Solutions for Personal Finance 8th Edition by Kapoor

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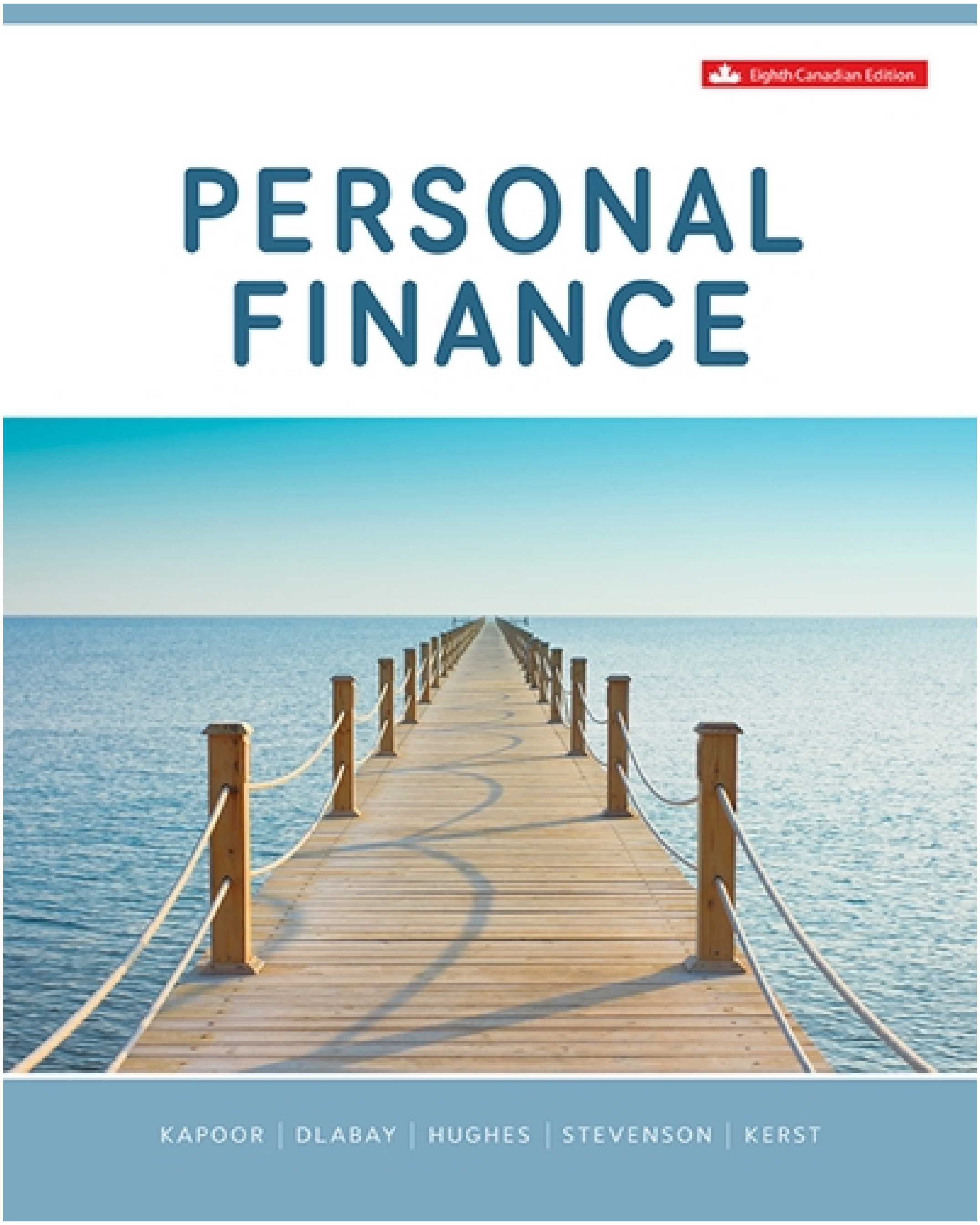

Solutions

SECTION B
CHAPTER TEACHING MATERIALS

1
FINANCIAL PLANNING: AN INTRODUCTION

CHAPTER OVERVIEW

This chapter provides the foundation for *Personal Finance* and the study of financial planning. The chapter starts with a discussion of an overview of the financial planning process. This is followed by coverage of the person's life situation, personal values, and economic factors that make up the financial planning environment. Next, the opportunity costs, or trade-offs, of decisions are considered in relation to personal and financial resources. Subsequently, the main components of financial planning (obtaining, planning, saving, borrowing, spending, managing risk, investing, and retirement and estate planning) are discussed. Finally, strategies for creating and using a financial plan are introduced.

