



Introduction to Accounting: An Integrated Approach

**AINSWORTH
DEINES
PLUMLEE
LARSON**

**VOLUME II
CHAPTERS 14 TO 25**

Introduction to Accounting: An Integrated Approach

VOLUME II
CHAPTERS 14 TO 25

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*First, and foremost, we dedicate this text to our families without whose love and support we never could have completed this project. To our spouses, **Scott Ainsworth, Linda Deines, Marlene Plumlee, and Doug Larson**, and to our children, **Heather, Dusty, Jennifer, Jeff, Matt, Sarah, Ashley, J. D., and Robyn**, we love you and we thank you for your patience. We would also like to thank the students of Kansas State University who used previous drafts of this textbook and gave us valuable suggestions for improvement. Finally, we would like to thank our development editors, **Leslye Givarz and Kelly Lee**, our executive editor, **Jeff Shelstad**, and the production and marketing departments at Irwin.*

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Brief Road Map

PART ONE

INTRODUCTION TO BUSINESS AND ACCOUNTING INFORMATION

- | | | |
|---|-------------------------------------|----|
| 1 | Business and Accounting | 4 |
| 2 | Accounting and Its Role in Business | 25 |
| 3 | Business Operations and Cycles | 62 |

PART TWO

PLANNING AND DECISION MAKING

- | | | |
|---|---|-----|
| 4 | Pricing, Costs, and Profit Planning | 102 |
| 5 | Planning and Budgeting for Operating Activities | 143 |
| 6 | Short-Term Operating Decisions | 185 |

PART THREE

RECORDING WITHIN THE OPERATING CYCLES

- | | | |
|----|--|-----|
| 7 | Recording and Communicating in the Accounting Cycle | 220 |
| 8 | Recording and Communicating in the Expenditure Cycle | 262 |
| 9 | Recording and Communicating in the Revenue Cycle | 303 |
| 10 | Recording and Communicating in the Conversion Cycle | 332 |

PART FOUR

CONTROLLING WITHIN THE CYCLES

- | | | |
|----|--|-----|
| 11 | Cash: Management and Control | 372 |
| 12 | Revenue and Expenditure Cycles: Analysis and Control | 398 |
| 13 | Conversion Cycle: Analysis and Control | 430 |

PART FIVE

PLANNING AND DECISION MAKING

- | | | |
|----|---|-----|
| 14 | The Time Value of Money: A Tool for Decision Making | 468 |
| 15 | Planning for Equity and Debt Financing | 497 |
| 16 | Planning for Investing Activities | 531 |
| 17 | Planning Investments in Human Resources | 563 |

PART SIX

RECORDING WITHIN THE FINANCING AND INVESTING CYCLES

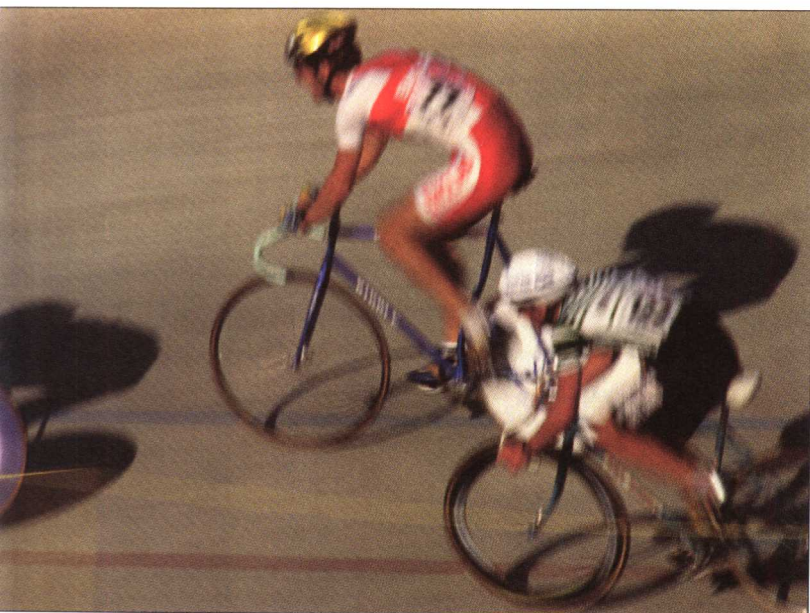
- | | | |
|----|--|-----|
| 18 | Recording and Communicating Long-Term Debt Financing Activities | 590 |
| 19 | Recording and Communicating Equity Financing Activities | 618 |
| 20 | Recording and Communicating Operational Activities | 652 |
| 21 | Recording and Communicating Nonoperational Investment Activities | 689 |

PART SEVEN

FIRM PERFORMANCE: EVALUATION AND CONTROL

- | | | |
|----|--|-----|
| 22 | Firm Performance: Profitability | 716 |
| 23 | Firm Performance: Financial Position | 744 |
| 24 | Firm Performance: Cash Flows | 780 |
| 25 | Firm Performance: A Comprehensive Evaluation | 812 |

