use them to reveal your patterns, gently challenge your defaults, and shape a more deliberate relationship with your money.

1. Immediate Reflection (Same-Day Tools)

The tools in this group aim to capture the *why* behind a purchase while the memory is still fresh. When used on the same day, they help preserve the emotional and contextual cues that shaped the decision, not to judge or justify, but to document and better understand your spending behavior in real-time.

Micro-Journal

A 20-second log. What did I buy? Did I mean to? What was I feeling before and after? What nudges did I notice? Over time, these small notes stack into significant insights.

Swipe Story

Record a quick voice note or short narrative. What led to the purchase? What emotion or event preceded it? The story reveals its structure through moments of tension, resolution, or routine.

One-Sentence Audit

Write one sentence to explain each discretionary purchase. If you hesitate, that's your insight. You're not looking for a defense, you're creating clarity.

These tools sit close to the moment of decision. They help you remember, not rationalize.

2. Pattern Recognition (Weekly Tools)

These tools are designed to help you recognize patterns and adjust course. By stepping back once a week, you can shift focus from isolated transactions to the habits and triggers that shape your overall spending behavior.

Theme Tracker

Label your purchases as joy, boredom, social pressure, or utility. Look for patterns. Did most "joy" purchases deliver joy?

Trigger Mapping

Identify consistent triggers (e.g., specific times of day, particular moods, or certain environments) that prompt spending. Is it always late at night? During stress? At the start of a new week?

Nudge Log

Actively note any nudges or design tactics you spot (countdowns, pop-ups, low-stock alerts). Awareness builds resistance. Just seeing the pattern weakens its grip.

These tools move you from single snapshots to broader trends. You're starting to connect the dots.

3. Calibration + Adjustment (Monthly Tools)

These monthly tools help you step back and reflect on broader patterns, allowing you to reinforce your sense of agency and steer your spending habits with greater intentionality. They're not about fine-tuning individual purchases, but about learning from accumulated choices and building a foundation for more deliberate financial behavior.

Categorical Budgeting (Refreshed)

Instead of rigid envelopes, group by reflection (e.g., essentials, joy, ego, regret). The goal isn't perfect math. It's honest insight.

Spending Postmortem

Choose one surprising or disappointing purchase. What happened? What would you do differently? Don't judge, use this as an opportunity to analyze.

Reverse Wishlist

Items you almost bought but didn't. Revisit them. Do you still want them? What helped you pause?

These tools stretch time. They ask you to re-view (not just review) your choices with the benefit of distance.

4. Meta Tools (Build Over Time)

These tools don't just track spending. They help build a thoughtful, reflective consumer identity. Each one invites you to slow down, surface meaning, and recognize patterns that shape your financial behavior. Used with intention, they foster self-awareness, align your choices with your values, and build a clearer sense of who you are as a consumer.

Personal Purchase Philosophy

Write your own decision rules (e.g., never buy

Emotional Spend Typology

Are you a celebrator, a comforter, or a

"Not Yet" List

Turn impulse into intention. Want something? Write it down

when tired, sleep on anything over $50). These evolve, but writing them down helps anchor your consumer strategy.

competitor? Know your pattern so you can plan around it. No type is wrong. Each calls for different safeguards.

and wait. If it lingers, maybe it's worth it. If not, it taught you something for free.

These tools set the stage for introspection and clarify who you are, not just what you buy.

Two Modes of Use

Not every tool serves the same purpose or the same moment. Some are meant to catch you after a purchase, when the story is still fresh. Others work best before, slowing the cycle just enough to shift a habit. Understanding these two modes can help you apply the right lens at the right time. Think of it like a camera: Reactive tools capture the moment after it's happened, allowing you to examine the frame. Proactive tools adjust the lens before you take the shot.

Reactive Toolkit

These come into play after a purchase has been made. Use them to gain insight, reduce regret, and uncover patterns. They support reflection and recovery. Think of them as the replay footage.

Proactive Toolkit

These are best used before your next purchase. They help restore friction, build intention, and invite pause. Instead of reacting, you're shaping what happens next.

You don't need every item in the kit, just the ones that fit your rhythm. You may start with just one from each mode or build rituals around a favorite. Either way, these tools help turn spending into a learning experience.

Friction Restored

These tools aren't just exercises. They're turning points. Each one offers a moment to pause, question, and reflect before the momentum of habit takes over. Used consistently, they restore something we often lose in the blur of modern spending: friction. That gentle resistance gives you just enough space to examine not only what you bought, but why.

Friction doesn't mean pain. It means presence. And presence is what turns money from reaction into reflection. Whether you jot notes in a journal, sketch a pattern, or walk through your "Not Yet" list before tapping a card, these tools help you become just a little more aware and a lot more empowered. They help you slow the cycle, not stop the motion. Think of them as lenses. They clarify, not constrain. They create distance, not from buying, but from blind buying.

Returning to the Loop

Remember: The purchase isn't the end. It's part of the loop.

- **Reflect:** notice what happened and how you felt
- **Recognize:** identify the patterns and influences at play
- **Refine:** adjust your approach going forward

Then try again, with just a bit more awareness next time. That's where better decisions begin.

Summary

Reflection is more than looking back: It's a strategy for moving forward. By using tools that match your pace and personality, you shift from reactive behavior to intentional practice.

- Every purchase tells a story. These tools help you listen.
- Patterns emerge when you pause to look.
- Friction slows impulse and builds clarity.
- Reflection transforms spending into learning.

Exercises

1. Start a Nudge Log for one week. Each time you see a retail tactic (flash sale, scarcity warning, countdown clock), note it. Which ones made you pause? Which almost worked?
2. Do you tend to reflect more on a purchase before or after making it? What would change if you shifted that pattern?
3. Choose one reactive and one proactive tool. Use both of them over the next three days. What did you learn? Which tool helped most?

8.7: Reactivation

Learning Objectives

1. Distinguish between reactive and proactive spending tools
2. Identify how reflection, recognition, and refinement reinforce each other over time
3. Apply integrated strategies to sustain intentional financial behavior

Connecting Insight to Action

By now, you've collected a library of insights. You've learned how external forces can shape spending. You've named your patterns and met the tools that help surface them. But insight alone isn't transformation. To move forward, we have to **reactivate**. Reactivation means putting your observations into motion. It's the shift from studying decisions to shaping them. It's where awareness becomes habit, and habit becomes identity.

To do that, we need to reframe everything we've done so far as a set of flexible inputs into a living system. Think of your financial behavior like a prototype: always evolving, always testable. That means revisiting earlier lessons, reapplying tools, and learning from what unfolds next.

Connecting the Dots

Let's zoom out.

Remember the loop? Reflect, recognize, refine. It wasn't just a framework for processing past choices. It's the engine of forward motion. Here's how it scales:

Reflection

Becomes more focused. Early questions like *"What did I buy?"* evolve into *"What themes recur in my purchases?"* and *"What would I change next time?"*

Recognition

Becomes faster. You start spotting nudges in real time. The design tricks that once steered you now appear like clues in a puzzle.

Refinement

Becomes personalized. You no longer adopt one-size-fits-all rules. You create your own, drawn from lived experience.

Every swipe, every pause, every journal entry contributes to a kind of fluency, not just in budgeting, but in understanding your relationship with consumption.

Reactive and Proactive Modes in Practice

Let's bring the reactive and proactive tools from the previous section into sharper focus:

Reactive Mode

This is your "after-action review". Something happened. You bought, clicked, regretted, and

Proactive Mode

This is your "pre-action calibration." You set intentions in advance. You define your filters.

delighted. Now you analyze. What influenced you? What could shift next time?

You decide what friction to reintroduce to slow your scroll.

You don’t need to live in one mode or the other. The most resilient learners oscillate. They reflect when required, then retool. They prepare, then observe. Together, these modes form a loop that sustains itself.

Bringing It Together

Let’s revisit some of the tools, this time seeing how they link across time:

- A **Swipe Story** (reactive) might lead you to recognize a trigger, which you then document using **Trigger Mapping** (weekly).
- A **Reverse Wishlist** (proactive) may prevent an impulse buy, whose absence you celebrate in your **Spending Postmortem** (monthly).
- A pattern in your **Theme Tracker** (weekly) might challenge a rule in your **Purchase Philosophy** (meta), prompting revision.

This is the benefit of structure without rigidity. Tools aren’t there to trap you. They exist to surface your data, gently and clearly, so you can act on it with confidence.

Optionality and Ownership

One of the biggest risks in financial education is assuming there’s one correct answer. There isn’t. The goal isn't to eliminate mistakes. It’s to understand them. To learn what they teach. To recover faster, with more clarity, and greater confidence next time. In the next section, we'll zoom out one final time to explore what it means to build a comprehensive financial system, not just a set of reactions, but a proactive plan that adapts to your goals, values, and life stages.

Summary

Reactivation means translating insight into motion. Instead of ending with awareness, we use it to form habits and ultimately, identity. The loop (reflect–recognize–refine) is not just a post-purchase review but a forward-moving engine. By understanding when to use reactive or proactive tools, and how they build on one another, students gain the confidence to adapt over time. Consumer strategy isn't static; it's cyclical.

Exercises

1. Name one recent financial decision where you used a proactive or reactive tool—intentionally or accidentally. How did it shape the outcome?
2. Think of a recurring spending habit. Which tool(s) from the toolkit could help you shift it over time, reactively or proactively?
3. Write a short scenario connecting three tools across time (e.g., micro-journal → theme tracker → revised purchase philosophy). What’s the throughline?

8.8: Consumer to Strategist

Learning Objectives

1. Describe the core components of a consumer strategy in the context of a personal financial system.
2. Distinguish between reactive decisions and proactive design in financial habits.
3. Construct a system tailored to personal goals, identity, and values.

Building Your System

A single decision matters. But the fundamental transformation comes from the system behind your decisions. When you build a personal financial system, you're not just reacting to individual purchases; you're also preparing for future financial needs. You're designing a repeatable process that supports your goals, fits your values, and adapts as your life changes. It turns a series of moments into a meaningful pattern.

Systems, Not Scripts

There is no one script for a perfect financial life. However, there *is* a system that works for you, and it will likely look different from that of your roommates, parents, or favorite influencer. Systems are made of routines, tools, boundaries, and checkpoints. They help you:

- Automate the boring parts
- Spotlight the vulnerable moments
- Align spending with priorities
- Adapt as your income, goals, and needs change

Above all, a good system is built to flex. Life will shift, and you'll adjust.

What Makes a System?

To move from scattered decisions to a thoughtful rhythm, you need a few reliable components. Here are the pillars to consider:

A Budget That Breathes

Not a punishment. A living plan that reflects your actual priorities. Built with categories that match your life: rent, groceries, joy, health, growth, and generosity.

A Reflection Habit

Choose one or two that help you learn from what you've done. Let them shape what you do next.

A Set of Rules

Simple, personal, and powerful. Only buy online after 24 hours? Never spend your future tax refund? These rules help you when motivation is low.

An Emergency Plan

A buffer. A backup. A way to reduce stress when life takes a hard left. Even $100 in a savings account can shift how you approach a problem.

A Check-In Point

Weekly, monthly, quarterly. It doesn't need to be dramatic. Just a moment to ask: Is this working for me? What needs to change?

The Role of Identity

Every system sends a message. Not just to others but to yourself as well. Are you someone who reacts, or someone who plans? Who avoids, and who adapts? Who waits for change or creates it? Start with one goal: Make better decisions after the swipe. Allow it to grow over time into something bigger. It isn't just about spending less. It is about spending in alignment with who you are becoming. That's what a system does. It reflects *you*. It grows with *you*. And it becomes a quiet form of support when things get loud.

System, Not Solution

There is no final boss in personal finance. No single number that tells you you've won. A good system keeps you *in the game*, aware, adaptable, and anchored. In fact, the best systems are almost invisible. They reduce friction where it matters, and increase it where it helps. They conserve energy. They restore control. They quietly reflect your values, even when you're tired, distracted, or overwhelmed.

Your system may start small. It might be a journal entry, a rule, and a once-a-month review. But that's how every great system begins: with a few strong parts, chosen on purpose and built to evolve.

> *From awareness to agency. From impulse to intention. From swipe to system.*

That's the arc. Not an ending. A launch. And you're already in motion.

Summary

A personal financial system turns scattered choices into a sustainable rhythm. Rather than relying solely on discipline, systems automate essentials, surface vulnerabilities, and adapt to life's shifts. Built from practical elements—budgets, rules, reflection, review—they serve as quiet scaffolding that evolves with you. A good system doesn't aim for perfection. It anchors your values, simplifies decisions, and supports long-term agency.

Exercises

1. List the existing financial habits or tools you already use. Which parts of a system do they represent? Which elements are missing?
2. If someone examined your current spending patterns, what values would they assume you hold? Are those the values you want to project?
3. Design your starter system in three parts and write them out as commitments:
    a. One rule you'll adopt
    b. One reflection tool you'll use
    c. One check-in time you'll schedule

CHAPTER OVERVIEW

9: Buying a Home

This chapter applies the ideas developed in the previous chapter to what, for most people, will be their most significant purchase: a home. The chapter discusses home ownership both as a living expense and an investment, as well as the financing and financial consequences of the purchase.

9.1: Introduction
9.2: Identify the Product and the Market
9.3: Identify the Financing
9.4: Purchasing and Owning Your Home

9.1: Introduction

Be it ever so humble, the “biggest” purchase you ever make may be your home. Unlike most other consumer purchases, a home is expected to be more than just a living space; it is also an asset that stores and generally appreciates (increases) in value. The house serves a dual financial purpose, acting as both a home and an investment.

Home ownership comes with substantial annual operating expenses for repairs and maintenance, insurance, and property taxes. Maintenance preserves a home’s value, insurance protects that value, and taxes for community services both enhance and secure value.

A home purchase is typically financed with secured debt that creates a significant monthly expense - the mortgage payment - in your budget. A mortgage is a long-term debt that obligates your cash flows for an extended period, potentially limiting your career choices and mobility.

Your choice of home reflects personal factors in your life. These factors include your tastes, age, stage of life, family size and circumstances, health, and career choices. These factors are reflected in your decision to own a home, as well as in the location, size, and use of your home.

9.2: Identify the Product and the Market

Learning Objectives

1. Describe the different building structures for residential dwellings.
2. Describe the different ownership structures for residential dwellings.
3. Identify the factors lenders use to evaluate borrowers for mortgage credit.
4. Identify the components of the mortgage affordability calculation and calculate estimated mortgage affordability.
5. Identify the components of a buyer's inspection checklist.
6. Explain the potential effects of business cycles, unemployment, and inflation on the housing market.
7. Analyze the effects of the demand for housing financing on the housing market.

Renting a Home

If you have already decided on a goal of home ownership, you have probably already compared the costs and benefits of the alternative: renting. Renting requires relatively few initial legal or financial commitments. The renter signs a lease that outlines the terms of the rental agreement, including the term, rent, payment terms and fees, restrictions (such as pets or smoking), and charges for damages. A renter is usually required to provide the landlord with a security deposit to cover the landlord's costs for repairs or cleaning, as necessary, when the tenant moves out. If the deposit is unused, it is returned to the departing tenant (although typically without any interest earned).

Some general advantages and disadvantages of renting and owning are shown in Table 9.2.1 (Renting) and Table 9.2.2 (Owning).

Table 9.2.1 : Advantages and Disadvantages of Renting

Advantage	Disadvantage
Limited financial obligation	No equity growth or store of value
Limited maintenance expenses	Lifestyle limitations (e.g., pets, smoking)
More liquidity	Decorating/renovating limitations
More mobility	Less predictable housing expense

Table 9.2.2 : Advantages and Disadvantages of Home Ownership

Advantage	Disadvantage
Store of value and possible equity growth	Substantial financial obligation
Lifestyle choices	Significant annual expenses
Decorating/renovating choices	Less liquidity
Pride of ownership	Less mobility
Tax deduction for mortgage interest	
More predictable housing expenses	

The decision of whether to rent or own typically follows the pattern of life stages. People often rent early in their adult lives because they typically have fewer financial resources and place a higher value on mobility, which allows for greater career flexibility. When adults first begin their careers, their incomes are generally lower, and the tax advantages of homeownership don't provide much benefit.

As family size grows, the quality of life for dependents typically takes precedence, and a family seeks the added space and comfort of a home, as well as its benefits as an investment. This is the mid-adult stage of accumulating assets and building wealth. As income rises, the tax benefit may become increasingly valuable as well.

With both income and family size smaller in retirement, older adults will often downsize to an apartment, reducing responsibilities and financial commitments.

Homeownership decisions vary: Some people do not want the responsibilities of ownership, while others want a place of their own.

Finding an apartment is much like finding a home in terms of assessing its attributes, comparing choices, and making a choice. Property owners, property managers, and agents all rent properties and use various media to advertise available space. Since the rent for an apartment is a regular expense, financed from current income (not long-term debt), you only need to find an apartment, not the financing, which simplifies the process considerably.

Assessing Attributes

Once you decide to own your home, you must choose the one that is right for you, considering the different types of homes and forms of home ownership.

There are single- and multiple-unit dwellings, for example. A **multiple-unit dwelling** can be used to create rental income or to house extended family members. Still, this choice imposes the responsibilities of being a property owner and also limits privacy.

There are previously owned, new, and custom-built homes. Previously owned homes may require some renovation to make them comfortably modern and convenient. New and custom-built homes typically have more modern features and conveniences and require less maintenance and repair expense. Custom-built homes are built to the homeowners' specifications.

Sales of existing single-family homes far outnumber sales of new and custom homes. In September 2023, for example, 3.96 million existing homes[1] were sold compared to 759,000 sales of new homes[2]. The average price of a new house in the United States in June 2023 was $416,000. [3]

Mobile homes can be fitted with utility connections, installed with trailers on permanent sites, and used as residences. A mobile home may also be situated in a trailer park or mobile home community where the owner rents a lot. Mobile homes are often referred to as manufactured homes. Other examples of manufactured homes include prefabricated or modular homes, which are transported to a foundation site by trailer and then assembled.

In a **condominium** (condo), the homeowner owns a unit in a multiple-unit dwelling, but the common areas of the building are owned and managed by the condominium owners' association. Condo owners pay a monthly fee to cover the costs of overall building maintenance and operating expenses for common areas.

Cooperative housing refers to a unit in a building or complex that is owned by a nonprofit association or corporation for the exclusive use of its residents. Residents do not own the units; instead, they own shares in the cooperative association, which entitles them to the right to reside in its housing units.

Personal factors such as your age, family size, health, and career help you to answer some of the following key questions:

- How large should the house be? How many bedrooms and bathrooms?
- Which rooms are most important: the kitchen, the family room, or the home office?
- Do you need a parking space or a garage?
- Do you need storage space?
- Do you need disability accommodation?
- Do you want outside space, such as a yard, patio, or deck?
- How important is privacy?
- How important are energy efficiency and other "green" features?
- How important are design features and appearance?
- How important are the location and environmental factors?
- What is the proximity to work? Schools? Shopping? Family and friends?

After ranking the importance of such attributes, you can use an attribute-scoring matrix to score your choices. Once you understand exactly what you are looking for in a home, you should also consider how much house you can afford.

Assessing Affordability

Before looking for a house that offers what you want, you need to identify a price range that you can afford. Most people use financing to purchase a home, so your ability to access financing or get a loan will determine the price range of the house you can buy.

For example, Eva and Mateo are both twenty-five years old, newly married, and hoping to buy their first home. Both work and earn good incomes. The real estate market is strong, especially with mortgage rates relatively low. They buy a two-bedroom condo in a new development as a starter home.

Fast-forward five years. Eva is expecting their second child. While the couple is happy about the new baby, neither Eva nor Mateo can imagine how they will all fit in their already cramped space. They would love to sell the condo and purchase a larger home with a yard for the kids, but the real estate market has slowed, mortgage rates have risen, and a plant closing last year has driven up unemployment in their area. Eva hasn't worked outside the home since their first child was born two years ago. They are barely getting by on one salary, and a new baby will increase their expenses, making it even more challenging to consider financing a larger home.

A lender will look at your income, your current debts, and your credit history to assess your ability to assume a mortgage. As discussed in Chapter 7, your credit score is a crucial tool for lenders, who may also request verification of employment and income from your employer.

Lenders do their calculations of how much debt you can afford, based on a reasonable percentage - usually about 33 percent - of your monthly gross income that should go toward your monthly housing costs, or **principal, interest, taxes, and insurance (PITI)**. If you have other debts, your PITI plus your other debt repayments should be no more than about 38 percent of your gross income. Those percentages will be adjusted for income level, credit score, and the amount of the down payment.

Say the lender assumes that 38 percent of your monthly gross income (annual gross income divided by twelve) should cover your PITI, plus any other debt payments. Subtracting your other debt payments and estimated cost of taxes and insurance leaves you with a figure for affordable monthly mortgage payments. Dividing that figure by the mortgage factor for your mortgage's maturity and mortgage rate shows the mortgage that is affordable overall. Once you know what percentage your mortgage will be of the home's purchase price, you can calculate the maximum purchase price of the home you can afford. That affordable home purchase price is based on your gross income, other debts, taxes, insurance, mortgage rate, mortgage maturity, and down payment.

Table 9.2.3 shows an example of this calculation for a thirty-year, 6.5 percent mortgage.

Table 9.2.3 : Mortgage Affordability Calculation

1. Gross Annual Income	$ 60,000
3. PITI + Other Debt Payments	$ 1,900 = 38% of $ 5,000
4. Other Debt Payments	$ 200 = your estimate
5. Affordable Monthly PITI	$ 1,700 = (3) - (4)
6. Monthly Taxes + Insurance	$ 700 = your estimate
7. Affordable Monthly Mortgage Payment	$ 1,000 = (5) - (6)
8. Mortgage Factor	6.32 = mortgage factor
9. Affordable Mortgage	$ 158,228 = (7) / (8) x 1000
10. Down Payment as % of Purchase Price	20% = your estimate
11. Mortgage as % of Purchase Price	80% = 1 - (10)
12. Affordable Purchase Price	$ 197,785 = (9) / (11)

You and your lender will have a clearer idea of how much house you can afford once you make these calculations. You may want to sit down and discuss this with a potential lender before you do any serious house hunting. That way, you have a price range in mind before you shop. Mortgage affordability calculators are also available online.

Searching for a Home

Once you understand exactly what you are looking for in a home and what you can afford, you can organize your efforts and begin your search.

Typically, buyers use a **real estate agent** and real estate listings to identify homes for sale. A real estate broker can add value to your search by providing information about the house and property, the neighborhood and its schools, recreational and cultural

opportunities, and the cost of living.

However, remember that although the broker or their agent may be helping you gather information and assess your choices, they are working for the sellers and will be compensated by the seller when a sale is made. Consider hiring a buyer's agent, a fee-based real estate broker who works on behalf of the buyer to help identify their best options. The industry is regulated by state and federal laws, as well as self-regulatory bodies, and real estate agents are required to be licensed to operate.

Increasingly, sellers are marketing their homes directly to save the cost of using a broker. Buyers and sellers of real estate negotiate with real estate agents on the amount of the commission they will pay on the sale/purchase of a home. For-sale-by-owner (FSBO) sites online can make the exchange of housing information easier and more convenient for both buyers and sellers. However, keep in mind that sellers acting as their own brokers and agents are not licensed or regulated, and may not be knowledgeable about federal and state laws governing real estate transactions. This will potentially increase financial and legal risks.

After you narrow your search and choose a prospective home within your price range, you will have the home inspected to assess its condition and estimate the cost of any necessary repairs or renovations. Many states require a home inspection before signing a purchase agreement or as a condition of the agreement. A standard home inspection checklist, based on information from the National Association of Certified Home Inspectors, is shown in Table 9.2.4 .

Table 9.2.4 : Standard Home Inspection Checklist

Structural Elements	Foundation, floors, walls, ceilings, roofs
Exterior Elements	Sliding, fascia, trim, windows, doors, elevation, drainage, landscaping, pool, driveways, sidewalks
Roof and Attic	Framing, ventilation, flashing, gutters
Plumbing	Pipes: potable, drain, waste, vent, toilets, showers, sinks, faucets, traps
Electrical	Main panel, circuit breakers, wiring, fixtures
Systems	Furnace, water heater, air conditioner, ducts, chimney, sprinklers
Outdoor Buildings	Garage, tool shed, pool house

When purchasing a car, it's a good idea to have a trusted mechanic inspect the vehicle. When buying a house, buyers or their agents must ask a professional (structural engineer, contractor, or licensed home inspector) to perform a thorough home inspection. See the American Association of Home Inspectors (www.homeinspector.org) for detailed information. Not only will a professional be able to spot potential problems, but they will also identify evidence of past issues that may have been improperly addressed or that may recur, such as water in the basement or leaks in the roof. If there are problems, you will need an estimate of repair costs. If an inspection finds any significant need for repairs or renovations, especially those requiring immediate attention, a buyer or their agent can try to reduce the purchase price by those costs. You don't want any surprises after you buy a house, especially costly ones.

Your lender will require a title search to verify that no **liens** or claims are outstanding against the property. For example, the previous owners may have had a dispute with a contractor and never paid his bill. The contractor may have filed a mechanics lien or a claim against the property, which must be resolved before the property can be transferred. There are several other kinds of liens; for example, a tax lien is imposed to secure payment of overdue taxes, such as property taxes or federal income tax.

A lawyer or a title search company can do the search, which involves checking the county or city records where a lien would be filed. A title search will also reveal if previous owners have deeded any rights, such as development rights, water rights, or mineral rights. Grants of right-of-way across the property may diminish its value, so be aware of these as well.

Identifying the Market

Housing costs are determined by the price of the house and the interest rate or other costs associated with financing the house. House prices are determined by forces of supply and demand, which, in turn, are determined by macroeconomic circumstances.

When the economy is contracting and incomes are decreasing, especially if unemployment rises and incomes become uncertain, buyers are hesitant to take on the significant financial responsibility of new debt. They tend to continue with their present arrangements or may try to move into cheaper housing, such as downsizing to a smaller house, an apartment, or a condo, to

decrease operating expenses. On the other hand, when the economy is expanding, expectations of rising incomes may encourage buyers to be more confident in their purchasing decisions.

Housing markets are local, however. If the local economy is dominated by a single industry or a large employer, the housing market will be susceptible to the fate of that industry or employer. If a location has value independent of the local economy, such as being a preferred vacation or retirement location, that value can offset local concerns. In that case, housing prices may be less sensitive to local economic conditions.

Acquiring a home relies on a buyer's ability to finance the purchase, provide a down payment, and secure a loan to cover the balance. That ability is determined by the buyer's personal situation (e.g., stability of employment or income, credit history) and by macroeconomic events such as interest rate levels, expected inflation, and liquidity in the credit markets. If interest rates and inflation are low and there is liquidity in the credit markets, it will be easier for buyers to borrow. If inflation and interest rates are high and the credit market is illiquid, it becomes harder for buyers to borrow. Demand for housing thus relies on the availability of credit for the housing market.

Summary

- Different building structures are
  - single-unit or multiple-unit dwellings or mobile homes
  - previously owned, new, or custom-built
- Different ownership structures include
  - conventional ownership
  - condominium
  - cooperative housing
- Lenders assess income, current debts, and credit history to determine the creditworthiness of borrowers
- A mortgage affordability estimate uses an estimate of PITI and other debt payments as a percentage of gross monthly income and of the down payment as a percentage of the purchase price
- The buyer's inspection checklist includes
  - structural elements
  - exterior elements
  - systems for plumbing, electrical, heating/cooling
  - outdoor buildings and features
- Housing prices may be affected by business cycles, as they affect
  - unemployment and income levels
  - inflation, which affects not only the cost of houses, but also interest rates and the cost of home financing
- Housing prices are affected by the availability of home financing, which in turn depends on
  - interest rates and inflation
  - liquidity in the credit markets

Exercises

1. Perform an analysis of your projected wants and needs as a homeowner. Begin by prioritizing the following personal and microeconomic factors in terms of their importance to you in deciding when to buy a home.
   - How large should the house be? How many bedrooms and bathrooms?
   - Which rooms are most important: the kitchen, the family room, or the home office?
   - Do you need a parking space or a garage?
   - Do you need storage space?
   - Do you need disability accommodation?
   - Do you want outside space, such as a yard, patio, or deck?
   - How important is privacy?
   - How important is energy efficiency or other "green" features?
   - How important are design features and appearance?

- How important are location and environmental factors?
- Proximity to work? Schools? Shopping? Family and friends?

2. In your financial journal, describe the first or next home you would like to own, including its location and environment. Predict how much you think it might cost in your state. Then look through real estate sites to find the asking prices for homes or housing units similar to the one you described. How accurate is your prediction?
3. Are you a renter and likely to remain one for a few years? Read legal tips about renting (www.nolo.com/legal-encyclopedia/ten-tips-tenants-29446.html) housing. How does that advice compare with the information in this chapter about buying a house? What advice, if any, would you add? Discuss with classmates the advantages and disadvantages of being a tenant and being a landlord. Develop a comparison chart that outlines the benefits, drawbacks, and risks.
4. Do you live in a dorm or at home with parents or other relatives? What needs to happen for you to have a place of your own? Research websites that aid students in finding independent housing, such as this article (www.collegiateparent.com/housing-residential-life/housing-search-tips-to-share-with-your-student) from *CollegiateParent*. Develop a flexible plan and timetable for finding and financing your own place, and record it in your personal finance journal.
5. Investigate the local real estate market. How do local housing availability and pricing differ from those of other cities, towns, counties, and states? Use online resources to find this information. Housing Predictor (www.housingpredictor.com) provides independent real estate market forecasts for local housing markets for all fifty U.S. states; Realty Times (www.realtytimes.com) analyzes local real estate markets nationwide. How stable or volatile is the real estate market? Is it a buyer's or seller's market, and what does that mean? To what local factors do you attribute the differences you find?
6. Identify and analyze the macroeconomic factors affecting your local real estate market. In what ways or to what extent does your local economy reflect macroeconomic factors in the national economy? According to the National Association of Realtors (www.nar.realtor), what are the most important present trends in the real estate market? If you were shopping for a new or existing home today or were planning to build, how would each macroeconomic factor or trend affect your choices? Record your answers in your personal finance journal.
7. Watch House Hunting Tips for First-Time Home Buyers (www.youtube.com/watch?v=iwz3eJyiWlk) (2:24 minutes). How do you determine the best location to look for a home? How do you find a real estate agent? Consider watching the Bank of America First-Time Home Buying series (www.youtube.com/playlist?list=PL4yQRNEEv-VnK-39hw4GQn86zQj2tAEoj) with Kristy and Desmond. The five short videos, each three to four minutes long, take you through their home-buying experience.

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[3] Phillips, Matt. "Old Houses Now Cost as Much as New Houses." Axios, July 23, 2023. https://www.axios.com/2023/07/21/new...-home-prices. www.axios.com/2023/07/21/new-existing-home-prices.

9.3: Identify the Financing

Learning Objectives

1. Define the effects of the down payment on other housing costs.
2. Calculate the monthly mortgage payment, given its interest rate, maturity, and principal balance.
3. Distinguish between a fixed-rate and an adjustable-rate mortgage, and explain their effects on the monthly payment and interest rate.
4. Distinguish between a rate cap and a payment cap, and explain their uses and risks.
5. Determine the effect of points on the monthly mortgage payment.
6. Identify potential closing costs.

Just as your house may be your most significant purchase, your mortgage may be your most significant debt. The principal is likely far more than your short-term disposable income. It may need to be paid over a period of fifteen to thirty years. The house secures the loan, so if you default or miss payments, the lender may **foreclose** on your house or claim ownership of the property, evict you, and resell the house to recover what you owe. You may lose not only your house but also your home.

Banks, credit unions, finance companies, and mortgage finance companies sell mortgages. They profit by lending and competing for borrowers. It makes sense to shop around for a mortgage, as rates and terms (i.e., the borrower's costs and conditions) may vary widely. The Internet has made it easy to compare; a quick search for "mortgage rates" yields many websites that provide national and state averages, lenders in your area, comparable rates and terms, and free mortgage calculators.

You may feel more comfortable obtaining your mortgage through your local bank, which may process the loan and then sell it to a larger financial institution. The local bank typically continues to service the loan and collect payments. Still, these cash flows are then passed through to the financial institution (usually a much larger bank) that has purchased the mortgage. This secondary mortgage market enables your local bank to have more liquidity and reduced risk, as it is repaid promptly, allowing it to make more loans. As long as you continue to make your payments, your only interaction is with the bank that services the loan. Alternatively, local banks may earmark a percentage of mortgages to keep "in-house" rather than sell.