LEARNING OBJECTIVES — CHAPTER SUMMARY

After studying this chapter, students will be able to:

Obj. 1	Analyze the process for making personal financial decisions.	Personal financial planning involves the following process: (1) determine your current financial situation; (2) develop financial goals; (3) identify alternative courses of action; (4) evaluate alternatives; (5) create and implement a financial action plan; and (6) re-evaluate and revise the financial plan.
Obj. 2	Develop personal financial goals.	Financial goals should (1) be realistic; (2) be stated in specific, measurable terms; (3) have a time frame; (4) indicate the type of action to be taken.
Obj. 3	Assess personal and economic factors that influence personal financial planning.	Financial decisions are affected by a person's life situation (income, age, household size, health), personal values, and economic factors (prices, interest rates, and employment opportunities).
Obj. 4	Determine personal and financial opportunity costs associated with personal financial decisions.	Financial opportunity costs are based on the time value of money. Future value and present value calculations enable you to measure the increased value (or lost interest) that results from a saving, investing, borrowing, or purchasing decision.
Obj. 5	Identify strategies for achieving personal financial goals for different life situation.	Successful financial planning requires specific goals combined with spending, savings, investing, and borrowing strategies based on your personal situation and various social and economic factors.

INTRODUCTORY ACTIVITIES

- Ask students to comment on the opening case for the chapter.
- Point out the learning objectives in an effort to highlight the key points in the chapter.
- Ask students to provide examples of social and economic factors that have increased the importance of personal financial planning today.
- Have students answer these three questions as individuals or in small discussion groups:
  1. What do you currently know about personal financial planning?
  2. What questions do you need answers for about personal finance?
  3. How and where might you obtain answers to the questions you have about personal finance?

CHAPTER 1 OUTLINE

I. The Financial Planning Process
   - Step 1: Determine Your Current Financial Situation
   - Step 2: Develop Financial Goals
   - Step 3: Identify Alternative Courses of Action
   - Step 4: Evaluate Alternatives
   - Step 5: Create and Implement a Financial Action Plan
   - Step 6: Re-evaluate and Revise Your Plan

II. Developing Personal Financial Goals
   - A. Factors that Influence Your Financial Goals
   - B. Life Situation
   - C. Goal-Setting Guidelines

III. The Influence of Economic Factors
   - A. Market Forces
   - B. Financial Institutions
   - C. Global Influences
   - D. Economic Conditions

IV. Time Value of Money
   - A. Interest Calculations
   - B. Future Value
   - C. Present Value

V. Achieving Financial Goals
   - A. Components of Personal Financial Planning
   - B. Developing a Flexible Financial Plan
   - C. Implementing Your Financial Plan

VI. Appendix 1A: Financial Planners and Other Financial Planning Information Sources

VII. Appendix 1B: The Time Value of Money: Future Value and Present Value Computations.

CHAPTER 1 LECTURE OUTLINE

THE FINANCIAL PLANNING PROCESS

- Personal financial planning is the process of managing your money to achieve personal economic satisfaction.

- **Discussion Question:** Why do some decisions require more time and effort than others?

Step 1. Determine Your Current Financial Situation

- Determine your current financial situation with regard to income, savings, living expenses, and debts.

Step 2. Develop Financial Goals

- Analyze your financial values and goals to set a course for action.

Step 3. Identify Alternative Courses of Action

- **Class Exercise:** Select a situation (such as obtaining funds to start a business or getting work-related experience without a job) and have students create a list of alternatives for this problem.

- Various alternatives associated with financial decision making are usually based on deciding to:
  - *Continue the same course of action*; for example, you may determine that the amount saved each month is still appropriate.
  - *Expand the current situation*; you may choose to save a greater amount each month.
  - *Change the current situation*; you may decide to buy Canadian savings bonds instead of using a regular savings account.
  - *Take a new course of action*; you conclude to use your monthly saving budget to pay off credit card debts.
- Creativity in decision making is vital to making effective choices. The more alternatives that are considered, the more likely a person or household will make wise financial choices.

Step 4. Evaluate Alternatives

- **Text Highlight:** Exhibit 1-2 provides information on four types of risks faced in many financial decisions.

- Every decision closes off alternatives. The **opportunity cost** is what a person gives up by making a choice. This cost, commonly referred to as the trade-off of a decision, sometimes cannot always be measured in dollars.
- Decision making will be an ongoing part of your personal and financial existence. Thus, you will need to consider the lost opportunities that result from your decisions.

- **Text Reference:** The Appendix provides expanded discussion of financial planning information sources and using a financial planner.

- Uncertainty is a par of every decision. In many financial decisions, identifying and evaluating risk is a difficult task. The best way to consider risk in such decisions is to gather information based on your experiences and those of others and refer to the research of financial planning sources.
- Relevant information is required at each stage of the financial planning process.

Step 5. Create and Implement A Financial Action Plan

- Develop a plan of action to achieve your goals.

Step 6. Re-evaluate and Revise Your Plan

- Decision making is a circular, ongoing process in which current decisions influence future choices.