Road Map



PART FIVE

PLANNING AND DECISION MAKING

CHAPTER 14

The Time Value of Money: A Tool for Decision Making 468

Return of and Return on Investment: What Is the Difference?	470
<i>The Importance of Time</i>	470
<i>The Importance of the Amount of the Initial Investment</i>	471
<i>Rate of Return</i>	471
<i>Expected Rate of Return</i>	472
What Is the Risk of Investment?	472
<i>Attitudes toward Risk</i>	473
<i>Measuring Risk</i>	473
The Risk-Return Relationship	475
<i>Risk Factors Considered in Determining Expected Return</i>	476
<i>Investors' Perception of Return and Risk</i>	477
<i>Perception of Return and Risk on Borrowed Funds</i>	477
Time Value of Money	477
<i>Simple and Compound Interest</i>	478
<i>Future Value of the Amount of \$1</i>	479

<i>Present Value of the Amount of \$1</i>	480
<i>Finding Unknown Rates or Time Periods</i>	482
Annuities	483
<i>Future Value of an Annuity</i>	483
<i>Present Value of an Annuity</i>	484
<i>Annuities and Compound Interest</i>	486
<i>Solving Annuity Problems</i>	486
Business Applications of the Time Value of Money	488
<i>Asset Valuation</i>	488
<i>Financial Planning</i>	489
Summary	489
Key Terms	490

CHAPTER 15

Planning for Equity and Debt Financing 497

Using the Owners' Money	498
<i>Rewards and Risks of Equity Financing</i>	499
<i>How Is Equity Financing Used?</i>	499
<i>Indicators of Ownership Interest</i>	499
Equity Instruments	500
<i>Common Stock</i>	500
<i>Preferred Stock</i>	500
How Many Shares Are There?	502
<i>Shares Authorized</i>	502
<i>Shares Issued</i>	503
<i>Shares Outstanding</i>	503
Capital Stock Values	503
<i>Par Value</i>	503
<i>No-Par Value</i>	504
<i>Market Value</i>	504
Dividends	505
<i>Date of Declaration</i>	506
<i>Date of Record</i>	506
<i>Ex-Dividend Date</i>	506
<i>Date of Payment</i>	506
Stock Splits	506
Where Do Corporations Find Equity Financing?	507
Why Borrow?	508
<i>Financial Leverage</i>	509
<i>Debt to Equity: A Measure of Financial Leverage</i>	510
<i>Financial Leverage and Risk</i>	511
<i>How Is Debt Financing Used?</i>	511

Long-Term Debt Instruments	511
<i>Periodic Payment Notes</i>	512
<i>Lump-Sum Payment Notes</i>	513
<i>Periodic Payment and Lump-Sum Notes</i>	514
Sources of Long-Term Debt Financing	518
Nonpublic Sources of Debt Financing	518
Public Sources of Debt Financing: Bonds	519
Summary	522
Key Terms	523