The U.S. government assists some groups, such as Native Americans, Americans with disabilities, and veterans, in obtaining home loans. Veterans can find resources at the U.S. Department of Veterans Affairs (VA) Home Loans (www.benefits.va.gov/homeloans/).

Please note that the costs discussed in this chapter, which are associated with various types of mortgages, are subject to change. The real estate market, government housing policies, and government regulation of the mortgage financing market may change. When shopping for a mortgage, it is essential to stay informed about the latest developments.

Down Payment

Mortgages typically require a **down payment**, which is a percentage of the purchase price paid in cash at the time of purchase. Most buyers fund the down payment with money from savings, another home sale, an inheritance, a windfall like lottery winnings, or a family gift.

The size of the down payment does not directly affect the price of the house, but it can impact the cost of financing. For a certain house price, the larger the down payment, the smaller the mortgage and, all things being equal, the lower the monthly payments. An example of a thirty-year mortgage is shown in Table 9.3.1 .

Table 9.3.1 : Down Payment and Monthly Payment

Purchase Price	% Down	Mortgage	Mortgage Rate	Mortgage Payment
$ 250,000	5.00%	$ 237,500	5.00%	$ 1,274.95
$ 250,000	10.00%	$ 225,000	5.00%	$ 1,207.85
$ 250,000	20.00%	$ 200,000	5.00%	$ 1,073.64
$ 250,000	30.00%	$ 175,000	5.00%	$ 939.44
$ 250,000	40.00%	$ 150,000	5.00%	$ 805.23

Purchase Price	% Down	Mortgage	Mortgage Rate	Mortgage Payment
$ 250,000	50.00%	$ 125,000	5.00%	$ 671.03

Typically, if the down payment is less than 20 percent of the property's sale price, the borrower is required to pay for **private mortgage insurance (PMI)**. If a borrower defaults on a mortgage that includes PMI, the lender is insured against loss. A larger down payment generally eliminates the need for PMI, saving the borrower that expense.

A larger down payment can offset the annual cost of the financing, but it may create opportunity costs and decrease liquidity. Cash will also be required for the **closing costs** (transaction costs) of this purchase, as well as for any immediate renovations or repairs. Those needs will have to be weighed against your available cash to determine the amount of your down payment.

Monthly Payment

The monthly payment is the ongoing cash flow obligation to the loan. If you fail to make this payment, you will default on the loan and may eventually lose the house, with no compensation for the money you have already invested in it. Your ability to make the monthly payment determines your ability to keep the house.

The interest rate and the maturity (lifetime of the mortgage) determine the monthly payment amount. With a **fixed-rate mortgage**, the interest rate remains constant throughout the entire mortgage term, and so does the monthly payment. Conventional mortgages are fixed-rate mortgages for thirty, twenty, or fifteen years.

The longer the term, the greater the interest rate, because the lender faces more risk the longer it takes for the loan to be repaid.

A fixed-rate mortgage is structured as an annuity: regular periodic payments of equal amounts. Some of the payment is repayment of the principal, and some is for interest expense. As you make a payment, your balance gets smaller, so the interest portion of your next payment is smaller, and the principal payment is larger. In other words, as you continue making payments, you are paying off the loan balance faster and paying less interest.

An example of a **mortgage amortization**, or a schedule of interest and principal payments over the life of the loan, is shown in Table 9.3.2 . The mortgage is a thirty-year, fixed-rate mortgage. Only year one is shown, but the spreadsheet extends to show the amortization over the term of the mortgage.

Table 9.3.2 : A Mortgage Amortization: Year One of a Thirty-Year, Fixed-Rate 6.5 Percent Mortgage

End of Month	Payment	Interest Expense	Principle Paid	Balance
				$ 200,000.00
1	$ 1,264.14	$ 1,083.33	$ 180.80	$ 199,819.20
2	$ 1,264.14	$ 1,082.35	$ 181.78	$ 199,637.42
3	$ 1,264.14	$ 1,081.37	$ 182.77	$ 199,454.65
4	$ 1,264.14	$ 1,080.38	$ 183.76	$ 199,270.89
5	$ 1,264.14	$ 1,079.38	$ 184.75	$ 199,086.14
6	$ 1,264.14	$ 1,078.38	$ 185.75	$ 198,900.39
7	$ 1,264.14	$ 1,077.38	$ 186.76	$ 198,713.63
8	$ 1,264.14	$ 1,076.37	$ 187.77	$ 198,525.86
9	$ 1,264.14	$ 1,075.35	$ 188.79	$ 198,377.07
10	$ 1,264.14	$ 1,074.33	$ 189.81	$ 198,147.26
11	$ 1,264.14	$ 1,073.30	$ 190.84	$ 197,956.42
12	$ 1,264.14	$ 1,072.26	$ 191.87	$ 197,764.55

In the early years of the mortgage, your payments are mostly interest, while in the final years, they are mostly principal. It is essential to distinguish between them because the mortgage interest is generally tax-deductible. That tax benefit is greater in the earlier years of the mortgage, when the interest expense is larger.

Monthly mortgage payments can be estimated using the **mortgage factor**. The mortgage factor is a calculation of the payment per $1,000 of the mortgage loan, given the interest rate and the mortgage maturity. Mortgage factors for 30-, 20-, and 15-year mortgages are shown in Table 9.3.3 .

Table 9.3.3 : Mortgage Factors for Various Mortgage Rates

	Mortgage Amount	Mortgage Rate	30-Year Mortgage Factor	20-Year Mortgage Factor	15-Year Mortgage Factor
t	$ 1,000	4.00%	4.77	6.06	7.40
t	$ 1,000	4.50%	5.07	6.33	7.65
t	$ 1,000	5.00%	5.37	6.60	7.91
t	$ 1,000	5.50%	5.68	6.88	8.17
t	$ 1,000	6.00%	6.00	7.16	8.44
t	$ 1,000	6.50%	6.32	7.46	8.71
t	$ 1,000	7.00%	6.65	7.75	8.99
t	$ 1,000	7.50%	6.99	8.06	9.27
t	$ 1,000	8.00%	7.34	8.36	9.56
t	$ 1,000	8.50%	7.69	8.68	9.85
t	$ 1,000	9.00%	8.05	9.00	10.14

The monthly payment can be calculated as

$$\text{mortgage factor} \times (\text{principal} \div 1,000)$$

If you purchase a house for $250,000 with a $50,000 down payment and finance the remaining $200,000 with a 30-year, 6.5 percent mortgage, your monthly mortgage payment would be 6.32 × ($200,000 ÷ 1,000) = $1,264. If you choose a 15-year mortgage, your monthly payment would be 8.71 × ($200,000 ÷ 1,000) = $1,742. If you opt for a 30-year mortgage at a 6 percent rate, your monthly payment would be $1,200.

Potential lenders and many websites provide mortgage calculators to do these calculations. You can estimate your monthly payments for a fixed-rate mortgage if you know the mortgage rate, the term to maturity, and the principal borrowed.

Mortgage Designs

So far, the discussion has focused on fixed-rate mortgages, which are mortgages with fixed or constant interest rates and payments that remain unchanged until maturity. With an **adjustable-rate mortgage (ARM)**, the interest rate and the monthly payment can change. If interest rates rise, the monthly payment will increase; if rates fall, the monthly payment will decrease. By federal law, adjustable interest rates cannot increase by more than 2 percent at a time; however, even with this **rate cap**, homeowners with adjustable rates risk unexpected payment increases. Borrowers can mitigate this interest rate risk by implementing a payment cap; however, this introduces another risk.

A **payment cap** limits the amount that payments can increase or decrease. That sounds like it would protect the borrower, but if the payment is capped and the interest rate rises, more of the payment goes toward the interest expense and less toward the principal payment, so the balance is paid down more slowly. If interest rates are high enough, the payment may be too small to cover all the interest expense, and any unpaid interest will be added to the mortgage principal balance.

In other words, instead of paying off the mortgage, your payments may increase your debt, and you could end up owing more money than you borrowed, even if you make all your required payments on time. This is called negative amortization. If you have this type of loan, you can voluntarily increase your monthly payment amount to avoid the negative effects of a payment cap.

Adjustable-rate mortgages are risky for borrowers. However, these mortgages are usually offered at lower rates than fixed-rate mortgages and may be more affordable. Borrowers who expect an increase in their disposable income (which would offset the risk of a higher payment) or who expect a decrease in interest rates may prefer an adjustable-rate mortgage, which can have a maturity of up to forty years. Otherwise, a fixed-rate mortgage is generally the better option.

Some mortgages combine fixed and variable rates; these mortgages offer a fixed rate for a specified period, followed by an adjustable rate. Another type of mortgage is a **balloon mortgage**; these offer fixed monthly payments for a specified period - usually three, five, or seven years - and then a final repayment of the outstanding principal (the balloon payment). An **Option Adjustable Rate Mortgage** allows the borrower to pay either interest-only or principal and interest for the first few years of the loan. This helps make homeownership more affordable for many buyers. However, although you may save money at first by paying interest only, you are not accumulating stored value, known as equity, in your investment.

As an asset, a house may be used to secure other types of loans. A **home equity loan** or a second mortgage allows homeowners to borrow against the equity in their home. A home improvement loan is a type of home equity loan. A **home equity line of credit (HELOC)** enables homeowners to secure a line of credit, or a loan that is borrowed and repaid as needed, with interest paid only on the outstanding balance. A **reverse mortgage** provides homeowners with long-term equity in their property a monthly income in the form of a loan. A reverse mortgage is a loan against your home that you do not have to repay as long as you live there. To be eligible for most reverse mortgages, you must own your home and be 62 or older. You or your estate repays the loan when you decide to sell the house or if you pass away and the house is sold.

Points

Points are another possible financing cost. One point is equivalent to one percent of the mortgage amount. When the mortgage originates, points can be paid to the lender as prepaid interest. Points are used to decrease the mortgage rate. In other words, paying points is a way of buying a lower mortgage rate.

To decide whether or not it is worth paying points, consider the difference the lower mortgage rate will make to your monthly payment and how long you will be paying this mortgage. When will the points pay for themselves in reduced monthly payments? For example, suppose you have the following choices for a 30-year, fixed-rate, $200,000 mortgage: a mortgage rate of 6.5 percent with no points or a rate of 6 percent with two points.

First, calculate the difference in your monthly payments for each situation. Using the mortgage factor for a 30-year mortgage, the monthly payments in each case would be the mortgage factor × $200,000 ÷ 1,000 or

Points	Mortgage rate	Mortgage factor	Monthly payment
0	6.50%	6.32	1,264
2	6.00%	6.00	1,200

Paying the two points allows you to enjoy a lower monthly payment and saves you $64 per month. The two points cost $4,000 (2% of $200,000). At the rate of $64 per month, it will take 62.5 months ($4,000 ÷ 64) or a little over five years for those points to pay for themselves. If you do not plan on keeping this mortgage for a long time, paying the points is not worth it. Paying points has liquidity and opportunity costs up front that must be weighed against its benefits. Points are part of the closing costs, but borrowers do not have to pay them if they are willing to pay a higher interest rate.

Closing Costs

Another cost of a home purchase is transaction costs, which are the expenses incurred to facilitate the transaction that are not directly related to the home or financing. These are referred to as closing costs, because they are paid at the closing, the meeting between buyer and seller where ownership and loan documents are signed and property is legally transferred. Buyers pay closing costs, which include the appraisal fee, title insurance, and filing fee to record the deed with the county recorder.

The lender will require an independent **appraisal** of the home's value to guarantee the mortgage amount is reasonable given the value of the house it secures. The lender will also require a **title search** and contract for **title insurance**. The title company will

research any claims or liens on the deed. The purchase cannot go forward if the deed cannot be freely transferred. Over the mortgage term, title insurance protects against defects not revealed in the original title and any claims that may arise. The buyer also pays a fee to file the property deed with the township, municipality, or county. Some states may also have a **property transfer tax** that is the buyer's responsibility.

Closings may occur in an escrow office (a neutral third-party office) or a title company office. Closings may also happen in the lender's space, such as a bank or legal office, if the buyer and seller's attorneys are involved in mediation. Real estate attorneys ensure that all legal requirements are met and all filings of legal documents are completed. For example, homebuyers have the right to review a U.S. Department of Housing and Urban Development (HUD) Settlement Statement twenty-four hours before signing at closing. This document, along with a Truth-in-Lending disclosure statement, outlines and explains all the terms of the transaction, including the costs of buying the house and all closing costs. The buyer and seller must both sign the HUD document and are legally bound by it.

Summary

- The percentage of the purchase price paid upfront as the down payment will determine the amount borrowed. That principal balance on the mortgage, in turn, determines the monthly mortgage payment
- A larger down payment may make the monthly payment smaller, but it creates the opportunity cost of losing liquidity
- A fixed-rate mortgage is structured as an annuity; the monthly mortgage payment can be calculated from the mortgage rate, the maturity, and the principal balance on the mortgage
- A fixed-rate mortgage has a fixed mortgage rate and fixed monthly payments
- An Adjustable-Rate Mortgage may have an adjustable rate and/or adjustable payments
- A rate cap or a payment cap may be used to offset the effects of an ARM on monthly payments
- Points are borrowing costs paid upfront (rather than over the maturity of the mortgage)
- Closing costs are transaction costs such as an appraisal fee, title search and title insurance, filing fees for legal documents, transfer taxes, and sometimes agent real estate commissions

Exercises

1. You are considering purchasing an existing single-family house for $500,000 with a 20 percent down payment and a 30-year fixed-rate mortgage at 6 percent.
   - What would be your monthly mortgage payment?
   - If you decided to buy two points for a rate of 5.5 percent, how much would you save in monthly payments? Would it be worth it to buy the points? Why, or why not?
2. Review the explanation of adjustable-rate mortgages consumer guide (www.federalreserve.gov/pubs/arms/arms_english.htm) written by the U.S. Federal Reserve (the Fed). According to the Fed, why should you be cautious about adjustable-rate mortgages?
3. Do you presently rent or own your home or condo? What are your housing costs? What percent of your income is taken up by housing costs? If housing costs you more than a third of your income, what could you do to reduce that cost? Record your alternatives in your personal finance journal.
4. As a prospective homeowner, what would be your estimated PITI? Would a bank consider you qualified for a mortgage loan at this time? Why or why not? What criteria do lenders use to determine your eligibility for a home mortgage?
5. Can you afford a mortgage now? How much of a mortgage could you afford? Answer these questions using online mortgage affordability calculators. If you cannot afford a mortgage now, how would your situation and/or your budget need to change to make that possible? Establish home affordability as a goal in your financial planning. When do you expect to reach that goal? Write an estimated date in your journal.
6. Read 12 Steps of a Real Estate Closing (www.investopedia.com/articles/mortgages-real-estate/10/closing-home-process.asp). According to *Investopedia*, who attends the closing? What legal documents are processed at the closing?
7. Review affordable local real estate, condo, or apartment listings. Choose a home you'd like to own and do some research for your personal finance journal.

- Record the purchase price
- Determine the down payment you would make
- Calculate the mortgage amount you would seek

- Determine the current interest rates on a mortgage loan for fixed- and adjustable-rate mortgages for various periods or maturities
- Select the type of mortgage you would prefer
- Determine the rate and maturity you would seek
- Determine the points you would buy (if any)
- Calculate the number of monthly mortgage payments you would expect to make
- Select the names of lenders you would consider approaching for a loan

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9.4: Purchasing and Owning Your Home

Learning Objectives

1. Identify the components of a purchase and sale agreement.
2. Explain the importance of a capital budget in determining capital spending priorities.
3. Identify the financing events you may encounter during the maturity of a mortgage.
4. Define the borrower's and the lender's responsibilities to the mortgage.
5. Explain the consequences of default and foreclosure.

The Purchase Process

Now that you've chosen your home and figured out the financing, all that's left to do is sign the papers, right? Not quite. You are off to a good start, but the purchase process will also include offers, negotiations, agreements, and a deposit.

Once you have found a house, you will make an offer to the seller, who will then accept or reject your offer. If the offer is rejected, you may try to negotiate with the seller or decide to forgo the purchase. If your offer is accepted, you and the seller will sign a formal agreement, known as a **purchase and sale agreement**, which specifies the terms of the sale. You will be required to pay a non-refundable deposit or **earnest money** upon signing the purchase and sale agreement. That money will be held in **escrow** or a restricted account and then applied toward the closing costs at settlement.

The purchase and sale agreement will include the following terms and conditions:

- A legal description of the property, including boundaries, with a site survey contingency
- The sale price and deposit amount
- A mortgage contingency, stating that the sale is contingent on the final approval of your financing
- The closing date and location are mutually agreed upon by the buyer and seller
- **Conveyances** or any agreements made as part of the offer; for example, an agreement as to whether the kitchen appliances are sold with the house
- A home inspection contingency specifying the consequences of a home inspection and any problems that it may find, if not already completed and included in the price negotiation
- Possession date, usually the closing date
- A description of the property insurance policy that will cover the home until the closing date

Legally, problems with the property must be disclosed, but specifics vary by state; however, lead-paint disclosure is a federal mandate for any housing built before 1978.

After the **Purchase and Sale Agreement** is signed, all specified conditions must be fulfilled before the closing date. If those conditions are the seller's responsibility, you will want to check that they have been fulfilled before closing. Read all documents carefully before signing them and obtain copies of everything you sign. Do not hesitate to ask questions. You will probably live in your home and be responsible for mortgage payments for a long time. Be sure you understand the process.

Capital Expenditures

A house and property need care; even a new home will have repair and maintenance costs. These costs are now part of your living expenses or operating budget.

If you have purchased a home that requires renovation or repair, you will decide how much of the work you can do immediately and how much can be done on an annual basis. A capital budget helps project these expenditures and plan for income or savings to finance them. You can prioritize these costs by urgency and by the method of completion.

For example, Mai and Quan just closed on an older home and are planning renovations. During the home inspection, they discovered that the old stone foundation required some repair work. They would like to install more energy-efficient windows, paint the walls, and strip and refinish the old wooden floors.

The home's foundation should be the number one priority. The windows should be next on the list, as they will provide comfort and reduce heating and cooling expenses. Cosmetic repairs, such as painting and refinishing, can be done later. The walls should be addressed before the floors are refinished. You don't want paint spots!

Renovations should increase the resale value of your home. It is tempting to customize renovations to suit your tastes and needs. Still, excessive customization can make it more difficult to recoup the value of those renovations when it comes time to sell. You will have a better chance of selling at a higher price if the renovations appeal to as many buyers as possible. The more customized or quirky the renovations are, the less broad their appeal.

Early Payment

Two financing decisions may come up during the life of a mortgage: **early payment** and **refinancing**. Some mortgages have an **early payment penalty** that fines the borrower for repaying the loan before it is due, but most do not. If your mortgage does not, you may be able to pay it off early (before maturity) either with a lump sum or by paying more than your required monthly payment and having the excess payment applied to your principal balance.

Suppose you are considering paying off your mortgage with a lump sum. In that case, you are weighing the value of your liquidity, the opportunity cost of forgoing cash, against the cost of the remaining interest payments. The cost of giving up your cash is the loss of any investment return you would have otherwise earned from it. You would compare that to the cost of your mortgage, or your mortgage rate, less the tax benefit that it provides.

For example, suppose you can invest cash in a Money Market Mutual Fund (MMMF) that earns 7 percent. Your mortgage rate is 6 percent, and your tax rate is 25 percent. Your mortgage costs you 6 percent per year, but saves you 25 percent of that in taxes. Therefore, your mortgage ultimately costs you 4.5 percent, which is 75 percent of 6 percent. After taxes, your money market mutual fund earns 5.25 percent, which is 75 percent of 7 percent. Since your cash is worth more to you as a money market investment, which nets 5.25 percent, than it costs you in mortgage interest (4.5 percent), you should leave it in the mutual fund and pay your mortgage incrementally as planned.

On the other hand, if your money market mutual fund earns 5 percent, but your mortgage rate is 8 percent and you are in the 25 percent tax bracket, then the real cost of your mortgage is 6 percent, which is more than your cash can earn. You would be better off using the cash to pay off your mortgage and eliminate that 6 percent interest cost.

You also need to weigh the use of your cash to pay off the mortgage versus other uses of that cash. For example, suppose you have some money saved. It is earning less than your after-tax mortgage interest, so you are thinking of paying down the mortgage. However, you also know that you will need a new car in two years. If you use that money to pay down the mortgage now, you won't have it to pay for the car two years from now. You could consider getting a car loan to purchase the vehicle, but the interest rate on that loan would likely be higher than the rate on your mortgage, and the interest on the car loan is not tax-deductible. If paying off your mortgage debt forces you to use more expensive debt, then it is not worth it.

One way to pay down a mortgage early without sacrificing liquidity is by making a larger monthly payment. The excess over the required amount will be applied to your principal balance, which then decreases faster. Since you pay interest on the principal balance, reducing it more quickly would save you some interest expense. If you have experienced an increase in income, you may be able to do this relatively painlessly; however, there may be a better use for your increased income.

Over a mortgage as long as thirty years, that interest expense can be substantial, possibly more than the original balance on the mortgage. However, that choice must be made in the context of the value of your alternatives.

Refinancing

You can consider refinancing your mortgage if better rates are available. Refinancing means borrowing new money, typically by acquiring a new mortgage to repay an existing one. It also involves closing costs: The lender will want an updated appraisal, a title search, and title insurance. It is valuable to refinance only if the mortgage rate is significantly lower than your current rate, resulting in a substantial reduction in your monthly payment. That, in turn, depends on the size of your mortgage balance.

You may be able to refinance and increase the principal balance on the new mortgage without increasing the monthly payment over your old monthly payment. If interest rates are low and your home has appreciated in value, your home equity may increase. You can withdraw equity from your house, but doing so means you are not allowing it to function as an investment. You are not storing your wealth.

Using gains from the house and investing them may be a good choice. But if you take gains from the house and use them for consumption, you reduce the investment returns on your home. You are also using non-recurring income to finance recurring expenses, which is unsustainable. There is also a danger that property values will decrease, and you will be left with a mortgage worth more than your home is worth.

Default, Foreclosure, and Fraud

If you have a change of circumstances (you lose your job in an economic downturn or you have unexpected health care costs), you may be unable to meet your mortgage obligations as planned. You may become unable to make payments. A mortgage is secured by the property it finances. If you miss payments and default on your mortgage, the lender can foreclose on your property, evict you, take possession of your home, and then sell it or lease it to recover their investment. Under normal circumstances, lenders incur a cost in repossessing a house, and usually lose money in its resale. It may be possible to renegotiate the terms of your mortgage to forestall foreclosure. You may want to consult with a legal representative or contact federal and/or state agencies for assistance.

You may believe you are having trouble meeting your mortgage obligations because they are not what you thought they would be. Lenders profit by lending. When borrowing, it is essential to understand the terms of your loan. If those terms adjust under certain conditions, you must understand what could happen to your payments and the value of your home. It is your responsibility to understand these conditions. However, according to federal and state laws, the lender is required to disclose the lending arrangement and all associated costs. Some rules may vary from state to state, but if you believe that all conditions and terms of your mortgage were not fairly disclosed, you should contact your state banking regulator or the U.S. Department of Housing and Urban Development (HUD). Consumer advocacy groups can also help clarify laws and explore any available legal recourse.

Just as your lender has a legal obligation to be forthcoming and transparent with you, you must be truthful. If you have misrepresented or omitted facts on your mortgage application, you can be held liable for mortgage fraud. For example, if you have overstated your income, misled the lender about your employment or your intention to live in the house, or have understated your debts, you may be prosecuted for **mortgage fraud**. Some forms of mortgage fraud are more elaborate, such as inflating an appraisal. Whether the errors are intentional or accidental, you are responsible for providing the lender with accurate information.

Summary

- The purchase and sale agreement details the conditions of the sale
- Conditions of the purchase and sale agreement must be met before the closing
- A capital budget can help you prioritize and budget for capital expenditures
- Early payment is the trade-off of interest expense versus the opportunity cost of losing liquidity
- Refinancing is the trade-off between lower monthly payments and closing costs
- Both borrowers and lenders have a responsibility to understand the terms of the mortgage
- Buyers, sellers, lenders, and brokers must be alert to real estate scams and possible cases of mortgage fraud
- Default may result in the lender foreclosing on the property and evicting the former homeowner

Exercises

1. Read what the National Association of Realtors has to say about real estate purchase agreements (www.nar.realtor/closing/real-estate-purchase-agreement), and view a sample California residential purchase agreement (www.eforms.com/purchase-agreements/ca/). For comparison, find a sample purchase and sale agreement for your state.
2. According to this chapter, what information is included in a purchase and sale agreement?
3. Use this mortgage refinancing calculator (www.bankrate.com/mortgages/refinance-calculator/) to find out if you would save money by refinancing your real or hypothetical mortgage at this time. What factors should you take into consideration when deciding to refinance?
4. Read about mortgage fraud (www.investopedia.com/terms/m/mortgage-fraud.asp) as defined by *Investopedia*. What constitutes mortgage fraud? What common ways do home buyers become involved either directly or indirectly in mortgage or real estate fraud?
5. Explore the ways to avoid foreclosure (www.usa.gov/avoid-foreclosure) at USA.gov. What steps should people take to avoid foreclosure?

CHAPTER OVERVIEW

10: Personal Risk Management- Insurance

This chapter incorporates risk management into financial planning. An awareness of the need for risk management often comes with age and experience. This chapter focuses on planning for the unexpected. It progresses from the more obvious risks to property to the less obvious risks, such as the possible inability to earn due to temporary ill health, permanent disability, or death.

10.1: Introduction

10.2: Insuring Your Property

10.3: Insuring Your Health

10.4: Insuring Your Income

10.1: Introduction

What if the biggest risk is thinking you will not face one?

> *"That sounded expensive," Jordan said, wincing at the crunch.*
>
> *"Parking poles shouldn't hide behind shrubs," Alex muttered, inspecting the back bumper.*

The parking pole was fine, but the bumper needed repair. The driver was not speeding or engaging in risky or reckless behavior. They were just parking. However, the world still has ways of reminding you that not everything goes according to plan.

Some risks you take on purpose because you're chasing something - a return, a thrill, or another possibility. You start a business or buy into a trend. Maybe you take a chance and bet on yourself. These are **speculative risks**, and there's always a chance that they will pay off; however, there's a significant possibility that they may not. The only reliable way to protect yourself from these risks is to avoid engaging in them.

However, other risks emerge without invitation. They don't offer a prize; they exact a price. A lightning strike, a burst pipe, or a cracked sidewalk that leads to a lawsuit are all **pure risks**. They are unwanted, unavoidable, and (here's the good part) often **manageable**.

This chapter is about those.

You can't eliminate risk, but you can **handle it**. Sometimes that means dodging it. Sometimes it means preparing for it. Sometimes it means shifting the cost to someone else, someone whose whole job is being ready.

But first, we need to zoom in. What actually causes a loss?

Peril

A peril is the event itself. The thing that brings the damage. Fire. Flood. Illness.

Hazard

A hazard is what makes that peril more likely to happen. Frayed wires. Slippery steps. A forgotten password.

One is the strike, and the other is the spark. Knowing the difference helps you decide what to protect and how.

So, where do we start?

We begin with tangible items (physical items), such as your home, your car, and other objects that let you live your life.

Then we move closer: to your body, your health, your care.

And finally, to the most fragile asset of all - your ability to earn, to plan, and to build what comes next.

Let's begin with what you own and why it might need a little backup.

10.2: Insuring Your Property

Learning Objectives

1. Explain how home and auto insurance protect against property loss and liability.
2. Interpret common policy structures, including deductibles, limits, and types of coverage.
3. Identify the factors that influence insurance premiums for homes and vehicles.
4. Understand the function of liability insurance, including the 100/300/50 model.
5. Evaluate how insurance supports financial stability after a property-related loss.

The Things You Own and The Risks You Didn't Expect.

> *"I told you that tree was leaning," Jordan said, staring at the splintered fence.*
>
> *Alex didn't look up from his phone. "So… am I responsible? Or is it just… nature?"*

Turns out, "nature" isn't a great legal defense.

When a tree on your property falls onto a neighbor's fence, car, or roof, it brings more than branches. It brings bills. And the answer to *who pays* depends on more than just bad luck. It depends on whether you're considered **legally responsible**.

That responsibility can take different forms:

Negligence

You didn't remove the obvious hazard, and now someone's paying for it.

Strict liability

You followed all the rules, but the law still says the cost is yours.

Vicarious liability

It wasn't your action, but it was your tree, your property, your problem.

That's where **insurance** steps in, not as a shield against blame, but as a system for **shifting financial risk**.

Here's how it works:

You pay a known amount (your **premium**) to a company (the **insurer**) in exchange for protection against significant, unpredictable losses. That promise is written out in a legal contract called a **policy**. The idea is simple: when something serious happens, you're not facing it alone.

But insurance isn't magic. It won't cover every scenario. And it won't allow you to be careless without consequences. Owning property means managing risk, both your own and that of others. It means preparing for fire, theft, weather, and yes, even falling trees.

Let's begin with one of the most significant financial assets most people ever own: **their home.**

Home Insurance Coverage

Because drywall doesn't heal itself.

> *"It came through the roof?" Jordan asked, blinking.*
>
> *"Not all the way," Alex said. "Just the attic, the ceiling, and then the couch."*
>
> *The tree had been leaning for years half-forgotten, a little too close to the property line, and it only took one windstorm to bring it down. By morning, a jagged trunk was wedged across the roof, insulation was spilling into the living room, and rainwater was soaking everything from the ceiling fan to the throw pillows.*

That's when the question hit: who pays?

The Benefit

Homeowner's insurance exists to answer exactly that question. It doesn't prevent disaster, but it steps in when disaster strikes. And while most people think of it as protection for the structure (the house, the garage, the shed), it actually does much more.

A typical homeowner's policy provides coverage not only for the building but also for its contents and belongings. That includes furniture, clothing, appliances, electronics - basically, the things you'd take with you if you had to start over. There are limits, of course, and special rules for high-value items, but in many cases, the cost of replacing what's lost would be devastating without insurance.

Beyond your own stuff, a good policy also protects you from the financial consequences of what happens to *other* people because of your home. If someone slips on your icy sidewalk or trips on your broken step and ends up with a medical bill—or even worse, a lawsuit—your policy can provide coverage for legal and medical costs. That kind of personal liability protection is often overlooked until it's needed.

Some events make your home unlivable altogether. If that happens during repairs after a major fire or storm, insurance may also cover the cost of temporary housing and basic living expenses. This part of the policy, often referred to as Additional Living Expenses (ALE), is what makes a total disruption more manageable.

The Cost

How all this plays out depends on the details: the specific language of your policy, your deductible, and whether you're covered for the *actual cash value* of an item or its *replacement cost*. The difference matters. Actual cash value takes depreciation into account. You will not be reimbursed for a new couch, but you will be compensated for the couch you had the day before the tree landed on it. However, replacement cost pays what it would take to buy a new one today. As you might guess, the second option offers better protection, but usually comes with higher premiums.

Premiums that you pay will vary widely. Home insurance cost depends on where you live, how old your home is, what materials it's made of, how far it is from a fire station, and how much coverage you choose. Insurers also consider your claims history and credit score, and many offer discounts if you bundle policies, install security systems, or upgrade your roof or wiring.

To assess the risk to the insured, the insurer requires information about the insured's circumstances and history, the nature of the property, and the desired amount of coverage for protection. This information is summarized in Table 10.2.1 .

Table 10.2.1 : Factors that Determine Insurance Premiums

Insured	Property	Coverage
Employment	Age	Actual cash value
Marital status	Size	Replacement cost
Criminal record	Location	Endorsements for listed property
Credit history	Proximity to fire/police services	Umbrella for personal liability
Insurance claim history	Building materials	
	Number of occupants	
	Heating system	

Home insurance doesn't cover everything. Most policies exclude damage from floods, earthquakes, and certain types of neglect. Coverage for those situations usually requires separate policies or endorsements. But for most homeowners, a well-structured policy offers essential protection, not just for the bricks and beams, but for the financial stability that comes with knowing you won't have to face a crisis alone.

> *By the time the adjuster left and the cleanup crew arrived, Alex and Jordan had already seen the value. A bad night had turned into a manageable problem. Not cheap, not pleasant—but not ruinous either.*

That's the quiet power of insurance. It doesn't erase risk. It just makes it survivable.

Insuring Your Car

Because metal bends, and people break.