- **Professional Practice Inquiry 1-1**

DEVELOPING PERSONAL FINANCIAL GOALS

- Many Canadians have money problems due to:
  * poor planning
  * weak financial habits
  * extensive numbers of marketplace influences in the form of advertising, selling efforts, and product availability.

Types of Financial Goals

- *Short-term goals* are those to be achieved within the next year or so, such as saving for an annual vacation or paying off small debts.
- *Intermediate goals* have a time frame of two to five years.
- *Long-term goals* involve financial plans that may be more than five years off, such as retirement and college savings.
- *Consumable-product goals* usually occur on a periodic basis involving items used up relatively quickly, such as food, clothing, or entertainment spending.
- *Durable-product goals* usually involve infrequent, expensive items, such as appliances, motor vehicles, and sporting equipment. Most durable goals consist of tangible items.
- In contrast, however, many people overlook *intangible goals*. These goals may relate to personal relationships, health, education, and leisure. Goal setting for these life circumstances is also necessary for a person's overall well-being.

CHAPTER 1 LECTURE OUTLINE

Life Situation

- The personal factors include your age, income, size of household, and your attitudes and beliefs. Your life situation is affected by various personal events.
- Values are personal beliefs and ideas that a person considers correct, desirable, and important.

Goal-Setting Guidelines

- Goal setting is at the center of financial decision making. Financial goals should:
  1. be realistic
  2. be stated in specific, measurable terms
  3. have a time frame
  4. indicate the type of action to be taken

Economic Factors

- Economic conditions (supply and demand, prices, and interest rates) and economic institutions (business, labor, and government) also affect personal finance.
- **Economics** is the study of how wealth is created and distributed.
- The price of a specific good or service is determined by supply and demand. Just as high demand for a consumer product forces its price up, a high demand for money forces interest rates up. This price of money reflects both the limited supply of money and the demand for it.
- Banks, trust companies, credit unions, insurance companies, and investment companies facilitate financial activities in our society.
- The Bank of Canada is our central banking system. It influences the money supply by borrowing funds, changing interest rates, and buying or selling government securities.
- The level of exports and imports, and the investment in our country by foreign companies affect the interest rates and prices in our society.
- Consumer prices, consumer spending, and interest rates affect the financial planning environment.
- **Inflation** is a rise in the general level of prices. In times of inflation, the buying power of the dollar decreases.
- The main cause of inflation is an increase in demand without a comparable increase in supply. Inflation is most harmful to people who live on fixed incomes.

Instructional Suggestions

- **Text Highlight:** Exhibit 1-4 provides an overview of common financial goals and activities for different life situations.
- **Professional Practice Inquiry 1-2**
- **Discussion Question:** How would various personal events affect personal financial decisions?
- **Text Highlight:** Use Exhibit 1-6 to point out how various economic factors affect financial decisions.
- **Assignment:** Have students use old newspapers and information from friends and relatives to compare current prices with those of five or ten years ago.
- **Discussion Question:** What types of attitudes in our society contribute to higher inflation?

- *Consumer spending* is the total demand for goods and services in the economy; this influences employment opportunities and potential for income.
- *Interest rates* represent the cost of money. Like everything else, money has a price. The forces of supply and demand influence interest rates. As the amount saved and invested by consumers increases the supply of money, interests rates tend to decrease. But as consumer, business, government, and foreign borrowing increases the demand for money, interest rates also tend to increase.

- **Discussion Question:** Interest rates influence most aspects of our economic existence. Why are changing interest rates a significant component of personal financial planning?

- **Professional Practice Inquiry 1-3**

OPPORTUNITY COSTS & THE TIME VALUE OF MONEY

- Distinguish between personal and financial opportunity costs.
- Personal opportunity cost involves time that, when used for one activity, cannot be used for other activities. Other personal opportunity costs relate to health.
- The time value of money refers to the increase of an amount of money as a result of interest earned.
- Computation of interest is based on:
  * the amount of the savings
  * the annual interest rate
  * the length of time the money remains deposited.
- **Future value**, also referred to as **compounding**, is the amount to which current savings will increase based on a certain interest rate and a certain time period. Future value calculations may be used for both a single amount and equal deposits. (See Exhibit 1-8.)
- **Present value**, also referred to as **discounting**, is the current value for a future sum based on a certain interest rate and a certain time period. Present value calculations may also be used for both a single amount and a series of amounts. (See Exhibit 1-8.)

- **Professional Practice Inquiry 1-4**

ACHIEVING FINANCIAL GOALS

- Throughout life, each individual has needs that the intelligent use of available financial resources can satisfy. Financial planning involves deciding how to obtain, protect, and use those resources.

Components of Personal Financial Planning

- **Text Highlight:** Exhibit 1-9 offers an overview of the course.

- The eight major components of personal financial

planning are:
1. obtaining financial resources
2. planning for current living expenses and future financial security
3. saving for emergencies, unexpected bills, replacement of major items, and special purchases
4. borrowing in a responsible manner
5. spending to meet daily living needs
6. managing risk through insurance decisions
7. investing for long-term financial security
8. retirement and estate planning

Developing a Flexible Financial Plan

- A **financial plan** is a formalized report that summarizes your current financial situation, analyzes your financial needs, and recommends a direction for your financial activities.
- Financial activities may be organized on the basis of spending, saving, investing, and borrowing decisions.

- **Text Highlight:** Exhibit 1-10 presents an overview of a financial plan which includes examples of goals, short-term strategies, and long-term strategies.

Implementing Your Financial Plan

- The most important strategy for success is the development of financial habits that will contribute to both short-term satisfaction and long-term financial security.
- Using a set spending plan will help you stay within your income while you save and invest for the future.

- **Professional Practice Inquiry1-5**

CONCLUDING ACTIVITIES

- Point out the chapter summary and key terms in the text margin.
- Discuss selected end-of-chapter Financial Planning Problems, Financial Planning Activities, and Life Situation Case.
- Use the Chapter Quiz in the *Instructor's Manual*.
- Have students start a journal of personal finance information and readings that they encounter in the daily newspaper, news magazines, personal business periodicals, and on the World Wide Web.
- Have students create a case problem for class use based on a personal financial experience they have experienced or observed.

CHAPTER 1 QUIZ ANSWERS

True-False	*Multiple Choice*
1. T	8. B
2. F	9. D
3. T	10. C
4. T	11. A
5. T	12. D
6. F	13. A
7. F	14. B

Name____ Date____________________________

CHAPTER 1 QUIZ

TRUE-FALSE

_____1. A major purpose of personal financial planning is future economic security.

_____2. Personal financial planning starts by creating a plan of action.

_____3. Interest rate risk and inflation risk can affect any financial decision.

_____4. Inflation reduces the buying power of a dollar.

_____5. Changes in interest rates affect your cost of borrowing and your return on investments, thus it is one of the risks you face when making financial decisions.

_____6. Intermediate goals have a time frame of two to seven years.

_____7. The life cycle approach is the idea that an average person goes through three basic stages in personal financial management.

MULTIPLE CHOICE

_____8. Opportunity cost refers to
a. your personal values.
b. trade-offs when a decision is made.
c. current economic conditions.
d. commonly accepted financial goals.

_____9. The first step in the financial planning process is to
a. create a financial plan of action.
b. develop financial goals.
c. evaluate and revise your actions.
d. determine your current financial situation.

_____10. You need a place to live. You have determined that you can continue to rent an apartment, move in with your parents, look at buying a condominium or look at buying a house. This is an example of which step in the financial planning process?
a. Determining your current financial position
b. Developing financial goals
c. Identifying alternative courses of action
d. Evaluating alternatives

_____11. You want to budget your money so that you can see a movie once a month. This is an example of:
a. A consumable products financial goal
b. A durable goods financial goal
c. An intangible goal
d. A long term financial goal

_____12. Economics refers to
- a. setting personal financial goals.
- b. planning future financial security.
- c. changes in prices due to supply and demand.
- d. the study of wealth.

_____13. Career planning is the part of the __________ component of financial planning.
- a. obtaining
- b. sharing
- c. saving
- d. planning

_____14. Financial strategies refer to
- a. the process of predicting your future financial situation.
- b. courses of action to achieve financial goals.
- c. resources an individual has available for investing.
- d. ideas or principles that are considered correct, desirable, or important.

SUPPLEMENTARY LECTURE

Financial Planning Through the Ages

People in their 20s-30s should…

- start saving regularly and invest for the long haul for retirement, children's education, or a down payment on a house.
- make contributions to tax-deductible retirement plans.
- create a diversified portfolio of common stock.
- have adequate health and property insurance, however, consider going without life insurance if they have no dependents.

People in their 40s-50s should…

- maximize contributions to tax-advantaged retirement plans.
- plan for adequate funds for children's college education.
- use stocks and stock funds for the largest share of long-term investments.
- review life, health, and home insurance for adequate coverage.

People 50-plus should…

- not feel they have to preserve all their wealth for others.

- be careful about retiring too young and not have adequate funds for what may be 30 more years.
- maintain earnings potential with a part-time job after retirement.
- not put all funds in fixed-income securities such as bank accounts and bonds.
- consider a long-term care insurance policy.

ANSWERS TO CONCEPT QUESTIONS, OPENING CASE QUESTIONS, FINANCIAL PLANNING PROBLEMS, FINANCIAL PLANNING ACTIVITIES, AND LIFE SITUATION CASE

CONCEPT QUESTIONS

Professional Practice Inquiry 1-1

1. What steps should we take in developing our financial plan?

   Every decision involves identification of the basic problem, generation of alternative courses of action, consideration of personal, social, and economic factors that influence the decision, evaluation of alternative courses of action, selection of the most appropriate one, and implementation of the course of action selected.