> *"Everyone okay?" the officer asked, jotting notes.*
>
> *Alex nodded. "Yeah. Just shaken. And… the bumper."*
>
> *The light had changed. The cyclist hadn't noticed. The driver braked, but not soon enough. A minor collision, no serious injuries—but a lingering sense of panic.*

This is the kind of moment that makes you grateful you're insured.

The Benefit

Auto insurance, like home insurance, is about risk. But the risks are faster, messier, and often more public. Every time you drive, you're participating in a shared system where one mistake (yours or someone else's) can lead to thousands of dollars in damage, or worse.

A typical auto policy includes **liability coverage**, which pays when *you're* at fault. It's legally required in most states, and it comes in three numbers, such as **100/300/50**.

Those numbers aren't just random—they set the maximum your insurer will pay:

$100,000	$300,000	$50,000
For injuries to **one** person	Total for all injuries in a **single accident**	For damage to **someone else's property**

What trips people up is that *first* number. It's not $300,000 to divide however needed; it's $100,000 **per person**, with a **total cap of $300,000**.

So if one person's medical bills are $175,000 and a passenger's are $5,000, the policy still only pays **$100,000** for the first and **$5,000** for the second. You're responsible for the remaining **$75,000**.

That's when people realize that liability coverage protects *others*, but it's also your **line of defense**. You carry it not just because the law says so, but because lawsuits are expensive and medical bills are worse.

Most drivers also carry **collision** and **comprehensive** coverage. Collision coverage pays if you hit something (even a tree or a light post), and comprehensive coverage covers non-collision risks, such as theft, vandalism, or storm damage.

You can also add **uninsured/underinsured motorist coverage**, in case the person who hits you doesn't have enough insurance, or any at all.

Policies may include **medical payments** to cover injuries to you or your passengers, as well as additional benefits such as **rental car reimbursement** if your car ends up in the shop after a covered event.

The Cost

Auto insurance isn't one-size-fits-all. Your premium is based not just on what you drive or how well, but on **who you are**—or more precisely, what insurers can predict about people *like* you.

Insurance companies look at

- Your **age** and **driving history**

- The **car you drive**
- Your **ZIP code**
- Your **marital status**, **credit score**, and even **commute distance**

Not because they're judging you, but because these factors **correlate** with real-world outcomes. People in certain age groups, neighborhoods, or vehicle types file more claims, or more expensive ones. Insurers use that data to estimate how likely they are to pay out on your behalf.

That's why two drivers with identical cars and clean records might still pay different rates if one lives in a low-traffic suburb and the other parks on a busy street downtown. The risk profile changes.

Higher coverage limits cost more. So do lower deductibles. However, discounts are available. Bundling home insurance with other policies, maintaining good grades (for students), installing safety features, or simply being accident-free for a specified period can help lower premiums.

Driving is freedom, but it comes with high stakes.

Auto insurance doesn't make you invincible, but it can make you whole again when something breaks.

Summary

- Homeowners insurance covers dwellings, possessions, personal liability, and temporary living expenses.
- Auto insurance typically includes liability, collision, comprehensive, and optional add-on coverage.
- Liability insurance protects against legal and financial consequences of causing harm.
- Premiums are based on risk factors like location, structure, driving history, and vehicle type.
- Coverage choices affect both protection and cost.

Exercises

1. Why might someone choose replacement cost over actual cash value in a home insurance policy?
2. What does each number in a 100/300/50 auto policy represent?
3. How does liability coverage protect a policyholder beyond their own property?
4. What role do deductibles play in shaping an insurance policy's cost and coverage?
5. What factors might cause two drivers with the same vehicle to pay very different auto insurance premiums?

10.3: Insuring Your Health

Learning Objectives

1. Understand how health insurance structures access and affordability.
2. Differentiate between plan types: HMO, PPO, EPO, and POS.
3. Identify the key components of cost, including premiums, deductibles, copays, coinsurance, and out-of-pocket maximum.
4. Recognize the role of government and employer-sponsored accounts (FSA, HSA, HRA).
5. Explore how Medicare, Medicaid, and private options fit into the health insurance landscape.

Because access is not automatic.

> *"Wait, so the doctor's in-network, but the lab isn't?" Jordan asked, holding the envelope like it might bite her.*
>
> *Alex shrugged. "That's what the nice person on the helpline said. On the fourth call."*

The appointment had felt routine; it was an annual physical, covered under the plan. Unfortunately, when the bill arrived, they realized that although the doctor's office was in-network, the lab that processed the blood work was not. The doctor and the lab were located in the same building, but they were not connected to the same insurance network. They now had a lab fee that they didn't expect from an out-of-network lab.

That's when they realized that health insurance doesn't just help pay for care. Health insurance determines the type **of care you can receive**, **where you can access it**, and **what happens afterward.**

Health Insurance Coverage

Health insurance exists to reduce the financial burden of medical care, but it doesn't eliminate confusion or cost. It works more like a complex cost-sharing agreement than a simple payment plan.

At its core, a health insurance policy outlines:

- **What services are covered**
- **How much the insurer will pay**
- **What you're expected to pay**

Most plans include a combination of **premiums**, **deductibles**, **copayments**, and **coinsurance**. Here's how they typically work, though each plan writes its own rules.

You pay a **premium**, usually on a monthly basis, just to keep the coverage active, regardless of whether you actually use it. When you do use it, you often face a **deductible,** an amount you must pay out of pocket before the insurance company begins to contribute. Some services may be covered before you meet that deductible; others aren't.

After the deductible, you may be required to pay a **copay** (a fixed fee for certain visits or prescriptions) or **coinsurance** (a percentage of the total cost). These add up toward your **out-of-pocket maximum**, a cap on how much you'll have to spend in a year before the insurance covers 100%.

Coverage isn't just about numbers. It's also about **networks**. Most plans partner with a defined group of doctors, hospitals, and specialists. Staying in-network usually means lower costs; going out-of-network may result in higher costs or no coverage at all. And that's how two different providers in the same building can fall on opposite sides of your policy.

It's easy to feel like the system was designed for confusion. But at its best, health insurance **protects your access to care,** making it possible to seek treatment when you need it, without fearing financial collapse. You need to conquer that confusion because in health insurance, what you don't know can cost you.

Health Insurance Costs

What you pay. And what you don't see.

For most people, health insurance costs feel like a moving target. You pay a **premium** just to have a plan. Then you pay more when you actually use it. The numbers are scattered across statements, billing portals, and "explanation of benefits" forms that often

provide very little explanation. But the core components are consistent, even if they don't always behave in predictable ways.

Premiums are the price of admission. Whether your employer pays part of it or you buy coverage on your own, this is the amount charged just to keep the policy active. It's due whether you visit the doctor or not.

If and when you do need care, **deductibles** come into play. This is the amount you must pay out of pocket before the insurance company begins sharing the cost. A plan with a low premium often comes with a high deductible. It's a trade-off: pay less every month, but more when something happens.

Copays are fixed amounts for specific services, maybe $30 for a primary care visit or $10 for a generic prescription. They don't always count toward your deductible, but they usually count toward your **out-of-pocket maximum,** which is the most you'll ever be required to pay in a given year.

Coinsurance is the percentage you are responsible for after the deductible has been met. For example, your plan might pay 80 percent of a surgery, leaving you responsible for the remaining 20 percent.

All of this culminates in the **out-of-pocket maximum**, your personal financial ceiling for the year. Once you hit it, the insurer pays 100 percent of covered services. But depending on the plan, that ceiling can be thousands or even tens of thousands of dollars high.

Then there's the bigger question: why does it all cost so much?

The answer isn't simple. A unique mix of market pricing, regulation, risk pooling, and provider contracts influences U.S. healthcare costs. But from the insurer's perspective, the math starts with **risk**: the probability and potential cost of claims. That's why some people pay more. Age, health status, location, and tobacco use can all play a role. Insurers don't know exactly what will happen to you, but they've seen the patterns. They price coverage based on the risks you represent, not just the benefits you receive.

It doesn't always feel fair. And sometimes, it isn't. But understanding the structure gives you power: to compare plans, ask better questions, and avoid surprises. Because while you can't control your appendix or your ankle, you can get better at controlling the financial aftermath.

Health Insurance and Health Care

Coverage opens the door. Access walks through it.

Health insurance is intended to make healthcare more affordable, and often it does. However, having insurance doesn't guarantee that you'll receive the care you need, when you need it, or from the provider you prefer.

Sometimes the problem is **network limitations**. Your doctor might not accept your insurance. Or the only approved specialist is hours away. In other cases, the issue is **timing**: long waitlists for appointments, delays in getting referrals, or prior authorizations required before a procedure can be approved.

And then there's the paperwork—forms to complete, claims to submit, appeals to file. For patients undergoing treatment, the administrative layer can feel like a second diagnosis.

Even within the system, there's a wide variation in what is considered *necessary*, *elective*, or *experimental*. A procedure that is approved by one insurer might be denied by another. A brand-name medication may be fully covered under one plan and completely out-of-pocket under another.

The result is that **health insurance doesn't equal health care**. It's a gateway, not a guarantee.

Plan Type Matters

One of the most significant determinants of access is the *type* of insurance plan you have. Most employer and marketplace plans fall into one of four basic models, each with its own rules for how care is delivered, paid for, and approved.

		POS (Point of Service) A hybrid between HMO	

HMO (Health Maintenance Organization)

Usually, the most affordable in terms of premiums and out-of-pocket costs, but also the most restrictive. Care must go through a *primary care physician (PCP)*, who acts as a gatekeeper. Out-of-network care is generally not covered, except in emergency situations.

PPO (Preferred Provider Organization)

Offers greater flexibility—you can usually see specialists without referrals, and you're allowed to go out-of-network (though you'll pay more if you do). You'll pay higher premiums for that freedom.

and PPO. Like an HMO, you'll need referrals and a PCP—but like a PPO, you may go out-of-network if you're willing to pay extra. Think of it as "structured flexibility."

EPO (Exclusive Provider Organization)

Similar to a PPO, but without out-of-network benefits. You don't need referrals, but you *must* use in-network providers. It's a lower-cost option for people willing to stay within a defined care system.

If this all feels like alphabet soup to you, you're not alone. However, these plan types shape *how care is delivered*. They determine whether you need a referral, whether you can keep your current doctor, and whether you'll be surprised by a bill.

Choosing the right plan isn't just about price; it's about how you like to navigate care. Do you want full control? Low cost? Fewer decisions? More options? The "best" plan is the one that fits your life and your needs.

Health insurance still matters. It significantly reduces the cost of major treatments, emergency care, and the management of chronic conditions. It makes preventive care, like screenings and vaccinations, more accessible. And it's often the only thing standing between a bad diagnosis and financial disaster.

Understanding your plan helps. Knowing what's covered, what's not, and what steps you must take to access services can make the difference between a smooth recovery and a bureaucratic nightmare.

The system isn't always logical. It's not always fair. But it's navigable, especially if you start paying attention before something goes wrong.

Private Health Care Financing

One system, many wallets.

For all its complexity, health insurance typically doesn't cover everything. Most plans come with out-of-pocket costs—such as premiums, deductibles, and copays—and those costs have been rising steadily for years. As a result, people often turn to *additional resources* to help cover expenses and close gaps in their protection.

Employers provide some of those tools. Others come from the government. And nearly all of them are named in three-letter acronyms.

Work-Based Accounts: FSA, HRA, HSA

If you've ever seen a paycheck, you've probably heard of one of these:

FSA (Flexible Spending Account)

Lets you set aside pre-tax dollars for out-of-pocket medical expenses—like copays, prescriptions, or even over-the-counter supplies. But there's a catch: it's "use it or lose it." Funds don't roll over at the end of the year unless your employer allows a small grace period or carryover.

HRA (Health Reimbursement Arrangement)

Employer-funded—only the company contributes. You don't own the account, but you can use the funds for qualified medical expenses. It's like a gift card with rules.

HSA (Health Savings Account)

Available only with high-deductible health plans (HDHPs). Unlike FSAs, HSA funds roll over from year to year and are portable. You can invest them, let them grow, and even use them tax-free in retirement for medical costs. The HSA is often considered the most flexible and long-term friendly of the three.

These accounts help people bridge the growing gap between what insurance covers and the actual costs of healthcare. They don't solve the affordability issue, but they soften it; that is, if you can afford to fund them in the first place.

Public Programs: Medicare and Medicaid

Not everyone gets insurance through work. For millions of Americans, **public insurance** plays a critical role, especially as people age, lose income, or develop serious medical needs.

Medicare is a federal program primarily for people aged **65 and older**, as well as younger individuals with certain disabilities. It's divided into parts:

Part A

Covers hospital stays and inpatient care.

Part B

Covers doctor visits, outpatient services, and some preventive care.

Part C

Also known as **Medicare Advantage**, it is a private plan alternative that combines Parts A and B (and often Part D) into a single policy with additional benefits.

Part D

Prescription drug coverage.

But Medicare doesn't cover everything. That's where **Medigap** comes in. It is a private insurance policy that fills in the gaps (like coinsurance and deductibles) that Medicare leaves behind. It's optional, but often critical for those on a fixed income.

Medicaid, by contrast, is a **state-managed** program for people with low income. Unlike Medicare, it's needs-based, not age-based. Coverage varies by state, but it often includes hospital services, doctor visits, and long-term care.

Where Medicare is **earned** through work history, Medicaid is **granted** based on need. Together, these programs form a patchwork, not a safety net. Eligibility, cost-sharing, and coverage vary widely, and navigating them requires not just awareness but persistence.

The deeper problem? Many of these systems weren't designed to cover **long-term care**—the kind of care people need when they can no longer live independently but don't require hospital-level care. That's where we turn next.

Long-Term Care Insurance

When care becomes your full-time job.

At some point, roughly half of all Americans will require assistance with basic daily tasks, such as bathing, dressing, eating, and remembering one's daily activities. This isn't traditional medical care. It provides long-term support, often lasting for years. That kind of care doesn't come cheap. And it's not typically covered by health insurance.

Most standard health plans, including Medicare, focus on **acute care, which involves** hospitals, doctors, and treatments aimed at curing or stabilizing a condition. But **long-term care** is about sustained assistance with daily living. And that's where the coverage gap opens wide.

Some people qualify for **Medicaid**, which does cover long-term care, but only after they've spent down most of their assets. Others pay out of pocket until the bills start to eat into retirement savings, home equity, or inheritances.

That's why **long-term care insurance** exists.

These policies help pay for:

- In-home care
- Assisted living
- Nursing homes
- Adult day care
- Specialized dementia care

They don't remove the challenge, but they *do* offer options, such as staying at home longer, choosing the right facility, and avoiding total financial erosion.

Long-term care insurance comes with caveats. It's often best to purchase it **before you need it**, while you're still healthy enough to qualify for it. Premiums can be high, and policies vary in what they cover, the amount they pay, and their duration. Some people hedge with **hybrid policies** that combine life insurance with long-term care benefits, providing flexibility if care isn't needed.

So, who should consider it?

Anyone planning for retirement who:

- Wants to protect their savings
- Has seen a parent or loved one struggle
- Prefers choices over crisis management

Long-term care isn't just a medical issue.

It's a financial decision and a deeply personal one. It's not about how long you live. It's about how much help you need *while* you're living. That's the essence of long-term care planning. And it's where health protection hands off to something even more fundamental: **protecting your income, your independence, and the people who count on you**.

Summary

- Health insurance determines how, when, and where care is accessed.
- Plan types vary in network access, referral requirements, and flexibility.
- Costs are distributed across premiums, deductibles, copays, and coinsurance.
- FSAs, HSAs, and HRAs help manage out-of-pocket expenses using tax-advantaged accounts.
- Medicare and Medicaid provide essential coverage for aging adults and low-income populations.

- Long-term care often requires separate planning and is not covered by standard health insurance.

Exercises

1. What are the key differences between HMO and PPO plans?
2. How does an out-of-pocket maximum provide financial protection to patients?
3. Why might someone choose an HSA-eligible plan, and how does an HSA benefit them long-term?
4. What gaps exist in traditional Medicare coverage, and how can Medigap help address them?
5. In what ways is having health insurance not the same as receiving health care?

10.4: Insuring Your Income

Learning Objectives

1. Explain the purpose of disability insurance and identify its main types.
2. Understand how life insurance protects dependents from income loss.
3. Compare term and whole life policies in terms of duration, cost, and purpose.
4. Recognize how life insurance can be integrated into broader financial planning.
5. Make informed decisions about selecting the right coverage based on your life stage and needs.

Because the paycheck is the plan.

> *"I mean, the house is insured," Alex said. "The car, too. But what if I can't work?"*
>
> *Jordan raised an eyebrow. "You're insuring the objects, not the engine."*

Most people insure the things they buy with their income. But far fewer think to insure the income itself. And yet for most households, that income is what makes *everything else* possible: the rent or mortgage, the food, the childcare, the utilities, the future plans. When that income disappears, even temporarily, the effects ripple outward fast.

This section is about protecting what fuels it all: Your **ability to earn**, your **financial promises**, and your **loved ones' stability**, with or without you.

We'll begin with **disability insurance**, which covers income loss that is either temporary or long-term. Then we'll explore **life insurance**, where the loss is permanent, but the need persists. And finally, we'll unpack the various types of policies, their actual effects, and how to select among them.

Let's begin with the most overlooked—and statistically most likely—risk of all: **not dying, but being unable to work.**

Disability Insurance

Because bills don't pause for injuries.

> *"It wasn't even a dramatic injury," Jordan said. "He just tripped and tore a ligament. He couldn't drive,so he couldn't work."*
>
> *Alex shook his head. "And no coverage?"*
>
> *"Not the right kind," Jordan replied.*

People imagine disability as something catastrophic, such as a terrible accident or a life-changing illness. And while those things do happen, the truth is far more ordinary and far more common. A bad back, a cancer diagnosis, a lengthy post-injury recovery, or the need for mental health treatment are the kinds of things that don't kill you, but do keep you from working.

According to the Social Security Administration[1], more than one in four current 20-year-olds will experience a disability that keeps them out of work for **at least a year** before they retire. Yet most working adults don't carry any form of **disability insurance**.

So what is it? **Disability insurance replaces part of your income** when a medical condition prevents you from working. It doesn't cover medical bills. That's what health insurance is for. It covers **lost earnings**, helping you pay the rent, the groceries, and other day-to-day expenses. There are two main forms:

Short-term disability

Usually replaces income for **a few weeks to six months**. Often offered through employers. Covers things like childbirth recovery, injuries, or temporary illnesses.

Long-term disability

Covers more extended periods, **years, or even until retirement age**, depending on the policy. It typically kicks in after short-term coverage runs out or after a waiting period.

Policies vary in how they define "disability." Some will pay if you can't perform **your current job**; others only pay if you can't perform **any job** for which you're qualified. That difference matters, and so does the payout structure. Most plans replace **50 to 70 percent** of your income, and benefits may be **taxable or tax-free** depending on how the premiums were paid. Some policies come with cost-of-living adjustments or residual coverage if you return to work part-time.

Many employers offer group disability plans, but not all do. And even if one is available, it may not cover enough. Individual policies exist, especially for self-employed workers or high earners whose lifestyle depends on income continuity. Disability insurance isn't flashy. It doesn't build wealth or leave a legacy. But it keeps your financial life alive when your physical life takes a pause.

Life Insurance

Because some promises shouldn't die with you.

> *"It's not for me," Alex said. "It's for who I'd leave behind."*
>
> *Jordan nodded. "That's the whole point."*

Life insurance is easy to misunderstand. It becomes wrapped in emotions, such as grief, fear, and a sense of legacy. But at its core, it's not about dying. It's about **ensuring that the people who rely on you aren't left vulnerable** if you're no longer there to provide for them. It's income protection in its final form. If you die unexpectedly, your paycheck stops, but the bills don't. Mortgages still come due. Tuition still needs funding. Grocery lists don't shrink. Life insurance helps the people you love **stay afloat**, **stay housed**, and **stay on track** during a time of loss.

Here's how it works:

When you buy a life insurance policy, you agree to pay a **premium**—monthly, quarterly, or annually. In exchange, the insurance company agrees to pay a **death benefit** to your chosen **beneficiary** if you die while the policy is active. That benefit is typically paid as a **tax-free lump sum**, and your beneficiary can use it as they see fit. There are no restrictions. Life insurance doesn't require guessing the future. It requires imagining one without you in it, and then protecting the people who would feel the absence most.

It's not for everyone at every stage of life. But it's essential if

- You have **children**, a **spouse**, or **other dependents** who rely on your income
- You share **financial obligations** (like a mortgage or co-signed loan)
- You want to leave behind a **financial cushion** or **legacy**

Next, we'll walk through the two major categories of life insurance and explore why the choice between them often causes confusion.

Term Insurance

Temporary protection. Lasting purpose.

Term life insurance is exactly what it sounds like: coverage that lasts for a **specific term,** often ten, twenty, or thirty years. If you die during that period, the policy pays your beneficiaries the agreed-upon amount. If you outlive the term, the coverage ends, and no benefit is paid.

That sounds simple, and it is. Term insurance is designed to cover **temporary financial risks**: the years when your family is most vulnerable.

- While your kids are young

- While you're paying down a mortgage
- While your spouse relies on your income

It's **affordable**, especially when you're young and in good health. You can often buy substantial coverage for a relatively low monthly premium. But that affordability comes with tradeoffs: when the term ends, the policy expires. If you still want coverage, you'll need to reapply at an older age, possibly with higher premiums or new health considerations.

Term life is **not an investment**. It's a pure risk management tool. You pay for the protection, and if you don't need it, good. That means you're alive. No payout doesn't mean it was a bad deal. It means life went on as planned. For most people, especially younger families and those on a budget, term life insurance is a clear and practical choice.

But what if you want coverage that doesn't expire?

Whole Life Insurance

Permanent protection. With a price.

Whole life insurance is built to last a lifetime, as long as you keep paying the premiums. It offers the same fundamental promise as term insurance: a payout to your beneficiaries upon your death. But it adds two more features:

1. **It never expires**, no matter how long you live.
2. **It builds cash value** over time—a kind of internal savings account that grows (slowly) on a tax-advantaged basis.

That cash value can be borrowed against, used to pay premiums, or left alone to grow. It's a feature that appeals to individuals who seek **long-term financial solutions** or those with **estate planning needs** later in life. However, a whole life policy comes at a cost, often **10 to 15 times higher** than a term life policy for the same death benefit. And because it mixes insurance with savings, it's more complex to understand and harder to exit. Cancelling a whole life policy too early can trigger fees and tax consequences.

Some people use whole life as a form of **forced savings**, or as a **guaranteed legacy tool** that supports heirs, funds donations, or pays final expenses. Others view it as **overpriced insurance with underwhelming returns**. Which is right? It depends on what you want the policy to do and for how long it will be in effect. Figure 10.4.1 shows the life insurance options.

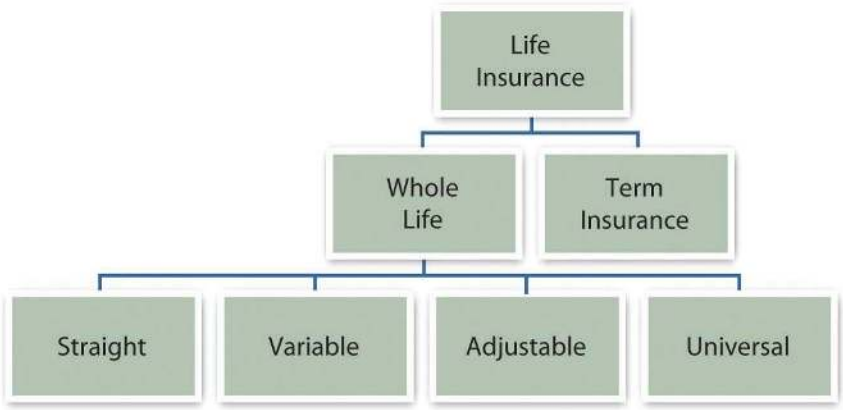

Figure 10.4.1 : Life Insurance Options

Term life answers the question:

"What if I die while people still depend on me?"

Whole life answers a different one:

"What if I want this safety net in place *no matter when I die*?"

There's no single best option. Only the one that fits your goals, your timeline, and your budget.

Choosing a Policy

The best policy is the one that does what you need, when you need it.

Insurance is one of the few financial products you buy, **hoping you will never need to use it**. That's what makes choosing a policy different from choosing a phone plan or a streaming service. There's no daily feedback loop; there is just the quiet knowledge that, if something bad happens, you're not facing it alone.

That's why your first question shouldn't be, *"What's the cheapest policy?"* It should be: **"What risk am I trying to cover?"**

If the answer is: *"If I died tomorrow, my kids couldn't stay in this house,"* you probably need **term insurance** with enough coverage to pay the mortgage. If the answer is, *"My spouse relies on my income, and that won't change,"* you might need a **longer-term** or even a **whole-life** policy. If the answer is: *"I want to leave a guaranteed inheritance,"* a **permanent policy** with cash value could serve that goal. And if the answer is, *"I'm not sure,"* that's okay too. It means you're thinking.

Start by clarifying:

- **Who depends on you** financially
- **What expenses or debts** would remain if you were gone
- **How long would those needs last**
- **What you can realistically afford**

Compare term, whole, and hybrid policies. Look beyond the premium. Be sure to ask these questions:

- How long does the coverage last?
- What happens if you miss a payment?
- Can you convert or cancel the policy?
- What happens to the cash value (if there is one)?

Avoid policies you don't understand. And avoid pressure if the person selling it benefits more than the person living with it; that's a red flag. The good news? Once you choose well, you often don't have to think about it again for years. Life changes, and so can policies. What matters is that you make the choice now, before you find yourself wishing you had chosen a policy sooner.

You can't avoid every risk. But you can choose not to face it alone.

Life Insurance as a Financial Planning Decision

Not just coverage. Coordination.

By now, life insurance may feel more practical, less mysterious, more navigable. But it's more than a product. It's a **planning tool**—one that, when used wisely, becomes part of a bigger picture. Life insurance offers more than just protection; it offers **options**. When integrated with financial planning, a well-chosen policy can

- **Protect dependents** from income loss
- **Create liquidity** to pay estate taxes, settle debts, or buy out a business partner
- **Leave a legacy** for heirs or charitable causes
- **Fund education** or supplement retirement in special policy structures
- **Equalize inheritances** among children when assets aren't easily divisible

Some people use permanent policies (like whole or universal life) as a **stable, tax-advantaged asset**—one that grows predictably and transfers wealth efficiently. Others use the term life as a **temporary shield**, buying time to build assets that make the coverage unnecessary in later years. There is no universal answer, but there is **alignment** between what you value, what you're building, and who you're building it for.

If your financial plan includes people who rely on you, life insurance belongs in the conversation. Life insurance should not be a panic purchase, and it is not a magic solution. However, including life insurance in your financial plan is a strategic act of care, both in theory and in practice.

Summary

- Disability insurance replaces income during periods when an individual is unable to work due to illness or injury.
- Life insurance provides financial support to beneficiaries after a policyholder’s death.
- Term insurance offers temporary, affordable coverage during years of greatest need.
- Whole life insurance offers permanent coverage with a cash value, albeit at a higher cost.
- Choosing a policy involves aligning coverage with financial responsibilities and future goals.

Exercises

1. Why is disability insurance often overlooked, despite its high likelihood of being used?
2. How does term life insurance differ in structure and purpose from whole life insurance?
3. What are some valid financial reasons someone might choose whole life insurance?
4. How can life insurance support broader financial planning goals beyond basic income replacement?
5. What key questions should you ask yourself before selecting a life insurance policy?

[1] Social Security Administration, Disability Planner: The Facts (www.ssa.gov/disabilityfacts/facts.html)

CHAPTER OVERVIEW

11: Retirement and Estate Planning

This chapter focuses on planning for the expected: retirement, loss of income from wages, and the eventual distribution of assets after death. Retirement planning involves the development of alternative sources of income from capital that can eventually replace wages. Estate planning affects everyone who has accumulated assets. Planning what to do with those assets after your death is the kindest thing you can do for those you leave behind.

11.1: Introduction

11.2: Retirement Planning - Projecting Needs

11.3: Retirement Planning - Ways to Save

11.4: Estate Planning

11.1: Introduction

While insurance is about protecting what you have, retirement and estate planning are about protecting what you may have in the future. When you insure what you have, you find the best way to ensure you and your tangible goods are protected. When you plan for retirement, you need to find the best way to protect the life that you'd like to be living after you stop earning income from employment. Estate planning may sound like something only wealthy individuals do; however, it is essential for anyone who owns property or goods. Estate planning can protect your assets, even after your death. If you have assets at the time of your death, what happens to those assets should be documented in a legal estate plan.

Retirement planning and estate planning are strategies designed to create and protect an accumulation of wealth, regardless of the amount of wealth involved. Both types of planning also require you to answer some of the following questions, which can be difficult to answer at the early stages of your life.

- What will my life be like when I retire?
- Will I have a spouse or partner?
- Dependents?
- A home?
- A mortgage?
- Will I be disabled?
- Where will I live?
- What will I do?
- What would I like to do?

Planning, especially for retirement, should begin as early as possible, allowing the most time for savings to accumulate. Ironically, when you are young, you need to imagine answers to these questions. Understanding the practical means of planning and saving for retirement can help you get started. If your plans are flexible, they can adapt to the unexpected as it happens, which it inevitably will.

11.2: Retirement Planning - Projecting Needs

Learning Objectives

1. Identify the factors necessary to estimate retirement savings.
2. Estimate retirement expenses, length of retirement, and the amount saved at retirement.
3. Calculate relationships between the annual savings required and the time to retirement.

Retirement planning involves the same steps as any other personal planning: determine where you'd like to be, and then figure out how to get there from your current position. More formally, the first step is to define your goals, even if they are no more specific than "I want to be able to afford a nice life after I stop getting a paycheck." But what is a "nice life," and how will you pay for it?

It may seem impossible or futile to project your retirement needs so far in advance, given the numerous uncertainties in life and the distance to retirement. But that shouldn't keep you from saving. You can try to save as much as possible for now, with the idea that your plans will become clearer as you approach retirement, so whatever money you have saved will give you a head start.

Chris and Sam were young urban professionals until they had children. Tired of pushing strollers through the subways, they bought a home in the suburbs. They are happy to provide a more idyllic lifestyle for their kids, but miss the "buzz" and convenience of their urban lifestyle. When their children are on their own and Chris and Sam are ready to retire, they would like to sell their home and move back into the city.

Chris and Sam plan to use the value of their house to finance a condo in the city. Still, they also recognize that real estate prices are often higher in more desirable urban areas and that living expenses may increase in the future. Now in their mid-thirties, Chris and Sam are planning to retire in thirty years.

Chris and Sam need to project how much money they will need to have saved by the time they wish to retire. To do that, they need to project both their future capital needs (to buy the condo) and their future living expenses in retirement. They also need to project how long they may live after retirement, or how many years' worth of living expenses they will need, so that they won't outlive their savings.

They know they have thirty years to save this money. They also know, as explained in Chapter 4, that time affects value. Thus, Chris and Sam need to project the rate of compounding for their savings, or the rate at which time will affect the value of their money.

To estimate required savings, in other words, you need to estimate the following:

- Expenses in retirement
- Duration of retirement
- Return on savings in retirement

If your retirement is years away, a lot can and will happen in the meantime. Estimating future needs may seem complicated, but you can start by using what you know about the present.

Estimating Annual Expenses

One approach is to assume that your current living expenses will remain about the same in the future. Given that over the long run, inflation affects the purchasing power of your income, you should factor in the effect inflation may have so that your purchasing power remains the same.

For example, if your living expenses are around $25,000 per year, you'd like to have that amount of purchasing power in retirement as well. Assuming your cost of living remains constant, if you are thirty years from retirement, how much will you be spending on comparable living expenses when you retire?

The overall average annual inflation rate in the United States is approximately 3.25 percent.[1] If $25,000 is the present value of your expenses, you need to calculate the future value, knowing your expenses will appreciate at a rate of 3.25 percent per year for thirty years. Using any online future value calculator, you can determine that your annual spending needs at retirement would be approximately $65,260.

In thirty years, you will need approximately two and a half times your current annual budget to maintain the lifestyle you currently enjoy. Fortunately, if you have savings, they won't be just "sitting there" during that time. They, too, will be compounding to meet

your needs.

You can use your current expenses as a basis to project a lifestyle that is more or less expensive after retirement. You may anticipate expenses dropping with fewer household members and dependents, for example, when your children become independent adults. Alternatively, when you retire, you may wish to increase spending and live a more comfortable life, pursuing the things you've always wanted to do. In any case, your current level of spending can be a starting point for your estimates.

Estimating the Length of Retirement

How much you need to have saved to support your annual living expenses after retirement depends on how long those expenses continue or how long you live. In the United States, life expectancy after the age of 65 has increased significantly over the past century, primarily due to improved access to healthcare, medical advancements, and healthier lifestyles before reaching this milestone.[2] Table 11.2.1 shows the 2021 Period Life Table for Males and Females[3]. As shown below, females generally live longer than males. These additional years must be factored into retirement planning. Table 11.2.2 shows the 2021 Period Life Table for Females[3].

Table 11.2.1 : Actuarial Life Table

Age	Expected Years Remaining
65	16.95
70	13.69
75	10.62
80	7.92
85	5.65
90	3.90
95	2.76
100	2.09
105	1.58
110	1.16

Table 11.2.2 : Actuarial Life Table (Females)

Age	Expected Years Remaining
65	19.75
70	16.00
75	12.49
80	9.38
85	6.72
90	4.65
95	3.22
100	2.35
105	1.71
110	1.20

If life expectancy continues to increase at these rates, in thirty years, your life expectancy at age 65 could be almost another thirty years. In that case, your retirement savings will need to cover your living expenses until you reach age 95. At age 35, you may only have about thirty years to save enough to support yourself (and spouse or dependents) for an additional thirty years.

Estimating the Amount Needed at Retirement

You can use what you know about time and value from Chapter 4 to estimate the amount you would need to have saved up by the time you retire. Your annual expenses in retirement are a series of cash flows that will grow by the rate of inflation. At the same time, your savings will grow by your rate of return, even after you begin making withdrawals to cover your expenses.

Assume that when you retire, your retirement funds are invested to earn a 5 percent annual return. Also, assume the annual inflation rate is 3.25 percent, and your yearly expenses upon retirement are $65,260.

Table 11.2.3 shows what your situation would look like.

Table 11.2.3 : Estimating Annual Expenses and Savings Needed at Retirement

Years after Retirement	Annual Expense (3.25% Inflation Rate)	Return on Savings 5.00%	Return on Savings 2.00%
0	$ 65,260	$ 65,260	$ 65,260
5th Year	$ 76,587	$ 60,008	$ 69,367
10th Year	$ 89,868	$ 55,171	$ 73,723
15th Year	$ 105,453	$ 50,725	$ 78,353
20th Year	$ 123,740	$ 46,636	$ 83,273
25th Year	$ 145,198	$ 42,877	$ 88,503
30th Year	$ 170,377	$ 39,421	$ 94,060
Sum (All Years)		**$ 1,590,290**	**$ 2,443,400**

The amount you need at retirement varies with the expected rate of return on your savings. While you are retired, you will be drawing income from your savings, but your remaining savings will still earn a return. The more return your savings can earn while you are retired, the less you have to save by retirement. The less return your savings can earn in retirement, the more you need to have saved *before* retirement.

In Table 11.2.3 , the total amount needed at retirement is only about $1.5 million if your remaining savings will earn 5 percent while you are retired, but if that rate of return is only 2 percent, you would have to begin retirement with almost $2.5 million.

Let's assume your return on savings is 5 percent. If you want to have $1,590,290 in thirty years when you retire, you could deposit $367,957 today and let it compound for thirty years without making any withdrawals. But if you plan to make an annual investment in your retirement savings, how much would that have to be?

Estimating the Annual Savings for Retirement

In the example above, if you make regular annual deposits into your retirement account for the next thirty years, each deposit would have to be $23,936, assuming that your account will earn 5 percent for thirty years. If the rate of return for your savings is less, you would have to save more to have more at retirement. Your retirement account grows through your contributions and its own earnings. The more your account can earn before you retire, the less you will have to contribute to it. On the other hand, the more you can contribute to it, the less it has to earn.

The amount of time you have to save until retirement can make a significant difference to the amount you must save each year. The longer the time you have to save, the less you have to save each year to reach your goal. Table 11.2.4 shows this idea as applied to the example above, assuming a 5 percent return on savings and a goal of $1,590,290.

Table 11.2.4 : Time to Retirement and Annual Savings Required

Time to Retirement (in years)	Annual Savings Required	Funds at Retirement	Annual Return on Savings
15	$ 153,212	$ 1,590,290	5.00%
30	$ 103,451	$ 1,590,290	5.00%
40	$ 92,679	$ 1,590,290	5.00%

The longer the time you have to save or the sooner you start saving, the less you need to save each year. Chris and Sam are already in their 30's, so they figure they have thirty years to save for retirement. Had they started in their 20's and had forty years until retirement, they would not have to save so much each year. If they wait until they are around age 50, they will need to save significantly more each year to achieve their financial goals. The more you are required to save, the less disposable income you will have to spend on current living expenses, making it harder to save. Saving early and regularly is the superior strategy.

When making these calculations, be aware that you are using estimates to determine the amount of money you'll need at retirement. You use the *expected* inflation rate, based on its historic average, to estimate annual expenses; historical statistics on life expectancy to *estimate* the duration of your retirement; and an *estimate* of future savings returns. Estimates must be adjusted over time because things change. As you progress toward retirement, you'll want to reevaluate these numbers at least annually to be sure you are still saving enough.

Summary

- To estimate the required savings, you need to estimate
  - expenses in retirement, based on lifestyle and adjusted for inflation
  - duration of retirement, based on age at retirement and longevity
  - return on savings in retirement
- You must save more for retirement if
  - expenses are higher
  - duration of retirement is longer
  - return on savings in retirement is less
- Your annual savings for retirement also depend on the time until retirement; the longer you have to save, the less you need to save each year.

Exercises

1. Write in your personal finance journal your ideas and expectations for your retirement. At what age do you want to retire? Will you want to stop working at retirement? Where and how would you like to live? How do you think you would like to spend your time in retirement? How much have you saved toward retirement so far?
2. Experiment with the retirement planning calculator available at Forbes.com (www.forbes.com/advisor/retirement/retirement-calculator/). What will you have saved for retirement by the time you retire? How much will you need to retire without income from employment? How old will you be when your retirement savings run out? Run several combinations of estimates to see how and why you should plan to save for retirement.

[1] McMahon, Tim. "Total U.S. Cumulative Inflation." InflationData.com, August 10, 2022. www.inflationdata.com/articles/2022/08/10/u-s-cumulative-inflation-since-1913/

[2] Basaraba, Sharon. "A Guide to Longevity throughout History, from the Prehistoric Onward." Verywell Health. November 22, 2024. www.verywellhealth.com/longevity-throughout-history-2224054

[3] Social Security Administration, Actuarial Life Table 2021. 2022. www.ssa.gov/oact/STATS/table4c6.html.

11.3: Retirement Planning - Ways to Save

Learning Objectives

1. Compare and contrast employer, government, and individual retirement plans.
2. Explain the differences between a defined contribution plan and a defined benefit plan.
3. Summarize the structure and purpose of Social Security.
4. State the difference between a Traditional IRA and a Roth IRA.
5. Identify retirement plans for the self-employed.

While knowing the numbers clarifies the picture of your needs, you must reconcile that picture with the realities that you face now. How will you be able to afford to save what you need for retirement?

There are several savings plans structured to help you save. Some offer tax advantages, while others don't. But first, and most importantly, you need to commit to saving.

Saving means not spending a portion of your disposable income. It means delaying gratification or putting off what you could have today until tomorrow. That is often difficult, as you have many demands on your disposable income. You must weigh the benefit of fulfilling those demands with the cost of not saving for retirement, even though the benefit in the present is much easier to credit than the benefit in the future. However, once you resolve to save, employer, government, and individual retirement plans are there to help you.

Employer Retirement Accounts

Employers may sponsor retirement plans for their employees as part of the total employee compensation. There are two kinds of employer-sponsored plans: defined contribution plans and defined benefit plans.

Defined Contribution Plans (e.g. 401(k) plans)

Commonly, larger employers sponsor **defined contribution retirement plans**. Under defined contribution plans, each employee has a retirement account, and both the employee and the employer may contribute to the account. The employer may contribute up to a percentage limit or offer to match the employee's contributions, up to a limit. With a matching contribution, if employees choose not to contribute, they lose the opportunity to have both the employer's contribution and their own. The employee makes untaxed contributions to the account through payroll deduction, up to a maximum limit specified in the current tax code.

Defined contribution plans have become increasingly popular since the introduction of Section 401(k) into the tax code. The **401(k) plans**—or 403(b) plans for employees of nonprofits and 457 plans for employees of government organizations—offer employees a pretax (or tax-deferred) way to save for retirement, to which employers can make a tax-deductible contribution.

The advantages of a 401(k) plan for employees include its flexibility, portability, and tax benefits. A defined contribution account belongs to the employee and can accompany them when they leave an employer. For the employer, there is a lower cost and the opportunity to shift the risk of investing funds onto the employee. There is a ceiling on the employer's costs: either a limited matching contribution or a limit set by the tax code.

The employer offers a selection of investments, but the employee chooses how the funds in their account are diversified and invested. Thus, the employee assumes the responsibility and risk for investment returns. The employer's contributions are a benefit to the employee. Employers can also make a contribution with company stock, which can create an undiversified account. A portfolio consisting only of your company's stock exposes you to market risk should the company not do well, in which case, you may find yourself losing both your job and your retirement account's value.

Defined Benefit Plans (aka Pension plans)

A **defined benefit plan** is a retirement plan, sometimes referred to as a **pension plan**, that is funded by the employer and promises the employee a specific benefit upon retirement. The employer can be a corporation, labor union, government, or other organization that establishes a retirement plan for its employees.

The payout for a defined benefit plan typically consists of an annual or monthly payment for the remainder of the employee's life. In some defined benefit plans, there is also a spousal or survivor's benefit. The amount of the benefit is determined by your wages and length of service with the company.

With a defined benefit plan, your income in retirement is constant or "fixed," and it is the employer's responsibility to fund your retirement. This is both an advantage and a disadvantage for the employee. Having your employer fund the plan is an advantage, but having a fixed income in retirement is a drawback during periods of inflation when the purchasing power of each dollar declines. In some plans, that drawback is offset by automatic cost-of-living increases.

Social Security

The federal government offers a small insurance program for all citizens except federal government employees and railroad workers, known as **Social Security**. Social Security is funded by a mandatory payroll tax shared by employees and employers. That tax, commonly referred to as the Federal Insurance Contributions Act (FICA), also funds Medicare (see Chapter 10). The program is managed by the Social Security Administration (SSA).

Data provided by the SSA as of December 2023 show that almost 67,077,000 beneficiaries receive an average monthly benefit of $1,767.[1] The federal government's total annual payment of benefits in 2023 totaled $1.24 trillion.[2] Most of the beneficiaries are retirees (74.8%) or their spouses and children (3.8%).[3]

Social Security is not an automatic benefit but an entitlement. To qualify for benefits, you must work and contribute FICA taxes for forty quarters (ten years). Retirement benefits may be claimed as early as age 62, but full benefits are not available until age 67 for workers born in 1960 or later.[4] If you continue to earn wage income after you begin collecting Social Security but before you reach full retirement age, your benefit may be reduced. Once you reach full retirement age, your benefit will not be reduced by additional wage income.

The amount of your benefit is calculated based on the amount of FICA tax you paid during your working life and your age when you begin collecting the benefit. Up to 85 percent of individual Social Security benefits may be taxable, depending on the amount of other sources of income. Each year, the SSA provides each potential, qualified beneficiary with a projection of the expected monthly benefit amount (in current dollars) for that individual based on their wage history.

Individual Retirement Accounts

Any individual can save for retirement without a special "account." Still, since the government aims to encourage retirement savings, it has established tax-advantaged accounts to facilitate this goal. Because these accounts provide tax benefits as well as some convenience, it is best to use them first in planning for retirement.

Individual retirement accounts (IRAs) are personal investment accounts that allow individuals to save for retirement. As such, they may be invested in a wide range of financial products, including stocks, bonds, certificates of deposit (CDs), and mutual funds. Types of IRAs differ in terms of the tax treatment of contributions, withdrawals, and contribution limits.

The **Traditional IRA** is an account funded by your tax-deductible and/or nondeductible contributions. The tax-deductible contributions you pay now lower your current tax basis. Deductible contributions are taxed later as funds are withdrawn, but nondeductible contributions are not. In other words, you either pay tax on the money as you put it in, or you pay tax on it as you take it out.

A great advantage of a Traditional IRA is that principal appreciation (interest, dividend income, or capital gain) is not taxed until the funds are withdrawn. As of 2023, withdrawals may be made without penalty after reaching the age of 59.5. Funds may be withdrawn before age 59.5, but penalties and taxes will be applied.[5] Contributions may be made until age 73, at which time required minimum distributions (withdrawals) of funds must begin.[6]

Because they create tax advantages, contributions to a Traditional IRA are limited, currently up to $7,000 (or $8,000 for individuals over 50), effective for tax year 2024.[7] That limit on deductible contributions becomes smaller (the tax benefit is phased out) as income rises. The Internal Revenue Service (IRS) provides a worksheet to calculate how much of your contribution is taxable with your personal income tax return (Form 1040).

For the **Roth IRA**, contributions are not tax-deductible; however, withdrawals are tax-free. You can continue to contribute at any age, and you are not required to take any minimum required distributions. A Roth IRA's most significant advantage is that capital appreciation is not taxed.

As with the Traditional IRA, contributions to a Roth IRA may be limited depending on your income. If you have both a Traditional and a Roth IRA, you may contribute to both, but your combined contribution is limited.

Table 11.3.1 is an adaptation of a guide provided by the IRS to the key differences between a Traditional and a Roth IRA.[8]

Table 11.3.1 : Differences between the Traditional and the Roth IRAs

	Traditional IRA	Roth IRA
Tax-deductible contributions allowed?	Yes	No
Tax-deductible contributions limited?	Yes, by income	N/A
Nondeductible contributions allowed?	Yes	Yes
Nondeductible contributions limited?	Yes	Yes
Withdrawals are taxed?	Yes, of deductible contributions	No
Minimum required distribution?	Yes	No
Age of mandatory distribution?	73[10]	None
Minimum age for distribution?	Yes, 59½	Yes, 59½

A **rollover** is a distribution of cash from one retirement fund to another. Funds may be rolled into a Traditional IRA from an employer-sponsored plan (such as a 401(k), 403(b), or 457 (b)) or another IRA. You may not deduct a rollover contribution (since you have already deducted it when it was contributed initially). Still, you are not taxed on the distribution from one fund that you immediately contribute to another. A **transfer** moves a retirement account, a Traditional IRA, from one trustee or asset manager to another. Rollovers and transfers are not taxed if accomplished within sixty days of distribution.

Self-Employed Individual Plans

People who are self-employed wear many hats: they are both employer and employee, as well as individuals in their own right. To accommodate them, several plans are available that allow for deductible contributions.

A S**implified Employee Pension (SEP)** is a plan that allows an employer with few or no other employees, aside from themselves, to make deductible retirement contributions to an employee's Traditional IRA. Such an account is called a SEP-IRA and is set up for each eligible employee. Contributions are limited: in any given year, they can't exceed 25 percent of salary or $69,000 (in 2024), whichever is less.[9] If you are self-employed and contributing to your own SEP-IRA, the same limits apply, but you must also include any other contributions that you have made to a qualified retirement plan.

A **Savings Incentive Match Plan for Employees (SIMPLE)** is a plan where employees make salary reduction (before-tax) contributions, and the employer matches them. If contributions are made to a Traditional IRA, the plan is referred to as a SIMPLE IRA. Any employer with fewer than one hundred employees who were paid at least $5,000 in the preceding year may use a SIMPLE plan. There are also SIMPLE 401(k) Plans.

A **Keogh Plan** is another retirement vehicle for small or self-employed individuals. It can be a defined benefit or a defined contribution qualified plan with deductible contribution limits.

Summary

- Employers, the government, or individuals may sponsor retirement plans.
- Defined benefit plans differ from defined contribution plans in that the benefit is a specified amount for which the employer is liable. In a defined contribution plan, the benefit is not specified, and the employee is responsible for the accumulation in the plan.
- Social Security is financed by payroll taxes and is designed to supplement employer retirement plans or individual retirement plans.
- Traditional and Roth IRAs differ in their taxable nature, as well as in the age limits for contributions and withdrawals.
- Retirement plans for the self-employed are designed for individuals who are both employees and employers.

Exercises

1. Do you participate in an employer-sponsored retirement savings plan? If so, what kind of plan is it, and what do you see as the benefits and drawbacks of participating? If you contribute to your plan, how did you decide how much to contribute? Could you contribute more?

2. As part of your planning, how can you estimate what you can expect from Social Security as a contribution to your retirement income? Find this answer by visiting the Social Security Administration's Plan for Retirement site (www.ssa.gov/retirement/plan-for-retirement). Using the menus at this site, find out your retirement age. How many credits toward Social Security do you have now? How many do you expect to accumulate over your working life? Use one of the benefit calculators to find your estimated Social Security benefit. How much could you receive monthly? Could you live on your Social Security benefits alone? How much more would you need to save for? What would happen if you continued to work or went back to work after taking your retirement benefit? What would happen if you took your benefit before your full retirement age?
3. Will your career path lead you to employment through government at the local, state, or federal level (for example, in education, law enforcement, or public health)? How are retirement plans for government employees different from the plans described in this section? Find answers to this question by visiting the Office of Personnel Management's Retirement Center (www.opm.gov/retirement-center/).
4. What individual retirement account(s) do you have? Which type of IRA, if any, would be best for you, and why? Why might it be a good idea to have an IRA as a means of funding your retirement, along with other means? According to *Investopedia's* Individual Retirement Account (IRA) article (www.investopedia.com/terms/i/ira.asp), what are the chief advantages of IRAs? How many types of IRAs are there? Can you withdraw money from an IRA account? When must you take a distribution (cash out your IRA)?

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[2] Social Security Administration, "Fast Facts & Figures about Social Security, 2023", Social Security Administration Research, Statistics, and Policy Analysis, 2023, www.ssa.gov/policy/docs/chartbooks/fast_facts/2023/fast_facts23.html.

[3] Social Security Administration. "Monthly Statistical Snapshot, December 2023", SSA.gov, December 2023. www.ssa.gov/policy/docs/quickfacts/stat_snapshot/2023-12.html.

[4] Social Security Administration, "See Your Full Retirement Age (FRA)", Social Security, August 16, 2023, www.ssa.gov/retirement/full-retirement-age.

[5] Internal Revenue Service, "What If I Withdraw Money from My IRA?", Irs.gov, 2019, www.irs.gov/newsroom/what-if-i-withdraw-money-from-my-ira.

[6] Internal Revenue Service, "Publication 590-A (2024), Contributions to Individual Retirement Arrangements (IRAs)", www.irs.gov, 2023, www.irs.gov/publications/p590a.

[7] ibid.

[8] ibid.

[9] Internal Revenue Service, "Publication 560 (2021), Retirement Plans for Small Business", www.irs.gov, 2023, www.irs.gov/publications/p560.

11.4: Estate Planning

Learning Objectives

1. Identify the purposes, types, and components of a will.
2. Relate the value of Advance Directive tools.
3. Describe the roles and types of trusts and gifts.

When people hear “estate planning,” they often think of mansions, yachts, or million-dollar assets. But an "**estate**" simply refers to everything you own—your bank accounts, car, home, belongings, and even digital assets. Estate planning is about making sure your wishes are known and your loved ones are supported, no matter your income level. Whether you rent or own, have a little or a lot, planning ahead helps protect what matters most.

Estate planning is a process for managing your assets after your death. Age is not a factor, because death can occur at any time, at any age, by any cause. Arranging for the disposition of your estate is not a morbid concern but a kindness to those you leave behind. Death is a legal and financial event - and in some cases a taxable event - as well as an emotional one. Your loved ones will have to deal with the emotional aftermath of your loss and will appreciate your care in planning for the legal and financial outcomes of your death.

Wills

Since you won't be here, you will need to leave a written document outlining your instructions regarding your estate. That is your **will**, your legal request for the distribution of your estate, that is, assets that remain after your debts have been satisfied. If you die **intestate**, or without a will, the laws of your state of legal residence will dictate the distribution of your estate.

You can write your own will so long as you are a legal adult and mentally competent. The document must be witnessed by two or three people who are not inheriting anything under the terms of the will, and it must be dated, signed, and, in some states, notarized. A **holographic will** is handwritten; it may be more challenging to validate. A **statutory will** is a preprinted will that you can download online. Consider, however, that a will is a legal document. Having yours drawn up by a lawyer may better ensure its completeness and validity in court.

Probate is the legal process of validating a will and then administering the payment of debts and distribution of assets by a court. Probate courts also distribute property in the absence of a will. Probate is not required in every case, however. Probate will not be required if the deceased:

- owned assets of little value, allowing for transfer without court supervision
- owned assets jointly with or "payable on death" to another person
- owned assets that named another person as the beneficiary
- held all assets in a living trust (a legal entity for managing assets on behalf of beneficiaries)

Besides the details of "who gets what," a will should name an **executor**, the person or persons who will administer the payment of your debts and the distribution of your remaining assets, according to your wishes as expressed in your will. If you have legal dependents, your will should name a guardian for them. You may also include a "letter of last instruction" stating the location of important documents, safe deposit keys, and bank accounts. Also, this should specify your funeral arrangements.

There are several types of wills. A **simple will** leaves everything to a spouse. For comparatively small estates, a simple will may be the most appropriate. A **traditional marital share will** leaves one-half of the estate to a spouse and the other half to others, usually children.

A **stated dollar amount will** allows you to leave specific amounts to beneficiaries. A drawback of this type of will is that the stated amounts may be reasonable when your will is drawn up, but may not reflect your intentions at the time of your death, perhaps many years later. For that reason, rather than specifying specific amounts, it may be better to specify percentages of your asset values you would like each beneficiary to have.

You may change or rewrite your will at any time; however, it is essential to update it as your life circumstances change, particularly with significant events such as marriage, divorce, the birth of a child, or the acquisition of substantial assets, like a house. If the changes in your circumstances are significant, you should create a new will.

Advance Directives

It is possible that you will become mentally or physically disabled before you die and unable to direct the management of your assets. To prepare for this possibility, consider creating a **living will** or advance directive with instructions for your care in the event of an emergency. You may appoint someone - usually a spouse, child, or sibling - who would have **power of attorney**, that is, the right to act on your behalf, especially as regards financial and legal decisions. That power may be limited or unlimited (such as a "durable power of attorney") and is restricted to certain acts or dependent on certain circumstances.

Along with granting power of attorney, your living will may include a health care proxy, requesting that medical personnel follow the instructions of a designated family member who expresses your wishes concerning your end-of-life treatment. For example, many people request that they not be revived or sustained if they cannot experience some quality of life. Be sure to update your advance directive, as your views may change, and medical and technological advances may change our notions of "quality of life."

Trusts and Gifts

A **trust** is a legal entity created by a trustor, also known as a grantor, who owns assets managed by a trustee or trustees on behalf of one or more beneficiaries. A **testamentary trust** may be established in a will, allowing beneficiaries who cannot manage their assets (such as minor children or disabled dependents) to benefit from the assets while having them managed on their behalf. A **living trust** is established while the grantor is alive. Unlike a will, it does not become a matter of public record upon your death. A **revocable living trust** can be revoked by the grantor, who remains the owner of the assets, at any time. Such a trust avoids the probate process but may not shield assets from estate taxes. An **irrevocable living trust** cannot be changed; the grantor relinquishes ownership of their assets, which are transferred to the trust. However, the trust then becomes a separate taxable entity and pays tax on its accumulated income.

Another way to avoid probate and estate taxes is to gift assets to your beneficiaries while you are alive. Ownership of the assets passes to the beneficiaries at the time of the gift, so the assets are no longer included in your estate. The federal government and many state governments levy a gift tax for gifts exceeding certain limits. For tax year 2024, for example, the annual exclusion from federal tax was $18,000 per recipient.[1] Additionally, the federal government does not tax gifts to spouses or payments for another person's medical bills or tuition.

Most trusts, whether testamentary or living, revocable or irrevocable, are created to avoid either the probate process or estate taxes or both. The probate process can be lengthy and costly, and therefore a burden for your executor, your estate, and your beneficiaries (who may have to wait for their distributions).

Estate Taxes

Estate taxes are sometimes called the “death tax,” and the name alone can make them sound scary. However, in reality, estate taxes only apply to very large estates worth millions of dollars. For most of us, this tax isn’t something we’ll ever have to pay.

In planning your estate, your primary objective is that the distribution of your assets provides for your dependents and that your assets are distributed as you would want, were you still there to distribute them yourself.

Summary

- A will describes your wishes for the distribution of your assets (the estate) after your death.
- Probate courts distribute assets in the absence of a will and administer wills in estates with assets valued above a certain (variable) dollar amount.
- There are many kinds of wills, including
  - the simple will
  - the traditional marital share will
  - the stated dollar amount will
- Living wills, with power of attorney and health care proxy, provide medical directives, empower someone to manage your estate while you are still alive, and authorize someone to make decisions about your health and end-of-life care.
- Trusts are used to provide the benefits of assets to beneficiaries without requiring them to assume responsibility for asset management.
- There are testamentary trusts, living trusts, revocable trusts, and irrevocable trusts. Setting up and administering trusts involves some considerable expense.

- Creating trusts and giving gifts are ways to reduce the taxable value of an estate.

Exercises

1. Draft a will or use a statutory will form recognized in your state. Start by reviewing your balance sheet, showing your assets, liabilities, net worth, and an inventory of personal and household property. Think about how you would want your estate to be distributed upon your death. Identify an executor. Review free advice for writing a will (www.legalzoom.com/articles/how-to-write-a-will) from LegalZoom.com. The same website can help you find out what kind of document your state requires (www.legalzoom.com/articles/state-requirements-for-a-last-will) for a "last will and testament". Finally, investigate if you need to use a lawyer (www.nerdwallet.com/article/investing/estate-planning/do-you-need-lawyer-make-will) to create your will.
2. Review the *Investopedia.com* information about living trusts (also called life estates in some states) (www.investopedia.com/terms/l/living-trust.asp). When and why might you want to create a revocable or irrevocable living trust (www.investopedia.com/articles/pf/06/revocablelivingtrust.asp) in addition to or as an alternative to a will?
3. Investigate the estate tax laws in your state. Does your state tax income from Social Security payments? Does your state tax pensions and other sources of retirement income? How does your state treat inheritance taxes and estate taxes? What tax breaks does your state offer to retirees? Find answers to these questions by visiting Taxes by State (www.retirementliving.com/taxes-by-state).

[1] Internal Revenue Service, “Instructions for Form 709”, www.irs.gov, 2023, www.irs.gov/instructions/i709.

CHAPTER OVERVIEW

12: Behavioral Finance and Market Behavior

This chapter introduces the complex forces that drive markets, contrasting rational models like efficient market theory with real-world behavioral tendencies. By examining psychological biases, social influence, and historical anomalies, it reframes the market not as a perfect machine but as a dynamic human system.

12.1: Introduction
12.2: Investor Behavior
12.3: Market Behavior
12.4: Market Efficiency
12.5: Extreme Market Behavior
12.6: Behavioral Finance and Investment Strategies

12.1: Introduction

Learning Objectives

- Explain how *framing* alters financial decision-making despite identical outcomes.
- Identify key cognitive biases that affect individual financial behavior (e.g., loss aversion, anchoring).
- Recognize the central premise of behavioral finance: Psychological tendencies influence financial choices.

The Illusion of Rationality

> *"Of course I make good financial decisions. I think about them."*

We begin with a lie. It is a well-intentioned, self-affirming lie that most of us tell without knowing. We imagine ourselves as thoughtful, calculating, maybe even clever investors. We might not think we're Warren Buffett, but we're not out of control. We believe in the power of logic. We trust our reasoning.

But then, we're offered a choice.

The Two Gamble Problem

Imagine this:

Option A	Option B
A sure **gain** of $500	A 50 percent chance of gaining $1,000, and a 50 percent chance of gaining nothing

Most people choose Option A. Risk feels... risky. Now imagine a second version:

Option A	Option B
A sure **loss** of $500	A 50 percent chance of losing $1,000, and a 50 percent chance of losing nothing

Most people flip and choose Option B. The risk feels like a rescue. Same numbers. Same math. Different choices. What changed? Only the frame. This isn't just a trick. It's one of the most important realizations in behavioral finance: We don't choose based solely on outcomes; we choose based on how outcomes are presented. And once you see it, you can't unsee it.

The Bias Beneath the Frame

The example above is often used to introduce *loss aversion*, a cognitive bias that causes people to fear losses more than they value equivalent gains. Losing $500 feels worse than gaining $500 feels good. But it doesn't stop there. The moment you start looking at your financial choices through this lens, a whole internal architecture emerges that was invisible before, but is obvious now.

- You **overestimate the importance of vivid information** (*availability bias*).
- You **judge by similarity to known stories**, even when irrelevant (*representativeness bias*).
- You **cling to numbers you've already seen**, even if they're arbitrary (*anchoring bias*).
- You **avoid decisions with uncertain outcomes**, even if the odds favor you (*ambiguity aversion*).
- You **prefer choices that isolate wins from losses**, even when aggregation would serve you better (*choice segregation*).

These aren't personality flaws. They're universal and wired into our DNA. They're evolutionary holdovers from a world where reacting fast was more important than calculating well.

What You Think Shapes What You Choose

Most financial education starts with facts, formulas, or tips. But beneath those strategies are assumptions about what people *will* do or *should* do. The problem is this: Those assumptions are often based on the idea that people behave rationally. And that's where the illusion begins to crack.

If we were purely rational:

- We'd invest based on probabilities, not feelings.
- We'd never overpay for trends or panic during downturns.
- We'd view $1 earned and $1 saved as equally valuable.
- We'd make decisions today that serve our future selves tomorrow.

But we don't. Not consistently. Not even close. And here's the real kicker: We're usually not aware when we're being irrational. The result? Our decisions feel right, even when they are economically wrong. We *feel smart* while we're doing something dumb.

> "I knew this stock was going to bounce back."
>
> "I felt like this one was a winner."
>
> "Everyone else was getting in, and I didn't want to miss out."

These are perfectly human statements. And they are not rational investment strategies.

Welcome to Behavioral Finance

This is where behavioral finance begins. Behavioral finance is not a rejection of financial logic, but a revision of its assumptions. It says: What if the problem isn't the formula….but the person using the formula?

Behavioral finance doesn't discard traditional financial theory; behavioral finance re-frames financial theory to include psychology, emotion, and context. It brings the messy, unpredictable, fascinating reality of human behavior into the clean world of numbers and models.

It asks:

- Why do people chase losses?
- Why do bubbles inflate and burst?
- Why do people keep buying high and selling low?

And it starts with a single premise: We are not perfectly rational agents.

So What Now?

Maybe that's unsettling. Maybe it's a relief. Because if you're not purely rational, and no one else is either, then investing isn't just about finding the right numbers; investing is about understanding the people behind those numbers. This includes you.

In the next section, we'll go deeper into this behavioral architecture. You'll meet your biases not as abstract flaws, but as recognizable habits of mind. And just like that, the myth of the rational investor begins to unravel. The market isn't moved by numbers alone. It's moved by minds like yours.

Summary

We open the door to behavioral finance by confronting a comfortable lie - that we are rational decision-makers. The Two Gamble Problem introduces framing, revealing how presentation, not content, shapes choice. This section outlines a constellation of biases, including loss aversion, anchoring, and availability bias, showing how they emerge naturally from our evolutionary wiring.

- People often favor certainty in gains and risk in losses, even when outcomes are equivalent.
- Biases aren't personal failings; biases are universal features of human cognition.
- Behavioral finance begins by re-centering the discussion from "perfect logic" to "predictable imperfection."

Exercises

1. Can you recall a time when the way something was phrased influenced your decision more than what was being said?
2. Why might framing have evolved as a useful shortcut in our psychology?
3. Which bias listed (e.g., anchoring, availability, loss aversion) feels most familiar or personally recognizable to you?

12.2: Investor Behavior

Learning Objectives

- Identify and define common cognitive biases (e.g., availability, anchoring, representativeness) and explain how they influence financial decisions.
- Interpret how these biases can distort the perception of risk, opportunity, and value in investing contexts.
- Recognize how multiple biases may interact to influence behavior in complex or uncertain financial situations.

Cognitive Bias

In theory, investors weigh risk and reward, sort through available data, and make rational decisions based on expected outcomes.