2. What are some risks are associated with financial decisions?

   Common risks associated with financial decisions include inflation risk, interest-rate risk, economic risk, and personal risk (Exhibit 1-2).

3. What are some common sources of financial planning information?

   The common sources of personal financial planning information are financial specialists, printed materials, school courses and seminars, financial institutions, and computer software. Refer students to Appendix 1 of the textbook for additional information. The most helpful information sources will depend on a person's need and situation. Magazine articles may be helpful to some, while others may require a computerized information system to gather investment data.

4. Why should you re-evaluate your actions after making personal financial decisions?

   Too often people think that once a plan is implemented, the work is over. However, we must continually re-evaluate our decisions since many factors (our life situation, the economy, AND personal goals) can change. In addition, we reassess the situation since the alternative selected may not turn out exactly as planned.)

5. What Web site feature of www.cafp.org or www.canadianfinance.com would provide assistance with your financial decisions?

   Answers will vary. Students might refer to investment advice, money management tips, or buying on credit warnings.

Professional Practice Inquiry 1-2

1. What are examples of long-term goals?

   Long-term goals are financial objectives more than just a few years off (usually more than five years), such as retirement savings, money for children's college education, or other long-term savings goals.

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

   Useful financial goals should (1) be realistic; (2) be stated in specific, measurable terms; (3) have a time orientation; and (4) imply the type of action to be taken.

3. How does your life situation affect your financial goals?

   The financial goals we set for ourselves, ultimately the way we spend and save our money vary greatly depending on our life situation. For example, an unmarried 25 year old with no children may be willing to take a few more risks and spend a larger amount of money since he/she only has him/herself to support. The opposite is true for a married, 45 year old with two children. He/she will likely spend money more wisely and take great consideration when presented with a risky situation.

Professional Practice Inquiry 1-3

1. How might the uncertainty of inflation make personal financial planning difficult?

   Inflation can affect financial planning with unexpected higher prices for which a budget was not planned. Or, expected inflation will mean higher interest rates as a lender is concerned about being paid back in dollars with less buying power.

2. What factors influence the level of interest rates?

   Interest rates are affected by the supply and demand for money, along with the risk of lending and borrowing money.

Professional Practice Inquiry 1-4

1. How can you use future value and present value computations to measure the opportunity cost of a financial decision?

   Time value of money calculations (future value and present value) are used to compute interest earned and the value of a sum of money at a later date. (See Appendix 1B and the "Financial Planning Calculations" feature).

2. Use the time value of money tables in Exhibit 1-8 to calculate the following:

   a. The future value of $100 at 7 percent in 10 years.

      $\$100 \times 1.967 = \$196.70$

   b. The future value of $100 a year for 6 years earning 6 percent.

      $\$100 \times 6.975 = \$697.50$

   c. The present value of $500 received in 8 years with an interest rate of 8 percent.

      $\$500 \times 0.54 = \$270$

Professional Practice Inquiry 1-5

1. What are the main components of personal financial planning?

   The main components of financial planning are obtaining, planning, saving, borrowing, spending, managing risk, investing, and retirement and estate planning.

2. What is the purpose of a financial plan?

A financial plan provides a person with an overall summary of current and desired financial situations along with planned actions to reach those goals.

3. Identify some common actions taken to achieve financial goals.

   Common financial planning strategies include developing a savings plan, investing in stocks and bonds, purchasing real estate for investment purposes, planning investment and other financial decisions with taxes in mind, limit the use of credit, and investing in a variety of investment vehicles.

OPENING CASE QUESTIONS

1. How did Karen benefit from her parents' advice and her own financial planning?

   Following advice from her parents, Karen consulted a financial planner to help her invest her money. By doing this, Karen is taking her first steps in personal financial planning which will help her get full satisfaction from each available dollar.

2. What decisions does Karen need to make regarding her future?

   Karen has already determined her current financial situation and financial goals. Her next step is to identify alternative courses of action and evaluate these alternatives so that she is able to create and implement a financial action plan.

3. How could various personal and economic factors influence Karen's financial planning?

   Many factors can influence Karen's financial planning, for example, graduation, engagement or a change in health can influence her spending and saving patterns and financial needs. In addition, economic factors such as inflation and interest rates can have a large effect on the value of her investments and her borrowing power.

4. What would be the value of Karen's $15,000 in three years if it earned an annual interest rate of 7 percent?

   The value of Karen's $15,000 in three years at an annual interest rate of 7 percent would be $18,375 according to the time value of money table Exhibit A-1 in Appendix A (15,000 x 1.225).

5. Conduct a Web search to obtain information that Karen may find useful. Recommend a Web site that they might consult when making financial planning decisions.

   Student answers will vary. Some possibilities are www.cafp.org and www.canadianfinance.com.