In practice, investors buy high because their cousin did, hold losing assets because selling feels like admitting defeat, and spend hours comparing five nearly identical options because they "want to be sure."

The mind wasn't built to optimize; it was built to survive. This means that even the best intentions are filtered through a series of mental shortcuts. These shortcuts, known as **cognitive biases**, are useful in a world of uncertainty. They help people make decisions quickly when there's no time to gather every data point. But in the world of investing, those same shortcuts can become costly detours.

Availability: What's Easy to Recall Feels Real

When a certain idea or memory comes to mind quickly, the brain treats it as more significant. If a news story about a market crash is fresh, risk feels imminent even if the probability hasn't changed. If someone just watched a viral clip of a "crypto millionaire," the odds of success seem higher than they are.

This is known as the **availability heuristic**. What's vivid becomes persuasive. What's recent becomes relevant.

It's not a flaw. It's a feature, but one that doesn't always serve financial reasoning.

A dramatic example sticks longer than a thousand insignificant ones.

Representativeness: The Pattern That Isn't There

Suppose a small tech firm launches with a charismatic founder and sleek product design. It feels like Apple in the early days. So investors treat it that way, even if the fundamentals are shaky.

This is **representativeness bias**: judging a situation by its similarity to a known category, rather than by analyzing its actual data. It's the mind mistaking a pattern for proof.

The market is full of echoes. Some are meaningful, and some are misleading. Just because something *looks* like a winner doesn't mean it *is* one.

Anchoring: The First Number Sticks

In the early days of the iPhone, Steve Jobs announced a $599 price tag. Then, almost as an afterthought, he said it would cost just $499. The crowd cheered. The first price, though never real, **anchored** expectations.

Anchoring is the tendency to rely too heavily on the first piece of information encountered, even when it's irrelevant. For investors, this can mean clinging to a previous stock price, treating it as the "true value," and resisting decisions that contradict it.

A stock that fell from $100 to $70 doesn't automatically become a good deal. But anchoring makes $100 hard to forget.

Overconfidence: Trusting the Gut Too Much

Overconfidence is among the most persistent of all cognitive biases. It's the belief - sometimes quiet, sometimes loud - that one's insight or intuition is above average.

It shows up in predictions that turn into convictions, trades made on hunches, and the belief that one's personal research can outperform the market.

It's not about arrogance. It's about trust misplaced in instinct.

Ambiguity Aversion: The Fear of the Unknown

Given a choice between a known risk and an unknown one, most people prefer the known, even when the unknown has better odds.

This is **ambiguity aversion**, and it can lead to missed opportunities. Investors might avoid newer asset classes or unfamiliar sectors, not because they've evaluated the risk, but because the uncertainty feels uncomfortable.

In markets, where the future is never certain, this discomfort can lead to avoidance when exploration might serve better.

Choice Segregation: Decisions in Isolation

A person may invest in five funds, each chosen independently for different reasons. But together, they might be heavily overlapping, redundant, or misaligned. **Choice segregation** is the habit of treating each decision on its own, without considering how it fits into the whole.

Investing isn't just about individual choices; it's about how they work together.

Framing: The Power of Presentation

Return to the scenario from the last section. Gains and losses are presented differently and, therefore, produce different decisions. That's **framing** in action.

The brain doesn't evaluate outcomes in a vacuum; it evaluates them relative to how they are posed. A "90 percent survival rate" feels different from a "10 percent mortality rate," even though they're identical.

In financial contexts, framing influences everything from portfolio descriptions to market headlines. The same investment can sound conservative or aggressive, depending on the language used.

Biases Don't Happen in Isolation

Each of these tendencies can shape a decision, but they rarely appear alone. Instead, they weave together. Availability influences representativeness; anchoring reinforces overconfidence. Together, they form a network of intuitive reasoning that feels right but isn't always reliable.

These patterns don't just distort perception. Over time, they shape behavior, and that behavior scales into the markets themselves.

As investors act on these patterns, they create trends, spikes, sell-offs, and bubbles. The result isn't a market that moves purely on logic. It pulses with psychological rhythm.

Recognition Before Reaction

The goal isn't to eliminate bias because that's not possible. The goal is **recognition**. Once a bias is visible, it loses some of its grip. A pattern named is a pattern weakened. So when a familiar headline feels urgent, or when a stock price "feels right," it's time to pause. That pause is where intuition meets inquiry. And inquiry is where better decisions begin.

In the next section, we'll zoom out. Bias doesn't live in a vacuum - it scales. The same cognitive patterns that influence individual decisions ripple across groups, firms, and entire economies. And when enough people follow a flawed instinct together? That's not investor behavior anymore. That's **market behavior**.

Summary

This section explores heuristics, the psychological shortcuts that guide financial behavior for better or worse. Our brains aren't calculators; they're survival machines that are trained to make fast judgments in uncertain conditions. That speed comes at a cost: We over-rely on vivid examples (availability), mistake resemblance for truth (representativeness), cling to first impressions (anchoring), and avoid what we don't fully understand (ambiguity aversion). These aren't isolated bugs. They're systemic features of the mind.

- **Availability** bias makes recent or vivid information feel more important than it is.
- **Representativeness** causes us to see patterns where none exist.
- **Anchoring** locks us to initial values, even when irrelevant.
- **Overconfidence** inflates our trust in our own judgment.
- **Ambiguity aversion** makes us reject options we don't fully understand.
- **Choice segregation** leads us to consider financial decisions in isolation, undermining overall strategy.

- **Framing** distorts interpretation based on wording and context. The kicker? These biases often operate together, forming an invisible architecture of behavior that feels right, even when it's wrong.

? Exercises

1. Pick a recent financial or purchasing decision you made. Which bias or heuristic might have influenced it - availability, anchoring, or something else?
2. Thought Prompt: Why might ambiguity aversion cause investors to miss out on new opportunities, even when the math is in their favor?
3. You're reading a glowing news article about a startup described as "the next Tesla." What bias is being activated? How would you step back and assess the situation more critically?

12.3: Market Behavior

Learning Objectives

- Explain how individual investor behaviors scale into collective market trends and distortions.
- Identify the behavioral finance mechanisms behind common market patterns, such as herding, momentum, and narrative-driven pricing.
- Evaluate the influence of cognitive biases and emotional factors on large-scale market movements.

The Investor *Is* the Market

Markets are often described in clinical terms: efficient, rational, self-correcting. They're portrayed as machines - cold and calculating, absorbing information and pricing it perfectly. But look closer, and the gears are not made of steel. They're made of **beliefs**, **decisions**, and **people**. The market doesn't exist apart from us. The market is us - scaled, networked, and amplified. The same biases that shape individual investors begin to echo, repeat, and cascade. Personal behavior becomes collective behavior. Investor psychology becomes **market behavior**.

A Crowd With a Spreadsheet

At any given moment, the market reflects the aggregated choices of millions - retail investors, institutional firms, analysts, bots, and algorithms - all responding to data, rumors, charts, gut feelings, and social cues. It would be neat to imagine the rational actors canceling out the irrational ones. But it rarely works that way. Biases aren't outliers. They're embedded.

Availability bias

Availability bias doesn't just affect one investor; it defines what gets reported and what gets ignored.

Anchoring

Anchoring shapes not just personal decisions, but entire pricing expectations.

Framing effects

Framing effects dictate how earnings reports are written and how headlines move markets.

When enough people follow the same mental shortcut, it stops looking like bias and starts looking like a **trend**.

Herding and Momentum

Investors often look to others for cues, especially in uncertain situations. If a stock is rising fast, the instinct is to assume that someone knows something. And no one wants to miss out. This is the root of **herding behavior**, where people follow the majority, not out of logic, but out of fear of being left behind.

In the early stages, herding can look like rational consensus. But as it builds, it generates **momentum** that is not grounded in fundamentals, but in psychology. Rising prices attract more buyers, which fuels more rises, which, in turn, attract even more buyers.

Until the story breaks.

The Role of Narrative

Markets don't just run on data. They run on stories.

- A new technology is "the next big thing."
- A company is "too big to fail."
- A coin is "going to the moon."

Narratives reduce complexity. They create a structure where data feels messy. They give investors a reason to believe, to buy, to hold, or to run. But stories also compress nuance. They blur the line between facts and assumptions. They're sticky - and sometimes, they're wrong.

Mispricing and the Myth of the Perfect Market

In theory, if a stock is under-priced, savvy investors will buy until its price reflects its true value. This is **arbitrage**, and it's one of the core self-correction mechanisms of the **Efficient Market Hypothesis**.

But arbitrage assumes that prices are only distorted by temporary informational gaps. Behavioral finance suggests something deeper: That prices can remain misaligned not just because of a lack of information, but because of **collective error**.

If everyone is anchoring on past performance, telling themselves the same story, and resisting the urge to be the first to exit the herd, then bad things may ensue. The correction may come, but not before a bubble forms, the narrative breaks, and a crash overwhelms the market.

Enter the Machines

Now add speed.

In today's markets, algorithms and bots handle vast volumes of trades in milliseconds. These systems don't feel fear or euphoria, but they are still shaped by human assumptions - coded by people, trained on historical patterns, and tuned to respond to other traders' behavior.

In other words:

> *Quants and bots don't eliminate human bias - they just automate it.*

Behavioral patterns baked into code can create feedback loops, flash crashes, and self-reinforcing volatility. And while a human trader might pause, a machine never blinks.

From Quirks to Currents

The biases explored earlier weren't just academic terms. They were clues, hints about how markets move, not because they must, but because we make them.

The upward surge of a hyped stock? This momentum is fueled by **availability**, **herding**, and **representativeness**. The slow decline of a once-loved company? This is likely the result of anchoring, overconfidence, and narrative inertia. The panic of a sudden sell-off? This happens when loss aversion is amplified by ambiguity aversion and spread through a hundred screens at once.

These aren't exceptions. They're patterns. The market doesn't ignore human behavior. Instead, it reflects it.

The Crowd Is Not Always Wrong - But It Is Always Human

To say the market is behavioral is not to say it is irrational at every moment. It's to say that rationality is **bounded** - shaped by fear, hope, stories, timing, and the structure of decision-making itself.

Some investors beat the crowd. Some predict crashes. But most are shaped by it. They surf waves they didn't create, chase signals they half-understand, and react to a crowd they both follow and help form.

Understanding markets, then, isn't just about reading graphs. It's about recognizing the **psychology beneath the price**.

In the next section, we'll introduce the model that once promised to explain it all. This is a theory of elegant simplicity, where markets *price in* all information and mispricing vanishes in a blink.

It's called the **Efficient Market Hypothesis**. And it's about to meet its behavioral counterpart.

Summary

What begins in the mind of a single investor doesn't stay there. This section zooms out, revealing how personal bias becomes market behavior. From the aggregation of individual decisions comes something much larger: pricing momentum, bubbles, and even systemic risk.

Key dynamics include:

- **Herding:** Following the crowd not for insight, but to avoid isolation or fear of missing out (FOMO).
- **Momentum:** Rising prices attract more buyers, creating a self-reinforcing cycle.
- **Narratives:** Investors lean on stories, not just spreadsheets, to explain value.
- **Mispricing:** Collective bias can keep prices out of sync with fundamentals far longer than expected.

- **Automation:** Algorithms don't erase human flaws; they repeat them at scale and speed.

The market, in this view, is not an objective judge but a mirror that reflects millions of minds, with all their brilliance and blind spots.

Exercises

1. Think of a recent market trend or viral stock surge. What human behaviors (e.g., herding, narrative, overconfidence) do you think contributed to it?
2. "The market is made of beliefs." What does this statement suggest about the limits of data in predicting market behavior?
3. A sudden sell-off hits a sector despite no major news. Headlines point to investor anxiety. What behavioral explanations could you propose for this market movement?

12.4: Market Efficiency

Learning Objectives

- Explain the core assumptions and implications of the Efficient Market Hypothesis (EMH).
- Differentiate between the weak, semi-strong, and strong forms of market efficiency.
- Evaluate the tension between EMH and behavioral finance, particularly regarding investor rationality and market mis-pricing.

The Case for Efficiency

In 1970, economist Eugene Fama proposed something that would become both foundational and controversial: the idea that markets are **efficient**.

Markets are not efficient in the everyday sense of neat or organized, but in the technical sense: **Markets reflect all available information.** If that's true, then prices already account for everything investors know. Stock prices aren't guesses; they're the distilled result of every data point, report, rumor, and projection available at the time.

If that's true, trying to beat the market consistently isn't just hard; it's statistically improbable.

This is the core of the **Efficient Market Hypothesis (EMH)**. This hypothesis is one of the most influential ideas in finance, and one of the most debated.

The Logic Behind the Hypothesis

At the heart of EMH is a simple proposition:

> *If information is freely available and investors act rationally, then prices should adjust immediately to reflect new information.*

If a company announces higher-than-expected earnings, its stock price should rise almost instantly, before most investors can act. The gain is priced in. The "opportunity" disappears. Likewise, if there's negative news - a lawsuit, a scandal, a bad quarter - the price should fall immediately. Stock prices will not wait to fall after a week of hand-wringing or an extended social media spiral. Stock prices fall immediately with negative news.

It's elegant. It's efficient. And it's built on three key assumptions:

1. All relevant information is available to all investors.
2. Investors interpret and act on that information rationally.
3. Price changes are driven only by new information.

From these assumptions, a powerful idea emerges:

> *You can't consistently outperform the market, because the market has already accounted for everything you know.*

The Forms of Efficiency

EMH is typically divided into three categories, based on how much information is reflected in prices:

Weak Form Efficiency

Prices reflect all *past* price and volume data. Technical analysis (using charts to predict future

Semi-Strong Form Efficiency

Prices reflect all *public* information - financial statements, news, and

Strong Form Efficiency

Prices reflect *all* information - public and private. Even insider knowledge wouldn't allow

prices) shouldn't work, because any patterns are already baked in.	forecasts. Fundamental analysis shouldn't offer a consistent edge.	consistent out-performance.

Few investors fully embrace the strong form, but even the weak and semi-strong versions carry major implications.

Implications for Investors

If EMH holds, then:

- There's no point in trying to "time the market."
- There's no magic in picking stocks.
- Active portfolio managers are unlikely to beat index funds in the long run.
- The best strategy may simply be to **buy and hold a diversified portfolio**, minimizing costs and letting the market do its work.

This is the philosophical foundation of **passive investing,** an approach that gained momentum alongside EMH. Passive investing theory continues to shape investment strategies today.

And the data? Many actively managed funds **fail to outperform** their benchmarks over time, especially once fees are accounted for. For EMH proponents, this confirms the theory: You can't consistently win in a game where the odds are already priced in.

What About Mispricing?

Markets make mistakes - that much is clear. Prices sometimes overshoot, undershoot, or collapse altogether. So, how does EMH account for this?

According to the theory, **mispricing is temporary**. It may happen when information is new or confusing; however, rational investors will recognize the error, act on it, and bring the price back in line. This corrective action is called **arbitrage** - the buying and selling that closes gaps between price and value.

The market, in this view, is self-healing. Imperfections are short-lived. Rationality prevails.

The Beauty - and The Blind Spot

EMH is tidy. It explains a lot. It's supported by decades of data showing just how hard it is to beat the market consistently. But it also rests on an ideal: Investors are rational, or at least close enough to it that irrationality cancels out in the aggregate. What if that's not always true? What if emotions don't cancel out and compound instead? What if the assumption that markets correct quickly depends on people recognizing the correction is needed? What if mispricing can persist not because information is hidden, but because it's misunderstood or even willfully ignored?

These are the questions behavioral finance asks. It asks the question not to dismiss efficiency, but to put it in context.

Coexistence and Contrast

EMH isn't wrong. It's just incomplete. It describes a world where logic dominates, a world where data drives decisions, and corrections happen naturally. Behavioral finance describes a different world, one where perception bends decision-making and risk is felt, not calculated. The stories behind behavioral finance shape value just as much as spreadsheets.

In the next section, we'll watch the two worlds collide. Efficiency will meet emotion. Rational pricing will meet narrative-driven bubbles. And the invisible hand? It shakes a little.

Summary

This section outlines the classical view of markets: the Efficient Market Hypothesis. Proposed by Eugene Fama, EMH suggests that prices reflect all available information, making it nearly impossible to consistently outperform the market.

- EMH rests on three assumptions:
  - Information is widely available
  - Investors act rationally

- Prices react immediately to new data

- The hypothesis comes in three forms:
  - **Weak form:** Past prices are already reflected in current prices.
  - **Semi-strong form:** All public info is reflected in prices.
  - **Strong form:** Even insider info is priced in.

The result? Strategies like market timing and active management become statistically ineffective, leading to the rise of passive investing.

But here's the rub: EMH assumes rationality. Behavioral finance asks the question, "But what if we're not rational?" Mispricing might persist not due to a lack of information, but due to human error. The two models aren't enemies, but they are uneasy neighbors.

? Exercises

1. Think about a time you saw a stock price move quickly after breaking news. How does that event support or challenge the idea of efficient markets?
2. EMH says markets correct quickly. Behavioral finance says biases linger. Which theory better explains recent financial bubbles or crashes?
3. Match each form of EMH (weak, semi-strong, strong) with an example of what kind of information it claims is already priced in. What investing strategies would be invalidated under each version?

12.5: Extreme Market Behavior

Learning Objectives

- Describe historical examples of major market failures and the behavioral factors that contributed to them.
- Analyze how biases like herding, overconfidence, and narrative influence the build-up and collapse of financial bubbles.
- Evaluate the recurring behavioral patterns underlying financial crises across different eras.

Crashes, Scandals, and Market Madness

By now, the pattern is clear. Markets are shaped by minds. Minds are shaped by bias. Bias scales.

So what happens when that scaling goes too far? When collective emotion overpowers individual analysis? When does the elegant balance of pricing and information break beneath the weight of hope, fear, and greed?

History answers in full color.

Markets don't always drift out of alignment. Sometimes they break suddenly.

The 1929 Crash: From Euphoria to Panic

The Roaring '20s were just that - roaring. New technologies, booming industries, and a cultural appetite for modernity. Stocks soared, driven by optimism, credit, and a belief that the good times would never end.

Margin buying became common, and investors borrowed to buy more stocks. Prices kept rising. It didn't matter what a company earned; what did matter was that others were buying.

Then, without warning, the optimism collapsed. In October 1929, the market dropped 12 percent in two days. The Great Depression followed. This was **herding behavior** on a national scale, and the behavior was amplified by **overconfidence**, **narrative bias**, and a widespread **failure to understand risk**. No new data caused the collapse. No rational trigger. Just a sudden, collective shift in emotion.

Ponzi Schemes: Trust Turned Toxic

In the 1920s, Charles Ponzi promised investors massive returns through arbitrage in international reply coupons, a technical-sounding idea that most investors didn't understand. In the beginning, investors didn't care because the returns were real.

As new money poured in, Ponzi used it to pay off earlier investors, creating the illusion of success. Some people reinvested, and others joined. The scheme fed on itself. Eventually, the math caught up.

There weren't enough new investors to pay the old ones. The illusion shattered, and the name stuck. **Ponzi schemes** are the most extreme form of market distortion: no fundamentals, no value, just narrative, momentum, and blind trust. They are behavioral finance in its darkest form. Hope overrides logic, and crowds suspend disbelief because disbelief feels like missing out.

Enron: Complexity as Camouflage

In the late 1990s, Enron was celebrated as an innovator - a company that had reinvented energy trading and risk management. Its stock soared. Analysts praised its leadership. Employees believed they were changing the game.

Behind the scenes, accounting tricks and off-the-books liabilities masked growing losses. But the image held, for a while.

When the truth emerged, the stock collapsed from over $90 to less than $1 per share. Thousands lost their savings. The company folded. Confidence evaporated.

This wasn't just a case of fraud. It was a market-wide **failure to challenge the narrative**. Anchoring, confirmation bias, and professional incentives all played a role. The story was too compelling. The numbers were too complex.

And no one wanted to be first to exit the herd.

The Big Short: Housing, Leverage, and Collective Delusion

By the early 2000s, housing prices in the U.S. had been climbing for years. Homeownership was rising. Banks were offering mortgages with low standards and high leverage. These mortgages were bundled into securities and rated as safe.

It looked like growth. It felt like certainty.

A few voices warned that the system was unstable and that people were borrowing too much. Banks were overexposed. The warning voices were ignored.

In 2008, the bubble burst. Housing prices fell, mortgage-backed securities collapsed, and banks failed. The global economy spiraled.

The 2008 crisis wasn't just about bad loans. It was about **groupthink**, **incentive misalignment**, and **systemic denial**. The tools were complex and new, but the behavior was ancient.

GameStop and the Reddit Rebellion

In 2021, something unusual happened. GameStop, a struggling retail company, became the center of a market battle between institutional short-sellers and individual investors on Reddit.

The stock price exploded, but not because of earnings or growth. The stock price exploded because of collective action, memes, and a desire to flip the script.

Investors weren't just trying to make money; they were trying to make a point. Prices surged from under $20 to nearly $500, then fell, and then surged again. This wasn't a traditional bubble. It was **behavioral finance meets internet culture** with herding, narrative, loss aversion, and identity rolled into a single, volatile moment. For some, it was irrational exuberance. For others, it was empowerment. For the market, it was a reminder: Behavior is still the engine - and it still runs hot.

Why Do These Patterns Repeat?

Each of these events is different. But the underlying dynamics echo:

- **Emotion** short-circuits **Evidence**
- **Narrative** rewires **Numbers**
- **Momentum** overrides **Fundamentals**
- **Delay** scrambles **Dissent**
- **Confidence** distorts **Probability**

And always the belief: *"This time is different."*

But markets are not immune to psychology. They are constructed from it. Even in the age of algorithms, the ghosts remain. Bots respond to volume. Quants embed human logic. Speed doesn't erase bias; it magnifies it.

Crashes, panics, and bubbles are not glitches in the system. They are expressions of its most human parts.

The Aftermath: Correction and Memory

Eventually, the dust settles. Regulations change. Caution returns for a time, but markets and investors forget. Slowly, the cycle rebuilds. Behavioral finance doesn't predict when the next break will happen. However, it does tell us this: If markets are made of minds, they will reflect our brilliance and our blind spots.

In the final section, we'll move from observation to application. What does this mean for real investors? What does investing look like when we don't just look at the numbers, but at the **human behavior behind them**?

Summary

This section pulls the curtain back on the most dramatic failures of market logic. From the crash of 1929 to the Reddit-fueled GameStop frenzy, we see how bias doesn't just influence investors; bias also scales, distorts, and sometimes detonates entire financial systems.

Key patterns across events include

- **Herding behavior:** Individuals follow the crowd, often without fully understanding why.
- **Narrative bias:** Compelling stories can overpower contradictory data — until reality reasserts itself.
- **Overconfidence and delay:** Warnings are ignored, risks are underestimated, and dissent is postponed.
- **Ponzi dynamics and systemic denial:** Trust is exploited, and complexity conceals danger.

These aren't random glitches. They are recurring expressions of human psychology under pressure. Behavioral finance helps explain not just that markets break, but why they break in such human, predictable ways.

Each case study offers a mirror, revealing how belief, emotion, and group dynamics override rational models. The past doesn't repeat, but the biases do.

? Exercises

1. Choose one case from this section (e.g., Enron, The Big Short, Reddit/GameStop). Which biases were most at play and how did they shape individual and collective behavior?
2. Crashes and scandals are often called "unpredictable." Do you agree? How might behavioral finance argue otherwise?
3. In the GameStop event, some investors said they were motivated more by community or justice than by returns. What does this suggest about how identity and emotion can drive market behavior?

12.6: Behavioral Finance and Investment Strategies

Learning Objectives

- Recognize how awareness of bias can inform practical investment strategy.
- Describe behavioral techniques (e.g., automation, diversification, reflective risk assessment) that help manage common cognitive pitfalls.
- Reflect on their own financial behavior, risk preferences, and decision-making patterns.

So What Do You Do?

By now, the idea of a perfectly rational investor or a perfectly rational market feels more like a myth than a model. We've walked through the architecture of behavior. We've seen how stories move prices. Algorithms don't escape emotion, but they do automate its patterns. Confidence becomes momentum, and unchecked bias can echo through an entire economy.

But this isn't a cause for despair. It is quite the opposite. It's clarity. Once you understand what shapes decisions - yours and everyone else's - the market starts to look different. It looks less like a game of genius and more like a system of habits, stories, feedback loops, and time. And that brings us to the real question:

> *How do people invest with that awareness in mind?*

A New Lens, Not a New Rulebook

Understanding behavioral finance isn't about becoming hyper-vigilant. It's not about second-guessing every instinct or chasing some impossible objectivity. It's about learning to recognize the **pattern behind the price** and the tendency behind your decision-making. This recognition doesn't mean you'll avoid every mistake. It means you'll **understand what the mistake is** when it happens. And that can change everything.

From Bias to Strategy

Investing, after all, isn't just numbers on a screen. It's behavior over time. When people structure their portfolios, they often find themselves building around truths that once seemed theoretical, but now feel deeply personal:

- That **diversification** isn't a trick, but a hedge against our uncertainty
- That trying to **time the market** usually reflects confidence we haven't earned
- That **automating contributions** can help bypass the impulse to buy high and sell low
- That **risk** is not a single number, but a shape that changes with life stage, income, experience, and mindset

These aren't rigid rules. They're adaptive tools built not in defiance of human behavior, but in cooperation with it.

A Quiet Kind of Discipline

In the beginning, many investors think of success in terms of cleverness. They want to find the edge, spot the trend, and beat the system. But the longer people stay in the market, the more they tend to shift their focus from performance to process. Instead of prediction, they rely on preparation. People learn to be resilient instead of just trying to be right. The market doesn't reward fearlessness. It rewards **clarity**, **patience**, and the ability to stay grounded when others drift.

Investing as Self-Knowledge

There is no single right portfolio, perfect allocation, or universally optimal strategy. However, there is a set of decisions made over time and shaped by circumstance and belief. Understanding investing is not just about understanding assets - it's about understanding **yourself**:

- What are you afraid of losing?
- What stories do you believe about risk?
- What patterns pull you in - and which ones push you away?
- How does your confidence shift when the market moves?

Behavioral finance doesn't answer these questions. But it helps you ask them more clearly.

The Market as Mirror

In the end, the market reflects all of us: our logic and our fear, our research and our rumor, our vision and our blind spots. To participate in it is not just to make financial decisions; it is to engage in a conversation with millions of others, all trying to do the same thing. And in that complexity, something remarkable emerges:

Not a perfect system or a predictable outcome, but a pattern of behavior that, once seen, can't be unseen.

If you understand that (even in fragments), then you're already ahead of where most investors start. You're not just watching prices. You're watching the patterns that shape them. And that's where the study of investment options begins. Studying options does not begin with a stock pick or product comparison, but with a clearer sense of the terrain, and a growing awareness of how people - including you - move through it.

Summary

Behavioral finance isn't just a diagnosis; behavioral finance is a starting point for strategy. This final section reframes investing not as a test of brilliance but as a practice in discipline and self-awareness.

- **Bias is inevitable**, but naming it gives it less power.
- Investors can build **process-oriented strategies** - diversify, automate, avoid timing games, and focus on resilience.
- Success shifts from cleverness to **clarity** - knowing your tendencies, not beating the market.
- The market reflects human psychology. The better you know yourself, the better your financial decisions.

Investing, at its core, is an exercise in self-knowledge. The goal isn't perfect rationality; the goal is resilient behavior.

Exercises

1. Which idea from behavioral finance has changed how you think about your own financial behavior? How might you adapt your strategy as a result?
2. If investing is more about managing behavior than predicting outcomes, what kind of "tools" does that require? What would a behavioral toolkit include?
3. You tend to panic and sell when the market dips, then hesitate to buy when it rebounds. What behavioral pattern is this? What strategy could help you break the cycle?

CHAPTER OVERVIEW

13: Introduction to Investing

This chapter answers the essential question: *Why invest at all?* It explores the tension between saving and investing, the relationship between risk and return, and how personal goals shape financial strategies.

13.1: Why Invest At All?
13.2: Investing vs. Saving
13.3: Risk and Return
13.4: Goals to Strategy
13.5: Instruments as Tools
13.6: Getting Help

13.1: Why Invest At All?

Learning Objectives

- Describe how investing relates to future goals and financial surplus.
- Recognize the role of time in building wealth through investment.
- Reflect on personal readiness to begin investing and identify motivating factors.

1. Why Invest at All?

Most people don't start their investing journey with a spreadsheet. They start with a question:

> *What should I do with my money?*

Maybe you've saved a little more than expected. Maybe a side hustle is starting to pay off. Or maybe a raise, a refund, or a gift landed in your account and now you're wondering whether to spend it, save it, or invest it.

That question is more powerful than it seems. It means you're starting to think not just about *money*, but about *time*. Specifically: How can the money you have today help you build the life you want tomorrow?

That's what investing is really about. It's not about guessing the stock market or chasing headlines. It's about **putting today's surplus to work for future goals.**

From Surplus to Strategy

If you've read *Market Behavior*, you already know that financial decisions don't always come down to logic. We're human. We're biased. We overestimate our control, underestimate risk, and react emotionally to markets. But now, we shift perspective. Instead of thinking about how *markets* behave, we turn inward:

> *How do **I** behave when I have more money than I need today?*

This moment, when your income exceeds your immediate spending, is when investing becomes possible. It is not required or automatic, but it is *possible*. What you do with that possibility is where the journey begins.

A Familiar Face

Let's check in with Alex and Jordan.

Alex just got his first salaried job and is surprised by how much is left at the end of each month.

Jordan, a little further along in her career, has been setting aside money in a savings account, but inflation has been eroding its value.

Both are asking: *What next?*

- For Alex, it's about learning the landscape.
- For Jordan, it's about doing more with what's already been saved.

They're in different places, but they're both standing at the entrance to the same road.

Investing Is Not One Decision - It's a Series

Some people consider investing a *leap of faith*. In reality, it's more like climbing a ladder step by step. The first step might be learning how a retirement account works. The second might be choosing between a savings account and a brokerage account. The third might be comparing different investment options and deciding how much risk you're comfortable with.

You don't have to start with stocks. You don't even have to start big.

You just have to start with a question:

> *What's something I want for my future that I can start working toward now?*

Where We're Headed

In this section, we'll walk through the foundational ideas behind investing, not just the "how," but the "why." We'll explore:

- How investing differs from saving
- Why risk and return are always connected
- How to set goals and plan around them
- And how to evaluate investment tools and the people who offer them

But before we go there, pause for a moment and consider:

- Do you see yourself as an investor?
- What future are you building toward?

Don't worry if the answers feel vague right now. That's what the next few sections are here to explore.

Summary

Investing doesn't begin with products or platforms. It begins the moment when you realize that today's surplus can serve tomorrow's goals. This section introduces the fundamental why behind investing.

- Investing occurs when income exceeds immediate spending and a person begins to plan for the future.
- It's not just about money. It's about shaping a future life using financial decisions made today.
- Alex and Jordan, two recurring characters, highlight different paths into investing: curiosity and re-evaluation.
- Investing is a process of gradual, intentional steps, not a one-time leap.

Before diving into mechanics, this section invites students to connect investment decisions to purpose, timing, and self-perception.

Exercises

1. Have you ever experienced a financial surplus? What did you do with it? How did you decide?
2. Why do you think investing often begins with a question rather than a plan? What does that suggest about how people learn?
3. Imagine you just received a bonus or an unexpected gift. List three future-oriented goals you might use that money to pursue. How would investing support those goals?

13.2: Investing vs. Saving

Learning Objectives

- Differentiate between saving and investing based on access, risk, and timeline.
- Identify the role of time in compounding investment returns versus savings stability.
- Evaluate how to balance saving and investing based on personal financial goals.

What's the Difference?

Alex's bank app lights up when his direct deposit lands. Rent is covered, bills are paid, and there's still a little left over. Jordan's account balance has been slowly growing, but lately she feels like she is *just* keeping up with expenses.

Both wonder the same thing:

> *Should I just keep this in savings, or is it time to invest?*

It's a simple question, but beneath it lies a powerful distinction that shapes everything that follows.

What Savings *Does*

Saving is about **safety**. It's keeping your money close, within reach, ready to respond to life's unpredictability. An emergency fund is for saving and planning for a new laptop next year is also for saving.

You use savings when you want:

- **Access** without delay (liquidity)
- **Stability** without fluctuation (minimal risk)
- And **certainty** about short-term goals (clarity of timeline)

In savings accounts or money market funds, your money doesn't do much, but it also doesn't wander far. That's the point. You're paying for peace of mind by sacrificing potential growth.

What Investing *Asks*

Investing is different. It asks you to **delay access**, **tolerate uncertainty**, and **accept fluctuation** in exchange for the possibility of greater growth over time.

You invest when your timeline stretches beyond the horizon of next month or next year. It might be five years away, or ten. It might not even be a specific date, just a vision - financial independence, a future home, a secure retirement. In these cases, holding cash becomes a risk in its own right. Inflation quietly erodes purchasing power. Growth opportunities go untapped.

Investing doesn't promise more; it just makes *more* possible.

Time: The Quiet Multiplier

Here's where the real magic happens.

The **longer** your money stays invested, the more time it has to benefit from **compounding**, growth on top of growth. Even modest returns, given time, can become meaningful.

- When you're just starting out, you may not have much to invest, but you do have **time** on your side.
- If you are starting a bit later in your career, you may have **more to invest**, but you must think carefully about how much time each goal truly requires.

Time isn't just a number. It's part of your strategy. Saving might preserve what you have, but investing, over time, can **amplify** it.

Tension, Not a Tug-of-War

One of the biggest misunderstandings is the notion that saving and investing are opposites. They aren't. They're partners in a well-balanced financial plan.

- **Saving** protects your present.

- **Investing** prepares your future.

The real question isn't "which one?" It's **how much of each**, and **when**.

A Personal Check-In

Ask yourself:

- Do you have enough saved to weather an unexpected expense?
- Do your savings fully cover your short-term goals?
- Is there money that could work harder if only you gave it a longer leash?

Building an emergency fund is the first step. But once that fund was in place, the leftover money could begin to serve future goals. You may split future deposits - some into savings, some into investments - each with its own job to do. You don't have to decide everything right now. Recognizing the difference between saving and investing is what turns good intentions into smart action.

Summary

This section contrasts the core purposes of saving and investing. While saving provides liquidity and security for short-term needs, investing is about long-term growth at the cost of short-term certainty.

- **Saving** favors stability, liquidity, and near-term certainty.
- **Investing** involves delay, volatility, and potential for growth.
- **Time** is not just a feature; it's the foundation of investing's value.

It is essential to explore both saving and investing, as well as how to blend the two. Move beyond binary thinking and consider how both strategies serve different roles within a financial plan.

Exercises

1. Think of a recent financial decision. Did you treat it as saving or investing? What factors guided your choice?
2. Why might someone view holding cash as safe, even when inflation reduces its value? What psychological factors reinforce that belief?
3. Create a sample allocation: 70 percent to savings and 30 percent to investing. What kind of goals might match each category? How would those ratios shift over time?

13.3: Risk and Return

Learning Objectives

- Explain the concept of investment risk and how it relates to return.
- Evaluate personal risk tolerance using emotional and time-based factors.
- Distinguish between different types of risk and their impact on investment choices.

The Trade You Can't Avoid

Alex is excited. He just read that a certain mutual fund returned over 15 percent last year. That's way more than his savings account. "Why wouldn't I just put all my money there?" he wonders. Jordan hears the same stat, and she winces. "Fifteen percent? That probably means it could *drop* just as fast."

Two people hear the same fact, but experience two completely different reactions. Neither is wrong, but both are staring down the same question:

> *How much am I willing to risk to get a better return?*

Which Would You Choose?

Try this:

- **Option A:** You earn exactly 2 percent every year. No surprises. No losses.
- **Option B:** Some years, you earn 12 percent. Other years, you lose 5 percent. Over time, you might average around 6 percent, but it's never guaranteed.

Now ask yourself:

- Which option feels safer?
- Which one sounds smarter?
- Which one are you more *comfortable* with?

That's not a quiz. It's the tension at the heart of every investment decision. And it doesn't go away, because **there's no return without risk.**

So What *Is* Risk?

Most people think of risk as "losing money." But in investing, it's more than that. Risk is the **range of possible outcomes** that exists in the space between what you expect and what actually happens. Sometimes that means losing. Sometimes it just means *not gaining as much as you hoped*. Here's the paradox:

The **bigger the possible upside**, the **wider the range of outcomes**. That's why savings accounts don't swing wildly. But they also don't grow much. That's why stocks can build wealth or leave you wondering what just happened.

The Unexpected Always Arrives

Maybe you expect a 7 percent return this year. Great. But the market doesn't read your plan. A headline, a war, a company's misstep, or a surge in demand - any of these can jolt prices up or down. Your return is real only when time passes and the dust settles.

Alex thought that a high-return fund sounded like a sure thing until he saw it lose 3 percent the following month. Jordan remembered losing money in the 2008 crash, and she felt that echo every time the market dipped.

Risk doesn't just exist on paper. It's emotional and it's lived.

What Shapes *Your* Risk Tolerance?

There's no universal answer. But you can explore it by asking these questions:

- How long can I go without this money?
- How would I feel if my investment were to drop 10 percent this year?

- Would I sell out of fear or stay in for the long run?

That tension between your ability to take risks and your willingness to stomach them is what defines **risk tolerance**.

Some investors want calm waters. Others are okay with storms, knowing what might be waiting beyond the horizon. Even a small loss can make an investor anxious. One may decide to keep some money in safer options. Others realize they may be overestimating their tolerance and dial back some of their riskier bets. It isn't because of fear. It was a decision aligned with personal risk tolerance.

The Trade You Can't Avoid, But *Can* Navigate

You'll never fully escape the risk-return tradeoff. But you can approach it on your terms.

- Think in timelines. What money do you need soon? What money can grow over the years?
- Think in roles. Which dollars protect your present? Which will build your future?
- Think in comfort. Not every opportunity is for you, and that's okay.

You don't have to chase the highest return. You just have to **understand the price you pay to pursue it**.

Summary

Risk is unavoidable, but it's also manageable. This section examines the tension between risk and return and how this tradeoff influences every investment decision. It introduces risk not just as a mathematical concept, but as a lived experience.

- Greater returns require greater tolerance for fluctuation and uncertainty.
- Risk is shaped by time horizon, emotional resilience, and financial flexibility.
- The difference between expected outcomes and actual experiences can trigger emotional responses, such as fear or overconfidence.

Reflect on your own risk profile - what you can afford to lose, what you can emotionally handle, and how long you can stay invested.

Exercises

1. Recall a time you took a financial risk. What was the outcome, and how did it feel? Would you take that same risk again?
2. Why might two people react differently to the same investment? What internal and external factors shape those responses?
3. You're offered two investments: One guarantees a 2 percent annual return, the other averages 6 percent but can lose value in bad years. Which would you choose and why?

13.4: Goals to Strategy

Learning Objectives

- Describe the components of an Investment Policy Statement (IPS) and their purpose.
- Construct a basic personal investment plan aligned with specific financial goals, risk tolerance, and constraints.
- Evaluate the tradeoffs between return objectives, risk personality, and life circumstances.

From Goals to Strategy

By now, Alex and Jordan both feel more confident about *why* investing matters and how it differs from saving. They understand that risk is a part of the deal, not a glitch in the system.

But there's still a big question hanging in the air:

> *How do I actually decide what to invest in?*

That's where planning comes in. And not the vague, "I should really do this someday" kind. We're talking about turning goals into strategies and strategies into action.

The Investment Policy Statement (IPS): Your Personalized Blueprint

You don't need a finance degree to build a smart investing plan. What you *do* need is a framework to clarify your thinking and maintain consistent decisions over time.

Enter the **Investment Policy Statement**, or IPS. It may sound technical, but it's really just a written summary of four things:

1. What you're trying to **achieve**
2. What kind of **risk** you're willing to take
3. What **constraints** or **needs** you have to plan around
4. How you'll **measure** whether you're on track

It's a living document, your compass. And it evolves as your life does.

Step One: Set the Goalposts

Imagine Alex wants to buy a home in seven years. Jordan is thinking about retiring in fifteen years. Each has a different **return objective—**the amount of growth their money needs to achieve in a given time. The clearer the goal, the easier it is to plan for it.

If you say, "I want to grow my wealth," that's a start. But "I want $30,000 in seven years for a down payment on a home" is a goal you can calculate backward from.

This part of the IPS keeps you grounded. It forces you to be honest about *how much*, *by when*, and *why*.

Step Two: Know Your Risk Personality

Some people love roller coasters, while others prefer to keep their feet on the ground. The same goes for investing.

Your **risk tolerance** isn't just about math; it's about mindset. It includes

- Your **ability** to take risks (based on your time horizon, current savings, and income)
- Your **willingness** to take risks (based on your comfort with uncertainty, past experiences, and temperament)

Alex knows he won't need this money for a decade, and that gives him more flexibility. Jordan remembers panicking during the last market drop and selling early. That shaped her willingness.

When you know your limits, you build a plan that respects them. That's how you stay invested when things get rough.

Step Three: Map Your Constraints

Investing doesn't happen in a vacuum. You have real-world boundaries to consider:

- **Liquidity needs** – Will you need to withdraw this money soon?
- **Time horizon** – How long can you let it grow?
- **Taxes** – Are there better or worse places to hold these investments?

- **Legal or structural limits** – Are you investing through a trust or foundation?
- **Personal values** – Do you want to avoid certain industries or support others?

Alex, for example, might decide to exclude fossil fuel companies from his portfolio. Jordan may want to invest only in assets that she can access without penalty in case of job loss.

These constraints don't block your plan; they shape it. And the better you define them, the fewer surprises you'll face down the road.

Putting It All Together

Here's the magic of the IPS: It connects your goals, your mindset, and your life realities into a single strategy.

- If your goals require high returns but you're not comfortable with high risk, you'll need to adjust something.
- If you want to invest aggressively but may need the money in two years, that's a red flag.

The IPS forces you to reconcile hope with habit, and dreams with data. It doesn't guarantee success, but it dramatically increases your odds of making choices you can live with, even when markets get turbulent.

Ready to meet the tools that can help make your IPS a reality? Next up: **The Instruments Are Just Tools,** and we'll help you choose the right ones for the job.

Summary

This section introduces students to the concept of strategic planning for investing. Rather than treating decisions as ad hoc, it encourages the use of a personalized framework, the Investment Policy Statement (IPS).

Core structure

1. Set clear and measurable goals (e.g., timeline, dollar amount, purpose)
2. Understand your ability and willingness to take risks
3. Map out personal constraints - liquidity needs, legal limits, values

An IPS draft reflects where you are and where you want to go. The section shows how a written plan provides both structure and clarity in the face of market uncertainty.

Exercises

1. Think of a future financial goal you have. What is your timeline, risk comfort, and one constraint that might affect how you pursue it?
2. Why is it valuable to write down your investment goals and boundaries, even if you're the only one who sees them?
3. Draft a simple IPS: define one goal, your risk level, and a constraint. What type of investments would or wouldn't fit that strategy?

13.5: Instruments as Tools

Learning Objectives

- Differentiate between common investment instruments based on purpose, risk, and time horizon.
- Select appropriate financial tools to match specific goals and strategies.
- Analyze how mismatches between tools and goals can impact investment success.

An Investing Toolkit

Alex is ready to start investing. Jordan is revisiting old choices with fresh eyes. Both sit down to make decisions, and both immediately hit the same wall:

> *Should I buy stocks? Bonds? What about a fund? Or real estate? Am I supposed to know all of this already?*

It's easy to feel like investing is about picking the right product. But here's the truth most people miss:

Investing is not about finding the "best" tool. It's about choosing the *right* tool for *your* job.

Tools Don't Make the Plan. They *Serve* It

You wouldn't use a hammer to fix a leaky faucet or a screwdriver to paint a wall. Financial instruments are the same way. They don't define your strategy, they **express** it.

- Stocks may be right when growth is your priority and time is on your side.
- Bonds may be suitable when you need income or stability.
- Funds offer built-in diversity.
- Real estate can build equity, but with different risks and time horizons.
- Cash equivalents protect liquidity but don't generate significant growth.

The point isn't which is better. It's about choosing the financial instrument that best **matches your investment** strategy, goals, risk profile, constraints, and timeline.

It's Not Just About "Where" You Put Your Money

Let's flip the question investors often ask:

Instead of *"What should I invest in?"* ask *"What am I trying to accomplish with this money?"*

Financial planning serves many different goals: a short-term emergency fund, a long-term plan for a future business, retirement, or your child's education. Each of those goals could lead to a different set of investment choices, even if they both use the same underlying tools.

One Size Never Fits All

This is where many new investors go wrong: They hear a friend say, "Buy this stock," or read a headline about "The Next Big Thing," and they jump in without checking if it aligns with *their* investment plan. An excellent investment for someone else might be a terrible choice for you.

Why? Because **risk tolerance, timelines, and goals vary**, so should strategies.

That's why tools aren't inherently good or bad. They're contextual. They need to be matched to the *job they're hired to do*.

Preview, Not Deep Dive

In the next section, we'll walk through the most common investment instruments one by one: what they are, how they work, and when they might make sense.

You'll learn

- How stocks, bonds, and funds differ

- Why diversification matters
- And how real people mix these tools to fit their lives

But for now, take this with you:

Choosing an investment instrument **before** you know your goals is like packing for a trip without knowing the destination.

Your first investment doesn't need to be flashy - it just needs to match your five-year plan. Examine your portfolio with a fresh perspective. Realize that some of the tools may serve your current purpose, but others may not. That evaluation is a decisive moment of realignment. Tools can empower, but only if you know what you're building.

Let's wrap this journey with one final insight: how to evaluate help, avoid traps, and stay in charge of your financial future.

Summary

This section reframes investment instruments not as magic bullets, but as tools to be matched to specific jobs. Stocks, bonds, mutual funds, real estate, and cash equivalents each serve a role, but their usefulness depends on the clarity of purpose.

- Tools express strategy; they don't define it.
- The right tool depends on timeline, risk tolerance, and liquidity needs.
- No tool is inherently good or bad; it is only more or less appropriate for a given context.

The section cautions against trend-chasing and emphasizes intentional alignment between instruments and goals. Strategic investing begins with purpose, not products.

Exercises

Explain your choices.

1. Think of a financial tool you've heard about (e.g., stocks, bonds, mutual funds, real estate). What kind of goal would it best serve? What might make it a poor fit?
2. Why do people often treat investment tools like trends or shortcuts? What might help them think more like planners and less like gamblers?
3. Match each of the following tools to the appropriate use/scenario:

A. stock
B. bond
C. fund
D. real estate

1. building long-term wealth
2. preserving capital
3. earning income
4. maintaining liquidity

13.6: Getting Help

Learning Objectives

- Identify different forms of financial guidance and evaluate their alignment with investor goals.
- Distinguish between helpful and potentially harmful sources of financial advice.
- Reflect on the role of personal responsibility when seeking professional or automated.

Knowing Who to Trust

By now, Alex and Jordan both have a clearer picture of where they want to go, what kind of risks they're comfortable with, and how their investments might support that journey. But a final, familiar question remains:

> *"Do I need someone to help me with this?"*

The answer is classic personal finance: *It depends.* But let's reframe the question. Instead of asking *whether* to get help, ask:

"What kind of help will keep me in control of my financial future?"

The Responsibility Always Stays With You

Even if you hire an advisor, use an app, or let someone else manage the portfolio, the responsibility always stays with you.

> **You are still the decision-maker.**

And that's a good thing. It means your goals, values, and constraints—not someone else's incentives or assumptions—stay at the center of the strategy. Hiring a financial advisor does not mean handing off responsibility. Guidance is helpful, but **delegating isn't the same as disengaging**.

What "Help" Looks Like

Help can take many forms:

- A **human advisor**, who listens, asks questions, and tailors a plan
- A **robo-advisor**, which uses algorithms to invest your money based on your profile
- A **platform with tools and education**, letting you learn and invest at your own pace
- **Mentors, community, and resources** that help you interpret what you're seeing

There's no one right choice. The right kind of help is the one that **fits your needs without blinding you to the process**.

A Quick Test: Who's Really Working for You?

Here are a few questions worth asking anytime you consider professional guidance:

- Are they required to act in your best interest (*fiduciary standard*)?
- How are they compensated - by a flat fee, commission, or a percentage of assets?
- Do they explain things clearly, or try to make it sound too complex to question?
- Do they adjust their approach based on your IPS, or push you toward what *they* like?

If the answers don't build trust, it might be time to look elsewhere.

Your Tools Are Only as Smart as Your Decisions

The financial world can sound intimidating on purpose. However, the truth is that the core ideas of investing are learnable. The best decisions are yours to make. The right kind of help is the kind that makes you *more* confident, not more confused. You don't have to become an expert overnight. But you should always be an *informed participant* in your financial life.

Final Thought: From Idea to Action

Investing isn't just about money; it's about shaping your future. You don't need to be wealthy to get started. You don't need to time the market perfectly. You just need clarity, a plan, and the courage to begin.

Start where you are. Invest what you can. Learn as you go. And always remember: *You're not alone, but you are in charge.*

Summary

The final section shifts from strategy to support, helping students evaluate what kind of guidance, if any, might serve their investing journey. Whether it's a human advisor, robo-advisor, app, or mentor, the core message remains the same: Responsibility can be shared, but never outsourced.

- Even with professional help, you remain the ultimate decision-maker.
- Advisors should be evaluated based on transparency, alignment, and clarity, not complexity or charm.
- The right kind of help empowers you; the wrong kind of help confuses or controls.

A fiduciary mindset and a strong personal strategy (like an IPS) make it easier to seek help without surrendering control.

Exercises

1. Have you ever followed advice (financial or otherwise) that didn't align with your goals or values? What did you learn from the experience?
2. Why is it important to ask how an advisor is paid or whether they are required to act in your best interest? What could happen if you don't?
3. Make a short checklist for evaluating financial guidance. What questions would you ask a potential advisor, platform, or service?

CHAPTER OVERVIEW

14: Investment Options and Opportunities

This chapter builds on foundational concepts, surveying the major instruments - especially stocks, bonds, mutual funds, real estate, and collectibles - available to investors. The focus is not just on definitions but also on matching tools to objectives, risk profiles, and time horizons.

14.1: Investing Fundamentals
14.2: Instruments
14.3: Markets
14.4: Strategies
14.5: Research
14.6: Formulas and Metrics

14.1: Investing Fundamentals

Learning Objectives

- Identify the motivation behind expanding one's understanding of investment tools and options.
- Recognize how different investment choices support different personal goals.
- Reflect on your current confidence in choosing between investment vehicles.

Introduction: Real Investing

Most people don't start their investing journey with a financial degree or a five-year plan. They start with a question:

> *What should I do with my money?*

Maybe you've heard about stocks from a friend who made a lucky trade. Maybe someone told you to "diversify" or warned you about market crashes. Or maybe you just want to stop feeling behind when people talk about 401(k)s, Roth IRAs, or interest rates.

This introduction to investment options and opportunities is designed to help you place investing into the context of personal risk preference and life stage priorities. We'll explore the landscape of investing through five structured parts:

Instruments

The core investment tools (like stocks, bonds, funds, and real estate), how they work, and how they differ.

Markets

Where those investments are bought, sold, and priced. We'll look at the systems and players that keep it all moving.

Strategies

How people use these tools thoughtfully to pursue their goals - balancing growth, income, and risk.

Research

How to ask the right questions, understand key metrics, and make informed choices.

Math & Metrics

A guided tour of the numbers behind investing, presented with clarity and confidence.

This chapter explores real-world scenarios using Alex and Jordan, two ordinary people just starting out and learning to make financial decisions with more curiosity and confidence. Their decisions and actions will reveal many of the terms and equations that define investing.

Summary

You've already begun investing, and now it's time to deepen your knowledge. This module prepares students to explore a more detailed landscape of investments, moving from general strategy to hands-on understanding. From stock shares to real estate, every financial instrument carries a purpose. But no tool is helpful without context. The work ahead is to gain fluency, not just in terms and tickers, but in how different options serve different lives.

Exercises

1. What's one investment tool you've heard about but never really understood? What has kept you from exploring it?
2. Why do people often confuse complexity with quality when choosing investments?
3. List two investments you've seen mentioned in the news or ads. Classify what kind of goals they might serve.

14.2: Instruments

Learning Objectives

- Classify investment instruments based on their underlying characteristics (e.g., equity, debt, ownership).
- Compare how different instruments are structured to create value or income.
- Identify the role that instrument type plays in an investment portfolio.

What You're Really Buying

> Alex once thought buying a stock was like placing a bet. Jordan thought it was just a fancy way to save. At first, neither Alex nor Jordan realized that investing isn't about gambling or guessing. It is about choosing the correct tools. And like any set of tools, each one has its purpose, its strength, and its trade-offs.

This section introduces the core investment instruments, financial vehicles that carry your money into the future. Some are built for growth. Some are designed for income. Some bundle the best of both. And all of them work differently than they might seem to at first glance.

Stocks - Buying a Piece of the Future

When you buy a stock, you become a **partial owner** of a business. That's more than just a technical detail - it's a fundamental shift in perspective. You're not lending money to a company. You're buying into its future.

Stocks represent ownership. As the company grows, innovates, and earns profits, your share of ownership can become more valuable. Some companies even return a portion of those profits through **dividends** - regular cash payments made to shareholders. You can take this money as cash, or you can reinvest it automatically, buying more shares each time a dividend is issued. This is known as a Dividend Reinvestment Plan, or DRIP. It's a way to let your investment grow quietly, behind the scenes, without needing to manually make a new purchase. Think of it like round-up investing: Instead of collecting spare change, each dividend gets automatically rolled into more shares with no action needed - just quiet, steady growth.

You make money with stocks in two main ways: By selling them for more than you paid (**appreciation**) or by collecting dividends. And if you reinvest those dividends, your investment can grow even faster through **compounding** - a concept first covered in our chapter on the Time Value of Money.

Stocks tend to be more volatile than other investments. Their prices move quickly. Sometimes prices fluctuate because of company performance, and sometimes due to news, trends, or even global events. But over long periods, stocks have historically delivered strong returns, especially for those who stay invested through the ups and downs.

Most people think stocks only make money when they go up. But many of the world's most successful investors have built wealth by holding quality stocks *through* ups and downs, and letting time do the heavy lifting.

Bonds - Lending with Interest

If stocks are about ownership, bonds are about lending. When you buy a bond, you're giving your money to a government, a company, or a municipality. In return, they promise to pay you interest over a set period and then return your original investment, or **principal**, when the bond reaches **maturity**.

This makes bonds fundamentally different from stocks. You're not sharing in the company's profits. You're charging them rent on your money.

That rent comes in the form of **interest payments**, often made semiannually. These payments are typically fixed, which makes bonds a reliable source of income for many investors. If you sell a bond before it matures, its price will depend on current interest rates and how attractive your bond's rate looks by comparison.

The safest bonds (like those issued by the U.S. government) pay relatively low interest. Riskier issuers have to offer higher returns to attract investors. That's why bond yields can serve as a signal of risk.

Picture two companies, one strong and stable, and the other struggling. If both offer the same bond rate, would you pick the riskier one? Most investors wouldn't, unless the second company paid more. That's how bonds signal risk. They offer higher returns to

compensate for uncertainty.

Mutual Funds and ETFs - Portfolios in a Package

Buying individual stocks or bonds is like picking your own ingredients for a meal. But what if you'd rather let a professional chef cook for you? That's where **mutual funds** and **ETFs (exchange-traded funds)** come in.

Mutual funds pool money from many investors to create a portfolio that may include dozens or even hundreds of securities. Some funds are actively managed by professionals who try to outperform the market. Others simply track a broad market index like the S&P 500.

The benefits? **Diversification** and **professional management**. Instead of putting all your money in one company or bond, you're spreading it across many, thereby reducing the impact of any single investment's performance.

Funds make money in the same ways stocks and bonds do - through capital gains, dividends, and interest. The fund collects earnings from its holdings and passes them along to investors. And because of the diversity that is baked in, funds tend to offer a smoother ride than individual stocks.

Mutual funds are typically bought directly from the provider and priced once per day. **ETFs** trade on exchanges throughout the day, like stocks. Many investors use **index funds** (a type of mutual fund or ETF) to gain broad market exposure at a low cost.

Real Estate and Alternatives - Physical and Unique Assets

Not all investments come in digital form. Some are as physical as the ground beneath your feet.

Real estate is one of the most time-tested ways to build wealth. The real estate market is typically categorized by type: Residential, Commercial, Agricultural, Industrial, and Mixed-Use. Whether it's a rental property, a vacation home, or land purchased for development, real estate offers the potential for two kinds of return: **income** and **appreciation**. For a property owner, rent payments provide steady cash flow, and properties generally rise in value over time.

Alternative investments include collectibles, precious metals, cryptocurrencies, and fine art. These assets don't always follow traditional market patterns, which can make them attractive but also harder to analyze. Their value often depends on scarcity, timing, and sentiment.

These assets have distinct traits:

- They're often **less liquid** - harder to buy or sell quickly
- They may require more specialized knowledge or higher initial capital
- They offer exposure to markets that don't move in lockstep with stocks and bonds

Real estate has a reputation for being "grown-up investing," but that's often a matter of scale. Whether it's a rental home or a piece of farmland, the real magic of real estate is how time can turn slow growth into significant wealth.

Wrapping Up: Instruments Are Building Blocks

Investing isn't about finding the one perfect vehicle. It's about understanding how each instrument works - and when to use it.

- Stocks offer ownership and the potential for high growth.
- Bonds provide steady income with relatively lower risk.
- Funds bring diversification and ease through professional management.
- Real estate and alternatives offer tangible, time-driven returns with unique trade-offs.

Most investors use a combination of these instruments to balance risk and reward. Over time, the blend may shift based on goals, life stage, and market outlook. What matters most is understanding what you're buying - and why.

In the next section, we'll explore the **markets** where these instruments trade and how the structure of those markets shapes opportunity and access.

Summary

This section demystifies financial instruments by returning to fundamentals: What exactly are you buying when you invest? A stock represents ownership. A bond is a loan. A mutual fund is a basket. A REIT is a share in property. These tools differ in structure, return profile, risk exposure, and investor expectations, but they all channel capital into a productive outlet.

- Instruments are defined by what they *give* the investor: ownership, repayment, income, and exposure.
- Structure shapes expectation: risk, liquidity, return potential, and time horizon.
- No one instrument does everything. Investors select instruments to match strategy and constraints.

This section focuses less on technical detail and more on conceptual clarity; that is, building a framework for thinking about what you are really buying.

? Exercises

1. Choose one instrument - stock, bond, fund, or REIT - and describe what it represents from the investor's perspective.
2. Why might someone treat a mutual fund or ETF as less "real" than a share of stock, even though both are investments?
3. Match each of the following goals to the most appropriate instrument: steady income, long-term growth, diversification, and real estate exposure.

14.3: Markets

Learning Objectives

- Describe the purpose of financial markets and how they facilitate investment activity.
- Differentiate between primary and secondary markets.
- Evaluate how market behavior and access shape investor decision-making.

Markets - Where Investments Change Hands

> Alex thought buying a stock meant owning a piece of a company. Jordan thought it meant betting on a rising price. In a way, they were both right, but they hadn't yet discovered the deeper truth: Every investment you make moves through a marketplace. And every market has rules, players, risks, and opportunities.

This section pulls back the curtain on how markets in fact work.

Primary vs. Secondary Markets - The First Stop and the Open Road

When a company or government issues a security for the first time, it enters the **primary market**. This is where stocks are born via Initial Public Offerings (IPOs) and bonds are first sold to investors. The issuer receives the money directly, and you become the first owner.

But most investing happens in the **secondary market** - where existing securities are bought and sold among investors. This is where prices change every day, sometimes every second. When you buy a share of Ford on the stock exchange, you don't send money to Ford. You're buying it from another investor who already owns the share. Ford doesn't benefit directly, but your decision reflects market belief in its future.

This distinction matters. The primary market is about **creation**. The secondary market is about **valuation**, where thousands of individual decisions shape the price of everything. Valuation in the secondary market isn't set by a committee; it's constantly negotiated. Every time someone buys or sells, they're making a judgment about what an asset is worth. Over time, those judgments, all those little yes's and no's, become the price the next investor sees.

Exchanges, Brokers, and Market Mechanics

Markets aren't physical places anymore (at least, not usually). They're systems - networks of buyers, sellers, brokers, and electronic exchanges.

Exchanges like the NYSE or NASDAQ act like digital arenas. They match buyers and sellers and display current prices in real time. Their role is to provide structure, transparency, and liquidity.

Brokers operate a little differently. Some brokers simply connect you to the exchange. Others buy and hold securities themselves, taking temporary ownership and hoping to profit on the spread between buy and sell prices. This is called **arbitrage**, and while it can be profitable, it involves risk. Brokers, unlike exchanges, may hold inventory and face exposure.

Historically, trades were placed over the phone or in shouting pits on trading floors. Today, much of that action has moved online. When you place an order through an investing app or online broker, you're tapping into this system. Behind every click, algorithms and institutions are working to fill your order efficiently. Technology hasn't changed the fundamentals; it's just changed the speed and scale.

What Moves Prices - Supply, Demand, and Sentiment

Prices in secondary markets fluctuate constantly. But why?

At the most basic level, it's the same principle that moves prices in a farmers market: **supply and demand**. When more people want to buy than sell, prices rise. When more people want to sell than buy, prices fall.

But in investing, price movement often reflects more than just supply. It reflects beliefs, fears, headlines, and expectations. That's called **market sentiment** - the collective psychology of thousands of participants. Sometimes, it aligns with the fundamentals. Sometimes, it doesn't.

This is why a company's stock can drop even after strong earnings. It is also why a rumor can cause a sudden spike. The market is part calculator, part weather vane. It measures not just data, but the shifting winds of public opinion.

How Different Instruments Travel Through Markets

Each instrument we've introduced finds its way into the market differently. Each journey affects not only how it's traded, but also how it's priced, accessed, and experienced by the investor.

- **Stocks** usually trade on public exchanges like the NYSE, accessible to individual investors through brokers or trading apps. Pricing is transparent, transactions are near-instant, and the cost to trade is typically low.
- **Bonds** may be sold initially through investment banks and later resold over-the-counter (OTC), an industry term for a decentralized market with less price transparency and higher barriers to entry. Corporate bonds, especially, may require more research and carry different transaction fees.
- **Mutual funds** are typically purchased directly from the fund company at the end-of-day price, which limits trading flexibility but provides predictable valuation. **ETFs**, by contrast, trade like stocks throughout the day and offer real-time pricing, though their liquidity depends on trading volume.
- **Real estate and collectibles** operate in slower, less transparent markets. A home may sit on the market for months. A rare comic book might require a specialized auction or appraisal. These transactions come with negotiation, due diligence, and often substantial closing costs.

When investors understand not just *what they're investing in*, but *how that asset travels*, they're more prepared for the rhythm and risk of the journey.

Market Depth and Liquidity - Can You Get In and Out?

One final concept worth noting is **liquidity** - how easily you can buy or sell an asset without significantly affecting its price.

Highly liquid markets, like those for large company stocks, let you move in and out quickly. Less liquid markets, like those for niche collectibles or rural real estate, can leave you waiting for a buyer or settling for less.

Liquidity isn't just about convenience. It's about confidence. If you need your money back, can you get it?

Wrapping Up: Markets as Mirrors

Markets don't just move money. They reflect priorities, fears, goals, and beliefs. The more you understand how markets function, the better equipped you are to use them thoughtfully.

Summary

Investments don't sit in isolation; they move. This section introduces the markets where buying and selling happen. These are not just physical exchanges, but systems that price assets, set expectations, and influence behavior. From IPOs to ETFs, and from stock tickers to cryptocurrency exchanges, the market is where theory meets liquidity.

- The primary market is where investments are created (e.g., IPOs).
- The secondary market is where they are traded (e.g., NYSE, NASDAQ).
- Markets offer liquidity, but also volatility, reaction, and noise.

Markets are not perfectly rational; they are ecosystems of belief and expectation. This section lays the groundwork for understanding what drives market movements - and why investor psychology matters.

Exercises

1. Have you ever followed a financial trend or market movement in real time? What did you learn from the experience?
2. Why do people often treat price as value when they are not the same thing?
3. Give an example of a primary market transaction and a secondary market transaction. What makes them different?

14.4: Strategies

Learning Objectives

- Identify core principles of portfolio strategy, including diversification and asset allocation.
- Analyze how time horizon, risk tolerance, and personal goals shape strategic decisions.
- Apply strategic frameworks to evaluate sample investor profiles.

Strategies - Navigating Risk, Return, and the Investor Mindset

Alex and Jordan need to consider the question that every investor eventually faces:

> *"How do I know what kind of investment is right for me?"*

It's a deceptively simple question, because behind it lie all the complexities of personal goals, emotional responses to risk, and the reality of time.