FINANCIAL PLANNING PROBLEMS

(Note: Some of these problems require the use of the time value of money tables in Appendix 1B)

1. Ben Collins plans to buy a house for $65,000. If that real estate property is expected to increase in value by 5 percent each year, what will its approximate value be seven years from now? LO3

   $65,000 × 1.407 = $91,455

Alternatively
N=5, I=7, PV=65000' PMT=0, FV=?=91,461.53

2. Using the rule of 72, approximate the following amounts: LO3

   a. If the value of land in an area is increasing 6 percent a year, how long will it take for property values to double?

      About 12 years (72 / 6)

   b. If you earn 10 percent on your investments, how long will it take for your money to double?

      About 7.2 years (72 / 10)

   c. At an annual interest rate of 5 percent, how long will it take for your savings to double?

      About 14.4 years (72 / 5)

3. A car that cost $12,000 in 1998 cost $16,000 10 years later. What was the rate of increase in the cost of the car over the 10-year period? LO3 ($16,000 - $12,000) / $12,000 = .3333 (33.33 percent)

4. If you want to have $7,000 in five years, how much do you have to deposit today if your investment earns a rate of 3 percent per annum? LO37000/$(1.03)^5$ = $6,038.26

   Alternatively using the calculator:

   N=5, I=3, PMT=0, FV=7000, PV=?=$6,038.26

5. The Benevolent Company has agreed to lend you funds to complete the last year of your degree. The Company will lend you $2,400 today, if you agree to repay a lump sum of $4,000 four years from now. What is the approximate annual rate of interest that Benevolent is charging you? (Obj. 3)

   $2400 = 4000 (DF i%, 4);
   Solution: I% = 14%

   Alternatively,
   PV=2400, FV=4000, N=4, PMT=0, I=?=13.625%

6. How long will it take to double your money with a growth rate of 5 percent and 12 percent respectively? (Obj. 3)

   1) LN(FV/PV)/LN(1+r)= n = LN (2/1) / LN (1.05) = 14.2067 years
   2) LN (2/1) / LN (1.12) = n = 6.116 years

7. You discover $40,000 under your pillow, which can be invested at a rate of 18% per year. If you spend $11,435 per year, how long will the money last? (Obj. 3)

   $40,000 = $11,435 (PVAF 18%, n)
   or $40,000 = $11,435 x $((1-1/1.18^n)/.18)$ and solve for n

   Solution n= 6 years.
   Alternatively
   PV = $40,000, PMT = 11,435, I=18, FV=0,N=?=6

8. What annual payment is required to pay off a four-year, $20,000 loan if the interest rate being charged is 7 percent EAR? What would the monthly payments be for the same loan assuming the same interest rate? LO3

Payments = [$20,000 / (PVAF 4, 7%)] = $20,000 / 3.387 = $5905

Alternative Solution using the calculator:

N=4, I=7, PV=20000, FV=0, PMT=?=$5,904.56

Second part for monthly payments we need to find the EMR for our rate (1+.07)1/12 – 1 = 0.005654145

$20,000 = PMT x (1 – (1 / 1.00565414548) / 0.005654145)

n=4*12=48

I = 7/12

PV=20000

FV=0

PMT = $476.93

9. You have $100,000 to invest today. At 5 percent per year, what sum can you withdraw at the end of each year, for a period of 20 years, before your money is exhausted? If you were to withdraw this money at the beginning of each year, how much would you be able to withdraw? LO4
$100,000 = Payment x PVA factor (Exhibit 1B-4) and Payment = $100,000 ÷ 12.462 = $8,024.

If you were to withdraw the money at the beginning of each year it becomes an annuity Due and the formula for the PVA factor is just multiplied by (1+r)

$100,000 = Payment x PVA factor (Exhibit 1B-4) x (1.05) Therefore payment = $100,000 / (12.462 x 1.05) = $7,642.28.

Alternative:
PV=100,000, I=5, N=20, FV=0, PMT=?=$7,642.15 Using the Beginning function

10. Using time value of money tables, calculate the following:

a. The future value of $450 six years from now at 7 percent.

$450 × 1.501 = $675.45

Financial Calculator:

PV=450, I=7, N=6, PMT=0, FV=?= $675.32

b. The future value of $800 saved each year for 10 years at 8 percent.

$800 × 14.487 = $11,589.60

Using Financial Calculator

PMT=800, N=10, I=8, PV=0, FV=?= $12,516.39 using Beginning Function If saved at the beginning of the year

Using End function the answer would be FV=$11,589.25 if saved at the end of each year.

c. The amount that a person would have to deposit today (present value) at a 6 percent interest rate in order to have $1,000 five years from now.

$1,000 × .747 = $747

Financial Calcultor:

FV=1000, N=5, I=6, PMT=0, PV=?= $747.26

d. The amount that a person would have to deposit today in order to be able to take out $500 a year for 10 years from an account earning 8 percent.