This section explores what it means to invest *intentionally*. We'll walk through the core components of investment strategy - risk, return, time horizon, and diversification - and emphasize discovery and application. The goal isn't to give you a script. It's to help you develop a playbook.

Risk and Return - Two Sides of the Same Coin

Imagine two companies, A and B. Both want to borrow your money by selling bonds. Both offer a 5 percent coupon rate. But Company A is a highly rated, blue-chip corporation with a long history of profitability. Company B is a newer firm, with inconsistent earnings and a few rough years behind it.

Which would you choose?

If the return is the same, almost everyone would pick Company A. But here's the rub: Investors won't buy Company B's bond *unless* they're compensated for the extra risk. So Company B increases its coupon rate to 7 percent. Now it has your attention.

This is the risk-return tradeoff. Riskier investments must offer the *potential* for higher returns. The opposite is also true: The safer an investment is, the more modest the return you should expect. These forces play out across every instrument you'll encounter.

Understanding this principle helps explain why some investors embrace volatility, while others seek stability. Neither choice is inherently wrong, but your comfort with risk will help shape the mix of assets in your portfolio.

Gauging Risk Tolerance

Your risk tolerance isn't just about emotion. It is about facts and the situation. Consider these reflective questions:

- How would you feel if your portfolio dropped 20 percent in a month?
- Do you need access to your money in the next year or in 20 years?
- Would a guaranteed but low return feel better than a chance at something higher?

Your answers will shape your approach. If volatility makes you anxious, you may prefer conservative, income-oriented investments. If you're still in the early stages of your career and willing to ride the ups and downs, you might be drawn to growth-oriented stocks or equity-heavy funds.

This leads us to another essential piece of strategy: Time.

Life Stage and Diversification - Matching the Strategy to the Season

Time isn't just a number; it's an asset. The earlier you start investing, the more flexibility and recovery room you have. That's why younger investors often lean toward aggressive growth. If a risky investment underperforms, younger investors have time to rebound.

Later in life, the calculus changes. Imagine approaching retirement and experiencing a market downturn. There's less time to recover, and less margin for error. That's why many investors shift to more conservative portfolios over time, favoring bonds, dividend stocks, or balanced funds.

Sample Life-Stage Trajectory

Early Career (20s-30s)	Mid Career (40s-50s)	Pre-Retirement (60s)	Post-Retirement
Heavy equity allocation, high growth focus	Blend of growth and income; introduction of bonds	Increased emphasis on income and capital preservation	Conservative mix; goal = reliable income + low volatility

This evolution isn't rigid, but it is rooted in risk tolerance and needs. Life doesn't move in perfect decades, and neither will your portfolio. However, understanding these shifts can help you respond with confidence instead of confusion.

Diversification: Spreading Risk

Diversification isn't just a *cliché*. It's a tool to manage risk and smooth returns. Think of it this way:

- If you only own one stock, and that company falters, your portfolio takes a direct hit.
- If you hold ten companies across different industries, one dip won't derail your progress.

But not all diversification is equal. Holding both Coca-Cola® and Pepsi® stock isn't diversification. It is redundancy. Both companies belong to the same industry and may respond similarly to market trends.

True diversification goes deeper. It includes an understanding of **correlation** - how different assets move relative to each other:

- If two investments are **positively correlated**, they tend to rise and fall together.
- If they are **negatively correlated**, one may rise when the other falls.
- If they are **uncorrelated**, they behave independently.

The goal isn't to bet against your own holdings; the goal is to build a portfolio where different elements react differently to market conditions. Like a building supported by multiple pillars, your foundation is stronger when those supports don't all shift in the same direction at once.

Diversification is the intentional spreading of risk. Relying on a single asset, investment, or strategy makes outcomes more fragile. A resilient plan anticipates volatility. Smart diversification also reflects your research and expectations. If you anticipate rising interest rates, you might reduce bond exposure and increase sectors that tend to benefit. You're not trying to outguess every move; you're constructing a portfolio that stays upright no matter which way the wind blows.

True diversification spreads across multiple spaces:

Asset classes	Sectors	Geography
Stocks, bonds, real estate, alternatives	Healthcare, tech, consumer goods, energy	Domestic and international markets

Diversification doesn’t guarantee profits, but it does help protect you from the unexpected. It’s a strategy that aligns with any life stage and can become even more powerful when paired with consistent, intentional investing.

Strategy in Practice - Building Habits That Work Over Time

If risk and time shape your approach, habits carry it forward. Strategy is as much about behavior as it is about selection. This section introduces practical tools and patterns that make investing more predictable, less emotional, and more aligned with your goals.

Dollar-Cost Averaging (DCA)

Imagine you want to invest $1,200 in a fund. You can invest the total amount all at once, or you could invest $100 every month for a year. With DCA, you’re making regular purchases, regardless of whether prices are up or down.

This strategy has two big advantages:

1. It removes timing pressure, so you’re not trying to guess when prices will hit bottom.
2. It averages out your cost over time, so sometimes you buy high, sometimes low, but you are consistently building.

DCA works especially well for long-term goals like retirement, where steady investing yields better results than trying to time the market. The phrase "time the market" is shorthand for a difficult and often unproductive goal (trying to predict short-term movements in prices).

Trying to outguess the market direction can feel empowering, but history shows it’s incredibly hard to do. DCA provides a calmer alternative: You focus on *when you invest*, not *where the market is heading*.

Buy and Hold

A buy-and-hold strategy is a simple idea with powerful results: Buy quality investments and hang onto them.

Imagine investing in a company you believe in. Instead of obsessively tracking daily prices, you let time and compounding do their work. This strategy avoids emotional trading. You can avoid the pitfalls of panic-selling in a downturn or jumping into a hot trend by relying on research instead.

Of course, this approach doesn’t mean you should ever ignore your portfolio. Choose well, rebalance occasionally, and let the market’s long-term upward trend work in your favor.

Growth vs. Value

These two labels are often misunderstood.

Growth stocks

Companies are expected to expand quickly. They may not pay dividends because profits are reinvested.

Value stocks

Companies that look under-priced based on fundamentals. They may offer dividends and tend to have lower volatility.

These aren’t mutually exclusive. Some companies grow and offer value. However, your portfolio may tilt toward one or another based on your risk profile, time horizon, or market outlook.

Understanding these distinctions helps you interpret *what* you’re investing *in*, not just *how much* you’re investing.

Strategy is a collection of aligned choices: It is your tolerance for risk and your time horizon, combined with the consistency and discipline of your investing habits.

Summary

Strategy connects tools to outcomes. This section introduces how to build portfolios, balance competing priorities, and plan for uncertainty. It doesn't teach what to invest in; it teaches how to think about investing systematically.

- Diversification: spreading risk across assets
- Asset allocation: aligning tools with goals and timeframes
- Risk personality: how comfort with volatility affects design

A well-designed portfolio isn't about predicting the future - it's about preparing for it. This section helps students develop frameworks for building investment habits that are resilient, intentional, and aligned with their identity.

Exercises

1. What kinds of risk feel most uncomfortable to you - loss, uncertainty, missing out? How would that shape your strategy?
2. Why do investors often chase performance instead of trusting their strategy?
3. Given an investor with a 30-year horizon and moderate risk tolerance, propose an allocation strategy and justify it.

14.5: Research

Learning Objectives

- Distinguish between qualitative and quantitative investment research.
- Evaluate common sources of financial information and potential biases.
- Recognize how research supports strategic clarity and confidence.

Research - From Guesswork to Groundwork

Alex once admitted he had spent more time researching where to get the best burrito in town than he did choosing his first investment. Jordan laughed at first, until she realized she'd done about the same. That moment led to a question every intentional investor eventually asks:

> *How much research is enough to make a smart financial decision?"*

You don't start as a market expert; you can start by being curious and protecting your future self. This section is about building a foundation, not for Wall Street but for your street. Research is not an intimidating wall of numbers. It's a habit of asking good questions and interpreting useful signals.

What Research Really Means

You've met the instruments. Now it's time to learn how to look inside them.

Research means getting to know what you're buying and why. It's about going beyond the ticker symbol to understand the engine behind the investment. A few good questions can tell you a lot:

- What does this company, bond issuer, or fund do?
- How does it make (and keep) money?
- Who's managing it, and can you trust their track record?
- What happens if things go wrong?

Think of browsing stocks like window shopping. If you only give two minutes of attention before investing, and your time is worth $30/hour, then you've spent about one dollar of mental energy. Would you expect that level of research to deliver above-average results?

Research begins with curiosity, not expertise. It's about slowing down and asking: *What am I getting into?* You will be able to answer that question with confidence once you understand these tools and calculations.

Researching Stocks - Peeking Behind the Ticker

Stock research starts with the story. What business is this company in? How does it make revenue? Who are its competitors? Then come the numbers:

Earnings

Is the company profitable?

Price-to-Earnings (P/E) Ratio

How expensive is the stock compared to its earnings? A very high ratio may suggest overvaluation or optimism. A very low one could mean undervaluation or a problem.

Dividend History

Does the company share profits with investors? Has it been consistent or erratic?

Reports like the SEC 10-K or annual summary help, but so do **earnings call transcripts** and **analyst summaries**. Even reading one thoughtful article can add layers of insight. In the next section, we will look more closely at these numbers. You will find they are good indicators of a company's financial health.

Researching Bonds - Assessing the Borrower

When you buy a bond, you're lending money. The research question becomes this: *How likely is it that I'll get paid back - and on time?* Check all the key signals:

Credit Ratings

Moody's or S&P 500: These help assess default risk. AAA is the safest; anything below BBB is considered junk or speculative.

Issuer Type

Government bonds are often safer, while corporate bonds carry more variation in risk.

Yield vs. Risk

A higher yield might seem tempting, but it often reflects greater risk. Ask: What's the catch?

You don't need to run a full credit analysis, but knowing the basics can help avoid reaching for yield without recognizing the risk. In the next section, we'll demonstrate how to calculate yield and compare bond types.

Researching Funds - Reading the Recipe

Mutual funds and ETFs bundle multiple investments. But who chooses what goes into the basket, and why? Good research focuses on these questions:

Fund Strategy

What's the fund's objective? Is it focused on growth, value, income, or a specific sector?

Holdings

What companies or assets are inside? Do they duplicate other investments you already own?

Turnover Rate

How high is the turnover? Is high turnover leading to higher transaction costs and tax consequences?

Expense Ratio

What are you paying for this fund to be managed?

Some investors choose a fund based solely on its name or past performance. Additional research can reveal whether the fund adds diversity to your portfolio or adds clutter. Later in this section, we'll explore how these factors affect overall cost and return.

Researching Alternatives - Appraisals, Comps, and Context

Real estate, collectibles, and other alternatives require their own lens. With real estate, it's all about **comps** (comparable properties) and trends in local demand. You need to ask these questions:

- What are similar properties worth?

- How is the market moving in this area?
- Who's managing the asset, and what's their history?

For real estate investors, appraisals provide an objective valuation, but those numbers often rely on local trends. Market momentum, vacancy rates, and zoning changes can all influence future value.

With collectibles or non-traditional assets, research means vetting authenticity, assessing rarity, and understanding buyer sentiment. This research is less about balance sheets and more about trust, verification, and contextual signals.

Behavior and Bias - The Hidden Research Hurdles

The biggest threat to research isn't ignorance - it's *narrative bias*. We're emotional creatures trying to survive in a numbers-driven world. Our brains crave clarity, stories, and shortcuts. We are vulnerable to behavioral traps that can shape our decisions before we even know it. Some common traps were covered in the Market Behavior chapter:

Recency Bias

Giving too much weight to the latest headlines. A dramatic event from last week might feel urgent, but investing requires a longer lens.

Herd Mentality

When everyone's buying, it's tempting to jump in. But the crowd doesn't always know where it's going or why.

Confirmation Bias

We naturally search for information that supports our existing opinions and ignore what doesn't. That's not research; it is reinforcement.

Overconfidence

Doing your homework is important, but it doesn't guarantee success. Even the best research must live alongside humility.

Analysis Paralysis

Waiting for the perfect set of data can become its own form of procrastination. Sometimes, progress comes from making the best decision you can with the information you have.

Market behavior is driven by these patterns more than we often realize. The prices we see reflect not just company performance but the collective emotions of fear, greed, optimism, and doubt of thousands. Awareness of bias is itself a form of protection.

The next time you make a quick decision that feels automatic or emotional, pause. Ask: *Am I reacting, or am I reasoning?* Pausing to reflect or reconsider can put you ahead of many investors.

Building a Repeatable Research Habit

Research doesn't have to be an all-or-nothing sprint. You can build a rhythm:

- Scan company or fund news once a month
- Revisit your portfolio quarterly
- Set alerts for major news or price swings
- Keep a personal "why I bought this" note for every investment

Over time, your instincts will improve. It's not because you got lucky, but because you got intentional.

Research is how you go from reacting to planning. It's how you shift from investing based on noise to investing based on knowledge.

And it all starts with curiosity and the knowledge to protect your future self. The next section will demystify the key math and metrics that make all this research even more actionable.

Summary

Good decisions rely on good information. This section helps students move beyond hype and guesswork by emphasizing the value of thoughtful research. It introduces tools and mindsets for asking better questions and interpreting the answers.

- Reading company reports, analyst opinions, and performance metrics
- Understanding qualitative context - news, leadership, industry trends
- Questioning bias and narrative in media and social platforms

Research is not about perfect prediction; it's about consistent preparation and becoming a critical thinker, not an information hoarder.

Exercises

1. Think of a time you acted on limited or one-sided information. How might better research have changed your outcome?
2. What makes certain sources feel more trustworthy, even if they're less reliable?
3. Choose a stock or fund and describe one qualitative and one quantitative insight you would look for before investing.

14.6: Formulas and Metrics

Learning Objectives

- Describe how taxes, fees, and account types influence investment outcomes.
- Recognize the value of automation and structure in reducing behavioral errors.
- Evaluate the tradeoffs of different investing platforms and custodial options.

Technical Aspects of Investing

Jordan had always trusted her instincts when buying stocks. If a company name sounded sharp or a product felt cool, she figured it had to be a good investment. One afternoon, she proudly showed off her latest pick, a company with flashy ads and a brand-new app. Alex asked a simple question: "What's the stock's P/E ratio?"

Jordan paused. "What's that?"

That moment launched a conversation, and for Jordan, a quiet realization. Behind every stock ticker is a story written in numbers. The story is not just about prices, but performance, value, and potential. In this section, we'll unpack those numbers and explore the technical tools investors use to make decisions grounded in more than just gut feeling.

This isn't about turning you into a Wall Street analyst. It's about giving you the confidence to read financial signals with clarity instead of confusion. And like any good story, we'll explore each investment instrument through its own lens of valuation metrics. These tools help you understand what you're buying, why it matters, and how your money might grow.

Let's begin our walk through the investment neighborhood with a walk down the stock market block.

Stock Metrics: Understanding Ownership Performance

When you buy stock, you're buying a slice of ownership in a company. You're not just betting on its future; you're sharing in it. Many investors come into the market thinking the goal is simple: buy low, sell high. In other words, they hope their stock appreciates.

But price appreciation is only part of the story. Stocks can also pay dividends, signal value through earnings, and reflect investor sentiment through various ratios. Let's look at some of the most important ways investors measure stock performance and potential.

A. Market Capitalization

$$\text{Market Capitalization} = \text{Share Price} \times \text{Total Shares Outstanding}$$

Example: A company with one million shares trading at $50 per share has a market cap of $50 million.

This gives you a quick sense of the company's scale. Investors often use terms like "small-cap," "mid-cap," or "large-cap" based on market capitalization, which can influence risk and growth potential. Smaller companies may offer more growth, but also more volatility.

B. Earnings Per Share (EPS)

$$\text{EPS} = \frac{\text{Net Income}}{\text{Total Shares Outstanding}}$$

Example: A company with a net income of $1,000,000 and 500,000 shares has an EPS of $2.00.

Think of EPS as a measure of how productive your share is and how much of the company's profit is attached to your investment. When EPS grows steadily, it's often a signal that the business is thriving.

C. Price-to-Earnings (P/E) Ratio

$$\text{P/E Ratio} = \frac{\text{Stock Price}}{\text{EPS}}$$

Example: If a stock trades at $50 and has an EPS of $2, the P/E ratio is 25.

That number tells you what investors are willing to pay for each dollar of earnings. A high P/E might signal optimism about future growth, or it could mean the stock is over-hyped. A low P/E could mean a bargain or could signal a red flag. Context is key.

D. Dividend Yield

$$\text{Dividend Yield} = \frac{\text{Annual Dividend}}{\text{Price per Share}} \times 100$$

Example: A $50 stock paying a $2 annual dividend yields 4 percent.

For income-focused investors, dividends can be a steady reward. Even when the stock doesn't climb in value, dividends can provide real returns. Reinvesting dividends can accelerate portfolio growth.

E. Price-to-Book (P/B) Ratio

$$\text{P/B Ratio} = \frac{\text{Stock Price}}{\text{Book Value per Share}}$$

Example: If a stock is trading at $40 and the book value per share is $20, the P/B ratio is 2.

This tells you how much you're paying compared to what the company owns outright. If the ratio is low and the company is healthy, it could mean you're buying in at a discount.

F. Total Return

$$\text{Total Return} = \frac{\text{Ending Value - Beginning Value} + \text{Dividends}}{\text{Beginning Value}} \times 100$$

Example: You buy a stock at $50, it rises to $60, and pays a $2 dividend. Your total return is

$$\frac{60 - 50 + 2}{50} = 24\%$$

This is the number that matters most. It combines income and appreciation. It is the full reward for your patience and planning.

Bond Metrics: Measuring Borrowing and Return

Bonds work differently from stocks. Instead of owning part of a company, you're lending money to a company (or government). In return, they promise to pay you interest and eventually return your original investment.

Let's take a look at how investors evaluate bonds.

A. Coupon Rate

$$\text{Coupon Rate} = \frac{\text{Annual Interest Payment}}{\text{Face Value}} \times 100$$

Example: A $1,000 bond paying $40 annually has a 4 percent coupon rate.

This is what the bond offered when it was first issued. This is a useful starting point, but not the full picture of today's return.

B. Current Yield

$$\text{Current Yield} = \frac{\text{Annual Interest Payment}}{\text{Current Bond Price}}$$

Example: If the bond is selling for $950, the current yield is about 4.21 percent.

That small price discount increases your return slightly. Current yield helps investors decide whether a bond is currently offering competitive income.

C. Yield to Maturity (YTM)

$$\text{YTM} \approx \frac{\text{Interest} + \frac{\text{Face Value - Price}}{\text{Years}}}{\frac{\text{Face Value} + \text{Price}}{2}} \times 100$$

Example: A bond priced at $950 with five years to maturity and a $40 coupon will yield approximately 5.13 percent.

YTM paints a fuller picture. It includes everything you'll earn from the bond if you hold it to the end, and whether you bought it at a discount or a premium.

D. Bond Rating

Instead of a formula, this metric is based on evaluations by credit rating agencies like Moody's and Standard & Poor's (S&P). Ratings such as AAA, BBB, or junk-grade indicate the bond issuer's likelihood of paying you back.

Think of bond ratings as a report card for reliability. Safer bonds tend to offer lower returns, while riskier bonds might tempt investors with higher yields.

E. Duration

Duration is a measure of how sensitive the bond's price is to changes in interest rates. Bonds with longer durations fluctuate more when rates move.

This becomes more important in rising or falling interest rate environments. Longer bonds may drop more in value if rates rise, making this an essential concept for long-term bond investors.

Fund Metrics: Evaluating Pooled Investments

Not everyone wants to pick and manage individual stocks and bonds, and that's where mutual funds and ETFs come in. They let you invest in a broad collection of securities with a single purchase, often managed by professionals. But how do you evaluate a basket instead of a single apple?

Let's look at the key numbers that help investors assess fund performance and structure.

A. Expense Ratio

$$\text{Expense Ratio} = \frac{\text{Annual Operating Expenses}}{\text{Average Assets Under Management}} \times 100$$

Example: A fund with $10 million in assets and $50,000 in annual expenses has an expense ratio of 0.5 percent.

Even a small difference in expense ratios can add up over time. A fund charging 1.5 percent consumes more of your returns than one charging 0.3 percent, especially in long-term accounts like retirement funds.

B. Net Asset Value (NAV)

$$\text{NAV} = \frac{\text{Total Assets - Liabilities}}{\text{Outstanding Shares}}$$

NAV updates daily for mutual funds. For ETFs, market price and NAV often stay close, but intraday trading allows slight fluctuations.

It's like asking, "What is my slice of the pie worth right now?" NAV helps you track that value, especially when comparing performance over time.

C. Turnover Ratio

The turnover ratio shows how often the fund's holdings are bought and sold. Some managers trade frequently to chase opportunities. Others stick with a long-term plan.

Example: A turnover ratio of 100 percent means the fund changed out all its holdings during the year.

High turnover can lead to higher costs and potentially higher taxes. Realized gains may be passed on to investors. Some investors prefer "low-turnover" funds for cost and tax efficiency.

D. Benchmark Comparison

Most funds are measured against a benchmark index, like the S&P 500 or the Russell 2000. These comparisons help you evaluate how well the fund performs relative to its peers or intended goal.

If a large-cap U.S. stock fund consistently underperforms the S&P 500, that's a signal worth watching. Likewise, if a fund beats its benchmark but charges high fees, you'll need to decide whether the outperformance justifies the cost.

Alternative Investments: Real-World Valuation Without Formulas

Alternative investments like real estate, collectibles, and commodities don't always come with clean math. But that doesn't mean they're guesswork. Investors use other tools like comparables, professional opinions, and income models to estimate value.

A. Comps (Comparables)

"Comps" are similar assets recently sold in the same market. Real estate investors use comps to estimate property worth based on nearby sales.

Think of it as pricing your home by looking at similar homes on your street. Comps also help mortgage lenders decide how much they're willing to finance.

B. Appraisals

Appraisals are professional evaluations of an asset's worth. In real estate, certified appraisers look at location, condition, market trends, and comps. In art and collectibles, appraisers assess authenticity, provenance, and demand.

These estimates may not be precise, but they're grounded in professional expertise and real data.

C. Capitalization Rate (Cap Rate)

$$\text{Cap Rate} = \frac{\text{Net Operating Income}}{\text{Property Value}} \times 100$$

Example: A property earning $12,000/year in net income and worth $200,000 has a cap rate of 6 percent.

Cap rate helps compare properties and decide whether the income justifies the investment. But it doesn't account for debt, taxes, or property appreciation. It is simply one tool among many.

Pulling It All Together

Stocks, bonds, funds, and other alternatives all have their own language of metrics. Some are as simple as a ratio. Others require judgment, experience, or professional advice. Once you know what to look for, these tools help transform investing from a guessing game into a thoughtful, informed process. The numbers won't decide for you, but they'll help you ask better questions and see clearer choices.

You don't have to love math. You just have to make friends with it.

Summary

Even the best investment strategy can be undone by neglecting the technical details. This final section introduces the infrastructure that supports successful investing: the accounts, platforms, tax implications, and automation options that shape results behind the scenes.

- Account types: taxable, tax-deferred, tax-free (e.g., brokerage, IRA, Roth)
- Fees: hidden and visible costs of platforms, advisors, and products
- Automation: recurring contributions and rebalancing to reduce emotional errors

Technical literacy doesn't mean becoming a tax expert; technical literacy means knowing what to ask and what to watch. This section ties the series together by showing how logistics serve strategy.

Exercises

1. Have you ever been surprised by a fee or tax outcome? What would you do differently next time?
2. Why is it so tempting to delay technical setup even when it directly affects outcomes?
3. List three questions you would ask when choosing a platform or account for long-term investing.

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U

umbrella policy
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uninsured motorist protection
10.2: Insuring Your Property
universal life
10.4: Insuring Your Income

V

variable life
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W

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wills
11.4: Estate Planning

Glossary

12b-1 fee | An annual management fee charged to mutual fund shareholders and calculated as a percentage of the assets under management.

401(k) plans | An employer-sponsored defined contribution plan. Contributions may be made by employer, employee, or both. The employee's contributions are tax deferred until distribution after age 59.5 and are limited by the Internal Revenue Code.

accounting equation | Assets = liabilities + equity, or the value of assets must be equal to the value of the debt and equity that financed them. In personal finance, assets = debts + net worth, or net worth = assets - debts.

accrual accounting | A method of accounting in which economic consequences rather than cash flow consequences define transactions.

active management | An investment strategy that includes security selection within an asset class in order to outperform the asset class benchmark.

actual cash value | Market value of insured property at time of loss.

adjustable life | Benefits and premium can be adjusted without cancellation of the policy.

adjustable-rate mortgage (ARM) | A mortgage loan with a floating or adjustable rate of interest.

Advisory dealing | An investor-broker relationship where the broker provides advice and guidance to the client, but investment decisions remain the client's.

Ambiguity aversion | A preference for known risks over unknown risks.

American Depository Receipt (ADR) | An asset representing equity shares in a foreign corporation trading in U.S. markets.

Anchoring | A bias in which the investor relies too heavily on limited known factors or points of reference.

angel investor | An individual or group providing equity financing; usually a wealthy individual.

annual percentage rate (APR) | The annual rate of interest on credit or debt.

annuity | A series of cash flows in which equal amounts happen at regular, periodic intervals.

appraisal | An opinion of the market value of a property done by a professional appraiser who is familiar with the real estate market and with housing, and who has been certified to do appraisals.

arbitrage | Trading that profits from the market mispricing of assets in the capital markets.

arbitrage opportunities | A market mispricing that provides an opportunity for unusual gain or loss.

arbitrageurs | Traders who seek arbitrage opportunities.

asset allocation | The strategy of achieving portfolio diversification by investing in different asset classes.

asset class | A kind of investment distinguished by its uses and market (e.g., stock, bonds, fine art, real estate, currency).

assets | Resources that can be used to create future economic benefit, such as increasing income, decreasing expenses, or storing wealth as an investment.

ATM (automated teller machine) card | A card allowing direct access to a bank account through an automated teller machine (ATM), most often used to access cash without having to go to the bank housing the account.

authorized shares | Shares of common or preferred stock that have been authorized for issuance by a corporation's board of directors.

Automatic payments | A direct payment of an expense or a debt payment made as an electronic transfer of funds from the payer's bank account to the payee's.

Availability bias | In finance, an investor's tendency to base the probability of an event on the availability of information.

audit | A review of tax calculations and obligations performed by the Internal Revenue Service (IRS).

back-end load | A deferred sales charge or sales fee charged when shares are redeemed.

balance sheet | A list of all assets, liabilities, and equity or net worth, at a given point in time, providing a concise picture of financial condition at that time.

balloon mortgage | A mortgage that offers a shorter maturity but with lower payments and a large principal balance due at maturity.

bankruptcy | An economic situation when the value of debts is greater than the value of the assets that can be used to satisfy them. Formal bankruptcy is also a legal process aiming to compensate creditors, governed by the laws of the nation or state in which it occurs.

basic insurance | Health insurance that covers the costs of physician expenses, surgical expenses, and hospital expenses.

basis point | A unit of measure that is one one-hundredth of a percentage point, or 0.01 percent.

Behavioral finance | The study of how cognitive and emotional factors affect economic decisions, particularly how they affect rationality in decision making.

Behavioral interviews | A common type of job interview in which the candidate is asked about past behavior in a specific set of circumstances.

benchmark | A standard, often an index of securities, representing an industry or asset class and used as an indicator of growth potential or as a basis of comparison for similar of disparate industries or assets.

benchmarks | A standard, often an index of securities, representing an industry or asset class and used as an indicator of growth potential or as a basis of comparison for similar of disparate industries or assets.

Blue chip stock | Stock of a corporation with a history of providing steady returns.

Bodily injury liability | Responsibility for financial losses from injuries sustained in an accident for people outside of the car of the driver at fault.

bond laddering | A strategy of cash flow matching to create a series of regular cash flows from bond investments.

Bonds | Publicly issued and traded long-term debt used by corporations and governments.

book value | The valuation of assets, liabilities, and equity from the balance sheet; the corporation's original investment in its assets, liabilities, and equity.

broker-dealers | An intermediary that acts as an agent for buyers or sellers and also trades for its own account.

brokers | An intermediary that acts as an agent for buyers or sellers to arrange a trade.

budget | A projection of the financial requirements and consequences of a plan.

budget deficit | A shortfall of available funds created when income is less than the expenses.

budget surplus | An excess of available funds created when income is greater than the expenses.

budget variance | A difference between the actual results of your financial activity and your expected, budgeted results.

business cycle | Recurring periods of economy-wide expansion, when the economy is growing, and contraction, when the economy is shrinking. Cycles are often measured by the increase or decrease in the GDP.

buy-and-hold strategy | The long-term strategy of investing and holding without trading.

buyer's remorse | Regret following a purchase, especially common with an impulse purchase.

buyout option | A feature of a lease that offers the option to buy the asset financed by the lease at the end of the lease term.

bias | A tendency or preference or belief that interferes with objectivity.

broker | An intermediary that acts as an agent for buyers or sellers to arrange a trade.

callable | A bond that may be redeemed before maturity.

Capital allocation | A strategy of diversifying a portfolio between risky and riskless assets.

capital budget | The budget that shows nonrecurring events that are usually associated with long-term financial goals.

capital gain | Wealth created when an asset is sold for more than the original investment.

capital gains distribution | The shareholder's share of capital gains (losses) created by mutual fund turnover.

capital loss | Wealth lost when an asset is sold for less than the original investment.

capital market | A market where long-term liquidity is traded.

capital markets | A market where long-term liquidity is traded.

career path | A planned progression of jobs or steps to advance in a profession or career.

cash account | A brokerage account where investments are paid for from money on deposit.

cash accounting | A method of accounting in which cash flow consequences rather than economic consequences define transactions. Events are defined as cash transactions and recorded only when cash changes hands.

Cash flow matching | A strategy of investing in bonds with maturities and face values that match anticipated cash flow amounts and timing.

cash flow statement | A summary of actual cash flows for a period, detailing the sources and uses of cash and classifying them as from operating, investing, or financing activities.

cash flows from financing | Nonrecurring cash flows that result from the borrowing or repayment of debt, or from the issue or repurchase of equity.

cash flows from investing | Nonrecurring cash flows that result from buying or selling assets.

cash surrender value | The value of a whole life policy (the cash available for the policyholder) if the policy is canceled before the death of the insured.

certificates of deposit (CDs) | A savings instrument requiring a minimum sacrifice of liquidity, either as a minimum deposit amount or a minimum time deposited, in exchange for a higher rate of earnings.

charge card | Revolving credit that must be periodically paid in full.

checking account | A bank account that is used to facilitate payment by check.

churning | A broker practice of executing trades for a client's account solely to create commissions for the broker.

Closed-end funds | A mutual fund that issues a limited number of shares, so that existing shares must be sold to new investors.

closing costs | Transaction costs of the home purchase, including appraisal fees, title, fee, and title insurance; closing costs are paid at the closing or purchase of the home.

Co-pays | Partial payment for certain costs, made by the insured.

Coinsurance | Shared payments by insured and insurer.

collective bargaining | The practice of union and employer representatives negotiating an employment contract to determine wages, hours, work rules, and working conditions.

collision | Responsibility for damage to the property of the driver at fault.

commercial property | Property used exclusively to create rental income.

Commodities | Raw materials (natural resources or agricultural products) used as inputs in processing goods and services.

common stock | Equity shares representing the residual claim on the company's value.

common-size balance sheet | A balance sheet that lists each asset, liability, and equity as a percentage of total assets.

common-size cash flows | A cash flow statement that lists each cash flow as a percentage of total positive cash flows.

common-size income statement | An income statement that lists each kind of revenue and each expense as a percentage of total revenues.

common-size statements | Financial statements where each item's value is listed as a percentage of or in relation to another value.

compensation | Payment for labor, including wages, salaries, commissions, stock options, and fringe benefits such as health, disability, and life insurance.

comprehensive budget | A budget that includes the operating budget and the capital budget, that is, it is designed to show all aspects of financial activities.

Comprehensive physical damage | Coverage for damage from hazards.

condominium | An ownership arrangement where individual housing units are owned by individual owners, while common spaces are owned by the condominium association of unit owners.

conservative | In finance, an approach preferred in all financial planning: overestimate expenses, losses, and the value of liabilities and underestimate incomes, gains, and the value of assets. This is based on the idea that any surprises should be advantageous. The use of this word in finance and accounting has absolutely no relation to any political associations that the word may have gained in common usage.

consumer price index | A measure of inflation or deflation based on a national average of prices for a 'basket' of common goods and services purchased by the average consumer.

consumption tax | A sales or excise tax that taxes the consumption of discretionary and nondiscretionary goods and services.

convertible bond | A bond that may be converted to common stock under specific conditions.

Conveyances | Any agreements regarding property features also included in the transaction, such as appliances, satellite dishes, and so on.

Cooperative housing | An ownership arrangement where the right to inhabit living space is claimed by the purchase of shares in the cooperative ownership of a multi-unit dwelling.

cost basis | The original cost of an asset that is used to calculate a gain (loss) upon sale of the asset.

cost of debt | The cost of borrowing capital because of having to pay interest on the principal.

cost of equity | The cost of having to share the benefits (capital gains or income (dividends)) from the investment.

coupon | The interest payment on a bond, specified as a feature of the bond at issuance.

coupon rate | The interest rate offered on a bond.

covenants | A condition placed on bond issuers (borrowers) to protect bondholders (lenders).

covenants | A condition of a loan that restricts the borrower to protect the lender.

credit card | Revolving credit that may not be paid in full, creating an interest expense.

credit cycle | The time period for extending and paying credit.

credit market | A part of the capital market where capital is lent and borrowed through the trading of debt securities such as bonds.

Credit rating | An analysis of personal creditworthiness based on income, current credit and debt, and credit history. The assessment is done by a credit rating agency that makes the credit report available to lenders.

credit score | A numerical score that rates personal creditworthiness in the credit rating process.

Credit unions | A retail banking institution that is either depositor- or member-owned. Membership is usually defined and limited to affiliation with a particular group (for example, state or union employees, or a religious or social affiliation).

creditors | Lenders; anyone to whom debt is owed.

cumulative preferred shares | Preferred shares that obligate the company to pay dividends to preferred shareholders before paying any others.

currency risk | The risk that an investment denominated in a different currency will suffer a loss due to exchange rate volatility.

current yield | The short-term return on a bond, calculated as the coupon as a percentage of the bond price.

Custodial accounts | A brokerage account for a minor, established with a guardian (adult) who is authorized to make trading decisions.

Cyclical stock | A stock that will move with the market but with more volatility.

Day trading | A short-term strategy for taking advantage of excessive volatility.

dealer | A professional investor trading for its own account.

debenture | A bond secured by only the 'full faith and credit' of the borrower and not by any specific asset.

debit card | A card that allows point-of-sale payment as an electronic transfer of funds from the payer's bank account to the payee's at the time of sale.

debt | Borrowed capital, a liability, a loan that must be repaid.

Deductibles | Costs paid by the insured before the insurer provides coverage.

default risk | The risk that a borrower will not be able to meet interest obligations or principal repayment.

Defensive stock | A stock with very little volatility that is relatively insensitive to market moves.

deferred coupon bonds | Bonds whose coupon payments are deferred until a specified time.

defined benefit plan | A pension plan sponsored by an employer in which the employer commits to providing a specific amount of benefit based on wages and tenure to retired employees.

defined contribution | A tax-advantaged retirement savings plan, such as a 401(k), that both employer and employee may contribute to.

defined contribution retirement plans | A retirement savings plan sponsored by an employer that both employer and employee may contribute to.

deflation | Period characterized by falling prices, increasing purchasing power, and higher currency values (one unit of currency is worth more because it buys a greater quantity of goods and services).

demand deposit | Accounts from which withdrawals may be made 'on demand,' such as a checking account.

depression | A prolonged and severe recession.

derivatives | Financial instruments such as options, futures, forwards, securitized assets, and so on whose value is derived from the value of another asset.

direct deposit | An automatic deposit of income directly to the receiver's designated bank account; widely used by employers and government agencies.

Direct investment | A real estate investment in which you are the owner and manager of property.

Disability insurance | Insurance to protect the insured against the risk of being unable to earn wages or salary as a result of injury or illness.

discount rate | The effect of time on value or the rate at which time affects value; used when calculating the equivalent present value of a nominal future value.

Discretionary trading | An investor-broker relationship where the broker is empowered to make investment decisions and trades on behalf of the client.

disposable income | Income available for expenses after tax expense has been deducted; gross income less income tax.

diversification | The strategy of reducing risk by spreading income and investments among a number of different kinds, sources, and locations.

Divestment | The sale of an asset to reverse an invested position.

dividend | A share of corporate profit distributed to shareholders, usually as cash or corporate stock.

dividend distributions | Mutual fund returns from any dividends distributed by mutual fund equity holdings.

dividend payout rate | The percentage of earnings that is paid out as a dividend.

dividend reinvestment | The practice of using dividends to automatically purchase additional shares.

dividend yield | The return provided by the dividend relative to the share price, or the dividend per each dollar of investment, given its market price.

dividends per share | The dollar value of the dividend return to each share of stock.

dollar-cost averaging | The strategy of investing regular dollar amounts at regular intervals in one security.

down payment | The share of the purchase price paid in cash at the time of purchase; also called earnest money.

due diligence | Competent and adequate research into an investment proposal to be able to project its returns and its potential risks.

early payment | Redemption or paying back the mortgage loan before its maturity.

early payment penalty | A cash penalty for the borrower for an early payment; this clause is not included in all mortgages.

earnest money | A nonrefundable deposit paid by the buyer to the seller at the time of the purchase and sale agreement then applied toward the closing costs.

earnings per share (EPS) | The dollar value of the earnings per each share of common stock.

efficient market theory | The idea that the market works best when prices reflect all available information, implying that the market price represents an unbiased estimate with an equal chance that stocks are over- or undervalued.

employment rate | A measure of the rate of labor force participation, or the percentage of the labor force that is employed, that is, people who want to work and are working.

endorsements | The clause of a homeowner's policy insuring listed property.

equity | An ownership share in an asset, entitling the holder to a share of the future gain (or loss) in asset value and of any future income (or loss) created.

escrow | A restricted account used for the earnest money until closing.

estate | All real and personal property of a decedent at the time of death, not including properties in joint ownership or assets that pass directly to a named beneficiary.

Estate taxes | A tax on the intergenerational transfer of wealth after death.

exchange-traded fund (ETF) | A fund that tracks an index or a commodity or a basket of assets but is traded like stocks on a stock exchange.

Exchange-traded funds (ETFs) | A mutual fund that is structured as a closed-end fund and actively traded on an exchange.

Excise taxes | A tax on a specific item produced within a country.

Execution-only | An investor-broker relationship where the broker's only role is to execute trades per the investor's decisions.

executor | The person named in a will who administers the payments of debts and the distribution of assets, as described in the will.

expected return | The return expected for an investment based on its average historical performance. Statistically, it is the mean or average of the investment's past performance.

expected value | The weighted average result for an event, or the value expected, on average, given the probabilities of each of its possible outcomes.

expense ratio | The total expenses of a mutual fund investment as a percentage of share value.

Expenses | The costs of consumption or daily living.

extended replacement costs | Insured amount capped at a specified percentage of actual cash value.

face value | For a bond, the amount to be repaid to the bondholder upon redemption.

fiduciary | A person or organization that acts on behalf of another and is legally or ethically obligated to prioritize that individual's interests above their own.

financial advisors | Professionals with various backgrounds and training who give financial advice and assist with personal and business financial planning, including tax, estate, and investment planning.

financial engineering | The use of mathematical modeling to create and value new financial instruments and markets.

financial planning process | A recursive process of defining goals, assessing situations, identifying and evaluating choices, making choices and assessing the results, redefining goals, and so on.

financial ratios | Ratios used to understand financial statement amounts relative to each other.

fixed interest rate | A bond interest rate that does not change over time, from issuance to maturity.

fixed rate-loan | A loan for which the interest rate remains constant over the maturity of the loan.

fixed-rate mortgage | A mortgage loan with a fixed interest rate over the life of the loan.

flexible savings account | An account created with regular payroll deductions by an employee to finance supplemental health care costs. Monies must be expended within a specified time period or forfeited ('use it or lose it').

floating interest rate | A bond interest rate that changes over time, usually related to a benchmark rate such as the U.S. discount rate or prime rate.

floating-rate loan | A loan for which the interest rate can change, usually periodically and relative to a benchmark rate such as the prime rate.

foreclose | The repossession of real property by a lender after a default on the mortgage by the borrower, assuming the real property has acted as collateral for the financing.

formulary | A list of drugs covered by an insurer under a prescription drug plan.

forward contracts | A private contract to buy or sell an asset at a specified time and price in the future.

Framing | The idea that the presentation or perception of a decision influences the decision maker.

Free cash flow | Income remaining after the deduction of living expenses and debt obligations that is available for capital expenditures or investment.

front-end load | The sales charge for mutual fund shares, quoted as a percentage of the funds invested; it cannot be more than 8.5 percent of investment.

front-running | An agent trading for its own account before executing trading orders for its clients.

fundamental analysis | The process of estimating security value by evaluating past performance and macroeconomic and industry factors.

Funds of funds | A mutual fund that invests in shares of other mutual funds rather than in specific securities.

future value | The value of a present liquidity or projected series of cash flows in the future, accounting for the effects of time on value.

Futures | A publicly traded contract to buy or sell an asset at a specified time and price in the future.

general obligation bond | A state or municipal bond secured only by the 'full faith and credit' of the issuer.

go public | To raise capital by issuing equity shares through a public exchange.

grace period | The time between the purchase date and the date that interest is charged on revolving credit.

gross domestic product | The total value of all final goods and services produced in a year in a nation's economy. It is used as a fundamental measure of an economy's growth based on its ability to use resources productively and provide for its members.

growth stock | A stock that is expected to offer excessive rates of growth.

Guaranteed replacement costs | The full cost of replacing insured items at time of loss.

health maintenance organization | An organization to provide 'managed care' through reliance on primary care physicians and a network of specialists, with an emphasis on preventative care.

health reimbursement account | An employer owned and funded account to finance employee health care costs, with the employee choosing the type of coverage.

health savings account | Individually owned and financed savings accounts that may be used to finance health care costs with tax-deductible contributions.

high-yield bonds | Bonds rated BB or Ba or lower, considered to have significant default risk.

holding period yield | The annualized return on a bond over the period it is owned.

holographic will | A handwritten or oral will.

home equity line of credit (HELOC) | A loan secured by home equity value, structured such that principal may be borrowed only as needed, and interest paid only on the balance outstanding.

home equity loan | A loan secured by home equity value.

Identity theft | A fraud that occurs when the identity is used to access or create accounts for financial gain.

Immunization | A bond portfolio strategy designed to 'immunize' or protect the portfolio from interest rate risk.

Income | Earnings of a given period. In the case of an individual or household, this is generally cash from wages, interest, dividends, or assets (such as rental income from real estate) that can be used for consumption or saved.

income statement | A summary statement of income and expenses for a period; an income statement shows the difference between them or the net profit (net loss) for the period.

independent event | An event made neither more nor less probable by the occurrence of another event.

index fund | A mutual fund designed to track the performance of an index for investors who seek diversification without having to select securities.

index funds | A mutual fund designed to track the performance of an index for investors who seek diversification without having to select securities.

index of leading economic indicators | A set of ten economic statistics that are used to assess the potential for economic growth.

Indexing | The strategy of using index funds to achieve diversification rather than specifically selecting individual securities.

indirect investment | A real estate investment in which you buy shares of an entity that owns and manages property.

inflation | Period characterized by rising prices, declining purchasing power, and lower currency values (one unit of currency is worth less because it buys a smaller quantity of goods and services).

Inflation risk | The risk that the value of a bond's returns will be decreased by a decrease in value of the currency of the bond's denomination.

initial public offering (IPO) | A company's first issuance of stock for trade in the public markets. Companies issue stock publicly to attract more investors and thus more capital for the company. When a company has its IPO is it said to 'go public.'

inside information | Information that is not publicly available that has a material effect on an investment's value.

insider trading | The illegal practice of trading securities based on nonpublic or 'inside' information.

Installment credit | A form of credit used to purchase consumer durables, usually issued by one vendor for one item.

interest | The cost of debt expressed as an annual percentage of the principal.

interest distributions | Mutual fund returns from any interest payments on the mutual fund holdings, such as bonds

interest rate risk | The risk that a bond's market value will be affected by a change in interest rates.

intermediary | A third party that facilitates trade between two parties. In financial services, a bank is an intermediary between lenders and borrowers.

internal growth rate | The maximum rate of growth achieved without any issuance of debt or new equity capital.

intestate | To die without a valid will, leaving the disposition of assets and debts to the law.

Inverse funds | A mutual fund that aims to increase in value when the market declines, in contrast to an index fund, which aim to increase in value when the market rises.

investment grade bonds | Bonds rated BBB or Baa or higher and considered to carry insignificant default risk.

Investment policy statements | A structured framework for investment planning based on the investor's return objectives, risk tolerance, and constraints.

investor profile | A combination of characteristics based on personality traits, life stage, and sources of wealth.

irrevocable living trust | A trust created while the grantor is living, that may not be revoked or changed by the grantor. The trust is considered a legal entity, and ownership of the grantor's assets is transferred to the trust.

issue price | The original market price of a bond at issuance.

job accommodation | A provision of the Americans with Disabilities Act of 1990 that employers make 'reasonable accommodations' for employees with defined disabilities so as not to discriminate against them.

junk bonds | High yield bonds rated BB or Ba or lower and considered to have significant default risk.

Keogh Plan | A tax-advantaged retirement plan for the self-employed.

labor market | Where labor is traded through hiring or employment and price is determined by the interaction of employers and employees.

lease | A rental agreement used as a form of financing for automobile purchases.

Lemon laws | Federal and state laws protecting consumers against products that repeatedly fail to meet standards of performance. The federal Magnuson-Moss Warranty Act was enacted in 1975.

Leveraged funds | A mutual fund that invests borrowed funds as well as investors' funds.

liens | An interest in a property granted to secure payment of debt.

life cycle investing | An investment strategy in which asset allocation is based on the investor's age or stage of life.

Life insurance | Insurance to compensate beneficiaries against the financial consequences of the death of the insured.

life stages | Periods of a person's life based on age and personal circumstances that reflect different needs, goals, and financial capabilities.

Lifestyle funds | A mutual fund designed to perform asset allocation and security selection for the investor. Assets are reallocated based on the firm's expected liquidity target date.

limit order | A trading order to buy or sell a security at a specific price.

limited partnership | A partnership in which there are both general and limited partners (at least one of each). The limited partners have limited liability, and, much like corporate shareholders, cannot be liable for the partnership beyond their original investment.

line of credit | A loan structured such that money can be borrowed as needed, up to a limit, and paid down as desired, and interest is paid regularly but only on the outstanding balance.

liquidity | Nearness to cash, or how easily and cheaply (with low transaction costs) an asset can be turned into cash.

listed property | Valuable property insured separately under a homeowner's policy.

living trust | A trust created while the grantor is alive.

living will | A document conveying your intentions for your personal care and management of your assets should you become unable to do so before your death.

load fund | A mutual fund that charges a sales commission or fee upon investment or purchase of shares; the load is stated as a percentage of invested funds.

long position | Ownership of securities; used in the strategy of 'going long,' which involves buying a security so that if the price rises, its sale will create a gain.

Long-term care insurance | Insurance to provide for permanent assistance with activities of daily living in the event of disabling injury or illness.

Loss aversion | An investor's preference to avoid losses, even when the costs outweigh the benefits, in which case it is not the rational economic choice.

major medical insurance | Insurance for the costs of serious injury or illness.

Managed care organizations | Organizations or networks of health care providers based on the principle of providing preventative care in order to better health and lower costs of health care. Such organizations also provide for emergency and special treatment services under various systems.

manufacturer's suggested retail price (MSRP) | The 'sticker price' for an item.

margin account | A brokerage account allowing the investor to purchase securities with funds borrowed from the broker.

margin call | The requirement that an investor invest more capital to maintain the margin requirement, or the investor's equity in the investment.

margin requirement | The percentage of security value that must represent capital from the investor (as opposed to money borrowed from the broker).

market capitalization | The total market value of a corporation's capital.

market efficiency | The idea that the market works best when prices reflect all available information, implying that the market price represents an unbiased estimate with an equal chance that stocks are over- or undervalued.

market order | An order to trade at the market price.

market timing | The practice of basing investment strategy on predictions of future market changes or on asset return forecasts.

Matching strategies | Strategies used to create a bond portfolio that will finance specific funding or liquidity needs at specific times.

maturity | The date on which payment of a financial obligation is due, such as bond redemption date.

maturity date | Date at which a bond matures, or the end of the bond's term, when the bond must be redeemed.

Medicaid | A federal program financing health care costs with eligibility based on income.

medical payments coverage | Responsibility for financial losses from injuries sustained in an accident for people inside of the car of the driver at fault.

Medicare | A federal program financing health care costs with eligibility based on age (for those over age sixty-five).

mental accounting | A preference to segregate investment accounts by goals and constraints, rather than to perceive the entire portfolio as a whole.

Mobile homes | A manufactured home, usually under 1,000 sq. ft. in size.

money market mutual funds (MMMFs) | A savings instrument invested in the money markets.

money markets | A market where short-term liquidity is traded.

mortgage amortization | A schedule of mortgage payments showing the amounts of each payment that pay interest and that pay principal.

mortgage bond | A bond secured by a specific asset such as real property or equipment.

mortgage factor | The mortgage payment per $1,000 of principal.

mortgage fraud | Intentional misrepresentation or omission of facts perpetrated by a borrower in the process of obtaining mortgage financing.

Mortgage-backed securities (MBS) | A security such as a bond whose return is secured by the income (mortgage payments) from a pool of mortgages.

multiple-unit dwelling | A residential building including more than one housing unit, such as a duplex, triplex, or apartment building.

municipal bonds | Bonds issued by a city, town or state to finance public projects. The coupon payments may, under certain circumstances, not be subject to federal income tax for the bondholder.

mutual fund | A portfolio of investments created by an investment company such as a brokerage or bank. It is financed as the investment company sells shares of the fund to investors. For investors, a mutual fund provides a way to achieve maximum diversification with minimal transaction costs through economies of scale.

Negative net worth | The mathematical result of liabilities being greater than the value of assets, or debts being larger than the value that can be used to meet them.

negligence | Failure to take ordinary precautions.

net asset value (NAV) | When used regarding open-end mutual funds, NAV refers to the redeemable value of each fund share at that time, given the market value of the fund's assets and the number of shares outstanding.

net worth | The value of assets owned after creditors' claims (debts) are accounted for, or literally, assets - debts.

Networking | A process of using personal contacts to get information and find job opportunities.

no-fault insurance | A system of auto insurance where the insured's insurance covers physical and property damage and liability, regardless of 'fault' determined.

no-load fund | A mutual fund that does not charge a sales commission or fee upon investment or purchase of shares.

open-end funds | A mutual fund in which shares are bought from and sold to the fund management; the number of shares is not limited.

operating budget | The budget the shows recurring income and expenses, usually living expenses and incomes from wages, interest, and dividends, usually related to short-term financial goals.

operating cash flows | Recurring cash flows that result from income and expense events.

opportunity cost | The cost of sacrificing the next best choice because of the choice made; the value of the next best choice, which is forgone once a choice is made.

Options | The right but not the obligation to buy or sell at a specific price at a specific time in the future; commonly written on shares of stock as well as on stock indices, interest rates, and commodities.

Overconfidence | A bias in which you have too much faith in the precision of your estimates, causing you to underestimate the range of possibilities that actually exist.

passive management | An investment strategy that does not include security selection within an asset class; the investment is expected to perform as well as the benchmark index.

payday loan | A small, short-term personal loan that charges a high rate of interest.

payment cap | A limit to the potential adjustment to the mortgage payment.

Penny stock | The stock of a corporation with low market capitalization; the stock has a low price (usually less than one dollar) and high volatility.

Pension Benefit Guaranty Corporation (PBGC) | An agency of the federal government that guarantees defined benefit pensions in the case of employer default.

pension plan | An employer-sponsored, defined benefit plan providing a regular, specified amount of pension, based on wages and years of service.

perpetuity | An infinite annuity; a stream of periodic cash flows that continues indefinitely.

point-of-service (POS) | A type of managed care in which physicians, hospitals, and other care providers contract with an insurer to provide care at reduced rates upon referral from the insured's primary care physician. Unlike the HMO, out-of-network providers may be used, but on a limited basis.

Points | One percent of the mortgage value, used as prepaid interest paid at time of purchase.

Ponzi scheme | A pyramid scheme practiced by Charles Ponzi in Boston during the 1920s. The term is now commonly used to describe a pyramid scheme.

power of attorney | The legal right to act on your behalf should you become unable to do so before your death.

preferred provider organization (PPO) | A type of managed care in which physicians, hospitals, and other care providers contract with an insurer to provide care at reduced rates upon referral from the insured's primary care physician. Unlike the HMO, out-of-network providers may be used.

preferred stock | Equity shares that represent a superior claim over common shares but typically do not confer voting rights.

present value | Liquid value in the present, or the discounted value of a nominal amount of future liquidity, taking into account the effect of time on value.

price discrimination | The practice of offering the same product at a different price, depending on customer needs.

price-to-book ratio (P/B) | A ratio comparing the market value of the company to its book or 'original' value.

price-to-earnings ratio | The ratio of a stock's market value per share to its earnings per share, or the market value of one dollar of the company's earnings.

primary market | The market in which the initial issuance or initial public offering of a stock occurs.

prime rate | A benchmark interest rate understood to be the rate that major banks charge corporate borrowers with the least default risk.

principal | The original amount of borrowed capital (a loan).

principal | Principal, interest, taxes, and insurance are the costs of home ownership. PITI is usually calculated on a monthly basis in the process of determining the affordability of a mortgage.

private equity | Equity not traded in a public market or exchange.

private mortgage insurance | Insurance that insures the lender against any losses incurred by the costs of a loan default.

Private placement | An issuance of bonds through a private deal rather than through the public markets.

pro forma financial statements | Projected results for financial statements in the future, given assumptions about what will happen in the meantime.

Probate | The legal process of validating a will and overseeing the orderly payment of debts and the distribution of assets.

progressive tax | A tax rate that increases as the amount to be taxed increases, a common design of an income tax.

Property damage liability | Responsibility for damage to property owned by people other than the driver at fault.

property transfer tax | A tax on the transfer of title to property; a transaction cost of purchasing property.

prospectus | A written statement of a mutual fund's structure, management, investment objectives, holdings, and historic and current performance; funds are required to make the prospectus available to all potential investors.

prudence | Acting with sound and responsible judgment; in investing, prudence implies a relative conservatism regarding risk.

purchase and sale agreement | The legally binding agreement that sets the terms of the property transaction as agreed to by buyer and seller.

purchasing power | A currency's usefulness and thus its value as measured by how much it can buy, that is, the quantity of goods and services that can be purchased with one unit of currency.

pure risks | The risk of accidental or unintentional events

pyramid scheme | A fraud in which 'returns' are created by new deposits rather than by real investment earnings.

Quantity discounts | The practice of offering a different unit price for the same product, depending on quantity purchased.

rate cap | A limit on the potential adjustment to the mortgage interest rate.

rate of compounding | The effect of time on value or the rate at which time affects value; used when calculating the equivalent future value of a present amount of liquidity.

rating agencies | Analysts of bond default risk that assign ratings to bonds.

Ratio analysis | A way of comparing amounts by creating ratios or fractions that compare the amount in the numerator to the amount in the denominator.

real estate investment trust (REIT) | A corporation investing in real estate that, practically, behaves much like a mutual fund for real estate investors.

realtor | A salesperson for real estate, usually hired by the seller to help price, advertise, and show the property and negotiate the actual sale.

recession | A period of economic contraction lasting at least six consecutive months or two consecutive quarters.

redeemable | A bond that is eligible for redemption.

refinancing | Attaining a new mortgage and simultaneously paying off the old mortgage.

regressive tax | A tax rate that decreases as the amount to be taxed increases.

reinvestment risk | The risk that a change in interest rates during the bond's term will change the earnings from reinvesting bond coupons.

replacement cost | Cost of replacing insured property at time of loss.

Representativeness | The practice of stereotyping asset performance, or of assuming commonality of disparate assets based on superficial, stereotypical traits.

resume | A document that summarizes job experience, education, and civic activities. It is commonly used in the job application process.

retained earnings | The portion of the company's earnings or net income that is not distributed (paid out) to owners as a dividend, but is retained as equity financing for the company.

retaliation | Actions by an employer to punish an employee who has complained of employer misconduct to authorities.

retention rate | The rate at which a company retains earnings for use as additional capital or the earnings retained (not paid out as dividends) as a percentage of earnings.

revenue bond | A state or municipal bond that will be repaid from revenues of the specific project it is financing.

reverse mortgage | A loan secured by equity value, most often used for elderly homeowners to extract equity value while retaining home ownership. Typically, the loan balance is payable at the home owner's death.

revocable living trust | A trust created while the grantor is living that may be revoked or changed by the grantor; therefore, ownership of the grantor's assets remains under the control of the grantor.

Revolving credit | A form of credit used to purchase consumer durables issued by a bank of finance company to purchase many items from many vendors.

rider | A clause to a policy that adds specific benefits under specific conditions.

risk | In finance, the probability that the value of an asset, income, or investment may decline in the future.

risk averse | An investor's preference to minimize exposure to risk.

Risk shifting | Selling risk to avoid bearing the full consequence of unintentional events.

risk tolerance | An investor's capacity for risk exposure, based on the ability and willingness to assume risk.

rollover | A retirement plan that may accept or distribute funds from another qualified retirement account without tax consequence or penalty.

Roth IRA | An individual retirement account for which contributions are not deductible but withdrawals are not taxed.

savings income match plan for employees (SIMPLE) | A retirement plan for employers with less than one hundred employees or for the self-employed.

scam | A scam (confidence game or con) is a fraud based on trust.

secondary market | A market in which outstanding shares are traded.

Security selection | The process of choosing individual securities to be included in the portfolio.

self-regulatory organizations (SROs) | A nongovernmental organization that regulates a profession or industry.

senior debt | A bond issue that has a superior claim in case of bankruptcy.

Severance | Compensation upon dismissal from employment.

short position | Owing securities because of having borrowed them from a broker; used in the strategy of 'shorting,' which involves borrowing and selling a security so that if the price falls, you can create a gain when the securities are repurchased to be returned.

simple will | A will leaving all property to a spouse.

simplified employee pension (SEP) | A retirement plan for employers with less than one hundred employees or for the self-employed, usually using individual IRAs (SEP-IRAs) as retirement accounts.

social capital | Connections within and between social networks that may be useful, as an asset, in a market.

Social Security | The mandatory retirement program sponsored by the U.S. government to provide supplemental retirement income. It is funded by a tax (FICA) paid by employers and employees and by self-employed individuals who act as both employer and employee.

Socially responsible investment | An investment strategy to achieve both ethical and financial goals.

specialized budgets | A budget that focuses on one particular financial asset, activity, or goal.

speculative grade bonds | High yield bonds rated BB or Ba or lower and considered to have significant default risk.

speculative risks | Intended risk that offers a chance of loss or gain.

Speculative stock | A stock promising excessive value that may already be overvalued.

split-coupon bonds | Deferred coupon bonds that pay no interest for a specified period, followed by higher-than-normal interest payments until maturity.

spread | A difference between two interest rates, quoted in basis points. The most commonly noted spreads are those between Treasury and corporate securities of the same maturity.

standard deviation | In finance, the statistical measure that calculates the frequency and amount by which actual returns differ from the average or expected returns.

STAR Method | A popular method of preparing narratives for behavioral interviews by referring to job situations, tasks, actions, and results.

stated dollar amount will | A will leaving a specific monetary amount to each beneficiary.

statutory will | A will written on a preprinted form.

step-up bonds | A bond with a floating-rate coupon that is scheduled to increase at specified intervals.

stock exchange | An organized market for the trading of corporate shares conducted by members of the exchange.

Stocks | Shares issued to account for ownership, as defined by owners' contributions to a corporation.

stop-buy order | An order to buy a security once its price has risen above a specified price.

stop-loss order | An order to sell a security once its price has fallen below a specified price.

strict liability | Responsibility for intentional or unintentional events.

subordinated debt | A bond issue that has an inferior claim in case of bankruptcy.

sunk costs | Costs that have been incurred in past transactions and cannot be recovered.

sustainable growth | The maximum rate of growth possible without changing the use of debt and equity capital.

syndicate | A group of individuals formed to own property. The syndicate acts as a vehicle for indirect investment, hiring professional management for the properties it owns.

Tax avoidance | The legal attempt to minimize tax obligations.

tax brackets | A range of income that defines an income tax rate.

tax budget | A budget that focuses on the tax consequences of projected financial activities.

tax evasion | The illegal attempt to report financial information fraudulently to minimize tax obligations.

Technical analysis | A process of estimating security value solely on the basis of past performance as an indicator of future performance.

Term insurance | Life insurance providing coverage for a specified period of time.

term structure of interest rates | A comparison of interest rates for bonds of different maturities.

termination | The ending of an employment relationship; termination may be initiated by the employee (voluntary), the employer (involuntary), or mutually agreed upon by both.

testamentary trust | A trust created by a will that becomes effective upon the death of the grantor.

Time deposits | An account from which withdrawals are made over time, or funds that are deposited for a time.

time value of money | The impact of the passing of time on the value of money, based on the premise that being separated from liquidity creates opportunity cost.

title insurance | Insurance purchased by the purchaser of the property that insures against any omission from the title search.

title search | A search of public records to determine if there are any restrictions or allowances on the property to be purchase, or any liens, or debts such as a mortgage balance, overdue taxes, a mechanic's lien, and so on, that must be paid if the property is sold.

Traditional IRA | An individual retirement account for which contributions are tax deductible and withdrawals are taxed.

traditional marital share will | A will leaving one-half of the estate to the surviving spouse.

transaction cost | The costs of achieving a trade or 'doing a deal' that do not contribute to the value of the thing being traded; a cost created by making an economic transaction.

transfer | The movement of funds in a tax-advantaged retirement account from one trustee or asset manager to another that is not considered a withdrawal or distribution of funds.

Treasury bills | Bonds issued by the U.S. government with a maturity of less than one year.

Treasury bonds | Bonds issued by the U.S. government with a maturity of more than ten years.

Treasury Inflation-Protected Securities (TIPS) | Bonds issued by the U.S. government with an adjustable face value designed to protect the bondholder against inflation risk.

Treasury notes | Bonds issued by the U.S. government with a maturity of between one and ten years.

trust | A legal entity created to own and manage assets for the benefit of beneficiaries.

turnover ratio | A measure of how much annual trading activity there is within a mutual fund's holdings.

umbrella policy | Personal liability insurance in attached to a homeowner's policy.

unemployment rate | A measure of the percentage of people in the labor force who are unemployed, that is, those who would like to be working but cannot find a suitable job.

Uninsured motorist protection | Coverage of financial losses from injuries sustained in an accident if the driver at fault has insufficient insurance.

universal life | Benefits and premiums are flexible, in terms of both timing and amounts.

utility | Value, including subjective or nonmarket value as well as objective or market value.

value stock | A stock whose return is based on its current underpricing by the market.

value-added tax | A consumption tax that spreads the tax burden among producers and consumers by taxing the value added to goods at each stage of production and consumption.

variable life | Life insurance that provides a guaranteed minimum benefit with potential to be greater depending on investment performance.

venture capital | Private equity provided to facilitate excessive growth before the initial public offering of shares.

vesting | The process of earning full ownership in an employer-sponsored retirement plan according to length of service.

vicarious liability | Responsibility for another's use of your possessions, or for another's actions, under certain circumstances.

Wallflower stock | A stock whose value is overlooked by the market.

warranty | A manufacturer's guarantee of product performance for a period of time.

whistleblowers | An employee who alerts authorities to possible employer misconduct.

whole life | Life insurance providing coverage until the insured's death; it can also be used as an investment instrument.

Widow-and-orphan stock | A blue chip stock that offers a reliable dividend.

wrongful discharge | A legal term to describe a termination by the employer that violates the employment contract or the law.

will | A legal document detailing the disposition of assets upon death.

yield curve | A graphic depiction of the term structure of interest rates.

yield to maturity | The total return on a bond, assuming it is held to maturity and that coupons may be reinvested at the same rate.

zero-coupon bond | A bond that has a coupon rate of zero, and therefore a coupon of zero. Its only cash flow return is the principal repayment at maturity.

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Overview

Title: Personal Finance

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