   $500 × 6.710 = $3,355

11. Elaine Romberg prepares her own income tax return each year. A tax preparer would charge her $60 for this service. Over a period of 10 years, how much does Elaine save from preparing her own tax return (assume that she earns 6 percent on a savings certificate)?

    $60 × 13.181 = $790.86

    Financial Calculator:

    PMT=60, N=10, I=6, PV=0, FV=?= $790.85

12. You have $800 in a savings account which earns 6% interest compounded annually. How much additional interest would you earn in 2 years if you moved the $800 to an account which earns 6% compounded semi-annually?

    Annual compounding $800 $(1.06)^2$ = $898.88
    Semi-annual compounding $800 $(1 + .06/2)^{2X2}$ = $900.41 Difference = $1.53

13. What is the future value of $20,000 received in 10 years if it is invested at 6% compounded annually for the next six years and at 5% compounded semi-annually for the remaining four years?

FV = $20,000 (FV 6, 6%) x (FV 4, 5%) = $34,484.38

Financial calculator:
PV=20000, I=6, N=6, PMT=0, FV=?=28,370.38

Then
PV in six years=28,370.38, I=5, N=4, PMT=0, FV in 10 years= $34,484.38

14. Your parents have promised to give you a graduation present of $5,000 when you graduate in four years. If interest rates stay at 6% compounded annually for the next four years, how much is this money worth in today's dollars?

    Using the financial tables PV = $5,000 (0.792) = $3,960
    Using Formula $5,000/1.06^4 = $3,960.47
    Using Financial calculator:
    N=4, I=6, PMT=0, FV=5000, PV=?=$3,960.47

15. *Calculating the Future Value of an Annuity. What amount would you have at age 65 if you contributed $200 a month starting today at age 25 and you can earn 5% APR compounded monthly on your investment? IF you were to delay this savings for 10 years when you're 35 how much would you then have at 65? LO4*

The first part of this problem is to determine the EMR as it is a monthly payment. Therefore
EMR = 0.05/12 = 0.004166667 or EMR = $(1 + .05/12)^{12/12} - 1$ = 0.004166667

Then we can use the future value of an annuity formula but remember since it was started today it is an annuity due. Number of payments is (65-25) x 12 = 480. Therefore, your formula to calculate this is:

FV = \$200 x ((1.004166667^{480} – 1) / (.004166667)) x (1.004166667) = \$306,475.65
If we wait until age 35 to start the number of payments decreases to 30 x 12 = 360 and our FV would be"

FV = \$200 x ((1.004166667^{360} – 1) / (0.004166667)) x (1.004166667) = \$167,145.28

As you can see by waiting a simple 10 years (payments of \$200 x 120 = \$24,000) you forego a lot of future value.

Financial calculator using beginning function:
At age 25:
N=40*12=480, I=5/12=0.416667, PV=0, PMT=200, FV=?=\$306,475.65

At Age 35
N=30*12=360, I=5/12=0.416667, PV=0, PMT=200, FV=?=\$167,145.28

FINANCIAL PLANNING ACTIVITIES

1. Using Web sites such as www.canadianfinance.com, www.advocis.ca , www.quickent.ca and search engines, obtain information about commonly suggested actions related to various personal financial planning decisions. What are some of the best sources of information on the Internet to assist you with financial planning?

   An extensive amount of personal finance information is available on the Internet. Students should also be referred to the end of each chapter for some of the most useful Web sites.

2. Survey friends, relatives, and others to determine the process they use when making financial decisions. How do these people measure risk when making financial decisions?

   This activity can be beneficial to both students and to whom they talk. Be sure students do not ask questions that are too personal. It can be helpful to have students ask questions such as "What do you believe are the main financial problems faced by individuals and families?" or "How should risk be considered when selecting an investment?" With this format, the people being interviewed do not feel pressured into talking about their personal situations.

3. Prepare a list of financial planning specialists (investment advisors, credit counsellors, insurance agents, real estate brokers, tax preparers) in your community who can assist people with personal financial planning. Prepare a list of questions that might be asked of these financial planning professionals by (a) a young person just starting out on his or her own, (b) a young couple planning for their children's education and for their own retirement, and (c) a person nearing retirement.

   Refer students to page 7 in the text as well as Appendix 1B. These references provide an extensive basis for obtaining information regarding many aspects of financial planning. Point out to students the importance of being able to find that answer to a question rather than trying to learn everything since various factors (laws, economic conditions, and personal situations) change quite frequently.

4. Create one short-term goal and one long-term goal for people in these life situations: (a) a young

single person, (b) a single parent with an eight year old child, (c) a married person with no children, and (d) a retired person.

Be sure students consider life situation, opportunity costs, and other factors. Differences among the groups mentioned will relate to their values, financial needs, and goals. These factors will influence how money is spent, saved, borrowed, and invested as well as the trade-offs that are present with every financial decision. Financial needs are different for people with children than people without children, and the risk associated with a decision investment is different for a young person with few financial responsibilities than a retired person with no other income source.

5. Ask friends, relatives, and others how their spending, saving, and borrowing activities changed when they decided to continue their education, change careers, or have children.

   This activity will provide students with an opportunity to better understand the impact of changing life situations on personal financial planning.

6. Use library resources or Web sites to determine recent trends in interest rates, inflation, and other economic indicators. Information about the Consumer Price Index (measuring changes in the cost of living) may be obtained at www.statcan.com. Report how this economic information might affect your financial planning decisions.

   This activity can help students appreciate the influence of the overall economy on personal financial decisions. Exhibit 1-6 provides specific examples for this activity. Students may also ask people questions such as "How do higher consumer prices and interest rates affect the financial situation and decisions of people in our society?"

7. What actions would be necessary to compare a financial planner that advertises "One Low Fee Is Charged to Develop Your Personal Financial Plan" and one that advertises "You Are Not Charged A Fee, My Services Are Covered By The Investment Company for Which I Work"?

   Students should consider the reputation of the organizations for which the financial planners work. In addition, students should consider the questions listed in Appendix 1A of this chapter.

8. What is the relationship between current interest rates and financial opportunity costs? Using time value of money calculations, state one or more goals in terms of an annual savings amount and the future value of this savings fund.

   This activity can help students to start to applying the skills associated with goal setting and time value of money. Students should be encouraged to develop specific goals that can be measured using future value and present value calculations.

9. Visit software retailers to obtain information about the features and costs of various personal financial planning activities. Information about programs such as Microsoft Money and Quicken may be obtained on the Internet.

   This assignment can assist students with developing an understanding of using the Internet and software for planning and implementing personal financial goals.

LIFE SITUATION CASE

Triple Trouble for the "Sandwich Generation"

1. What actions have Fran & Eds taken that would be considered to be wise financial planning choices?

Wise financial actions by the Blakes include funds set aside for the education of their children and deposits to a retirement fund.

2. What areas of financial concern do Fran & Ed face? What actions might be appropriate to address these concerns?

   The financial burdens of raising children and paying for their education, the care of aging parents, and setting aside funds for retirement.

3. Using time value of money calculations (tables in Appendix 1B), compute the following:

   a. At 9 percent, what would be the value of the $52,000 education funds in three years?

      $\$52,000 \times 1.295 = \$67,340$ or use the formula $\$52,000\ (1.09)^3 = \$67,341.51$

   b. If the cost of long term care is increasing at 6 percent a year, what will be the approximate monthly cost for Fran's mother eight years from now?

      $\$4,050 \times 1.594 = \$6,455.70$ or use the formula $\$4,050(1.06)^8 = \$6,455.09$

   c. Fran and Ed plan to deposit $2,500 a year to their RRSPs for 35 years. If they earn an average annual return of 7 percent, what would be the value of their RRSPs after 35 years?

      $\$2,500 \times ((1.07^{35} – 1) / .07) = \$345,592,20$

Continuous Case

1. Jamie Lee's short-term financial goal is to pay off the credit card in the year. The intermediate goals for Jamie are, save enough for her cupcake café in 5 years and having her own apartment. The short-term goal is specific in the amount paid but the time horizon is dependent on her not using the card anymore. The intermediate goal is measurable (saving for business) since it has a specific savings amount of $1,800 a year and time horizon for achievement. The other intermediate goal is dependent on a lot of factors such as her ability to save and market of the real estate industry and finding an affordable place.

2. Jamie should investigate the market around the business of her interest. Creating a business plan would be wise as it would give her something to work on. Having an idea of the costs associated with running a business is pretty important to understand. Failing in business is usually caused by a lack of planning. A simple solution for her would be to use the emergency funds to pay off the credit card immediately and save on the high interest charges. The interest earned in the emergency fund is likely taxable and low whereas the interest paid on the credit card is not deductible and high. After paying it off add the $50 monthly to the emergency fund.

3. Jamie has already understood that by trying to achieve her goal of her business and school she will have to forego a social life. Another thing she is foregoing is her own apartment in the short term in order to achieve her intermediate goal.

4. If Jamie is depositing $1,800 annually (assuming normal annuity) for 5 years and earning 1% annually she would have $\$1,800 \times ((1.01^5 – 1) /.01) = \$9,181.81$.

   If the money were deposited equally in monthly amounts of $150 (assume at end of 1st month) then she would have:

   $1800/12 = $150 a month and we now have to use an effective monthly rate in our formula

so EMR = $(1.01)^{1./12}$ – 1= 0.000829538 and the number of payments (n) now is 12x5 =60

FV = \$150 $((1.000829538^{60} -1) / 0/000829538)$ =\$9,223.82