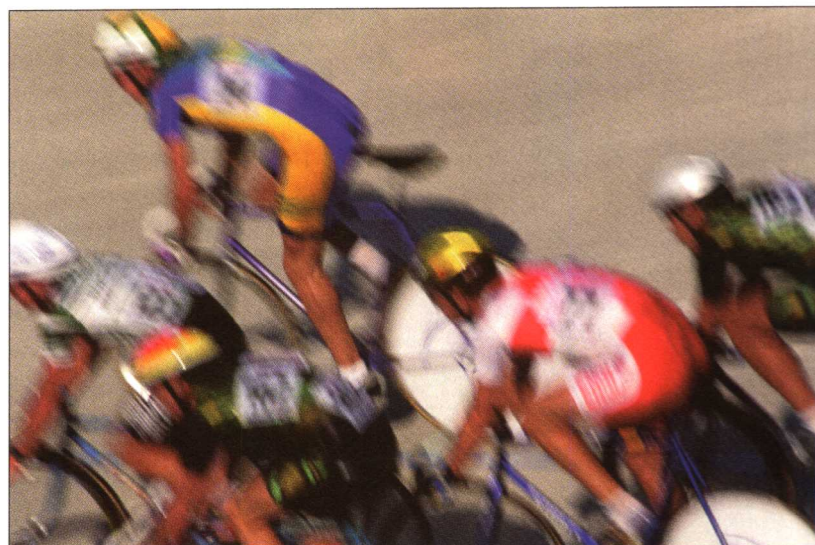
CHAPTER 16

Planning for Investing Activities	531
The Capital Budgeting Process	532
<i>Identifying Long-Term Investment Opportunities</i>	532
<i>Selecting Appropriate Investments</i>	533
<i>Financing Selected Investments</i>	535
<i>Evaluating Investments</i>	536
Discounted Cash Flow Analysis	536
<i>Net Present Value Method</i>	536
<i>Time-Adjusted Rate of Return Method</i>	538
<i>The Effect of Uneven Cash Flows on Net Present Value</i>	539
<i>Advantages and Disadvantages of the Discounted Cash Flow Methods</i>	540
<i>Assumptions Underlying Discounted Cash Flow Analysis</i>	541
<i>The Source of Cash Flows</i>	541
<i>Income Taxes and Cash Flows</i>	542
<i>Noncash Expenses</i>	544
<i>Gains and Losses on Disposal</i>	546
Capital Budgeting: A Comprehensive Illustration	547
Conflicting Signals: A Performance Evaluation Problem	549
Capital Budgeting and the Need for Informed Speculation	550
<i>Sensitivity Analysis</i>	551
<i>Qualitative Factors</i>	552
Summary	552
Key Terms	553

CHAPTER 17

Planning Investments in Human Resources	563
Impact of Compensation Issues on Business Decisions	564
<i>Human Resources: The Unrecorded Investment</i>	564
<i>Impact of Compensation on Operating Decisions</i>	564
<i>Impact of Compensation on Investment Decisions</i>	566
Labor Costs Are Not the Same as Payments to Employees	566
<i>The Real Costs of Employees</i>	566
Deferred Compensation: Effect on Labor Costs	572
<i>Alternatives to Paying Employees Now</i>	573
<i>Employee Stock Option Compensation Controversy</i>	575

What about Employee Motivation and Performance-Based Labor Costs?	576
<i>The Economics of Employee Motivation</i>	576
<i>Motivating Employees to Accept Risk</i>	577
<i>Motivating Teams</i>	578
<i>Bonuses as Compensation</i>	578
<i>Unions: Labor's Voice</i>	579
Summary	580
Key Terms	580



PART SIX

RECORDING WITHIN THE FINANCING AND INVESTING CYCLES

CHAPTER 18

Recording and Communicating Long-Term Debt Financing Activities	590
Accounting for Long-Term Notes Payable	591
<i>Periodic Payment Long-Term Notes Payable</i>	591
<i>Lump-Sum Payment Long-Term Notes Payable</i>	593
<i>Periodic Payment and Lump-Sum Long-Term Notes Payable—Bonds</i>	596
<i>Periodic Payment and Lump-Sum Notes Payable—Private</i>	603
Early Retirement of Bonds	603
<i>Buying Bonds in the Secondary Market</i>	603
<i>Using the Bond's Calling Feature</i>	604
<i>Converting Bonds into Stock</i>	605
Accounting for Leases	606
<i>Reflecting Operating Leases in the Accounting Records</i>	606
<i>Reflecting Capital Leases in the Accounting Records</i>	606
Information Provided for Decision Makers	608
Summary	609
Key Terms	610

CHAPTER 19**Recording and Communicating
Equity Financing Activities**

	618
Noncorporate Forms of Business	619
Sole Proprietorship	619
<i>Drawing Account for a Sole Proprietorship</i>	620
<i>Statement of Changes in Owner's Equity for a Sole Proprietorship</i>	620
Partnerships	621
<i>Closing Entries for Partnerships</i>	622
<i>Statement of Changes in Partners' Capital</i>	622
<i>Division of Income for Partnerships</i>	623
<i>Admission of a New Partner</i>	626
<i>Revaluation of Assets before Admission of a New Partner</i>	628
<i>Withdrawal of a Partner</i>	629
Corporations	629
How to Account for Capital Contributed to the Corporation	630
<i>Accounting for Par Value Stock</i>	630
<i>Accounting for No-Par Stock</i>	630
<i>Accounting for No-Par Stated Value Stock</i>	631
<i>Noncash Stock Issue</i>	631
<i>Donated Capital</i>	631
Accounting for Corporate Earnings	632
<i>Retained Earnings</i>	632
<i>Stock Dividends</i>	635
How to Account for Additional Equity Events	636
<i>Treasury Stock</i>	636
<i>Stock Splits</i>	637
How Are Corporate Equity Events Reported?	637
<i>Statement of Retained Earnings</i>	638
<i>Stockholders' Equity</i>	638
Summary	639
Key Terms	640

CHAPTER 20**Recording and Communicating
Operational Activities**

	652
Plant Assets	653
Acquisition of Plant Assets	653
Use of Plant Assets	656
<i>Factors Affecting Depreciation Calculations</i>	657
<i>Method of Depreciation</i>	658
<i>Other Issues Relative to the Use of Plant Assets</i>	664

Disposal of Plant Assets	666
<i>Discard Plant Assets</i>	666
<i>Sell Plant Assets</i>	666
<i>Exchange Plant Assets</i>	667
Natural Resources	670
Intangible Assets	671
<i>Patents</i>	671
<i>Copyrights</i>	672
<i>Franchises</i>	672
<i>Leaseholds and Leasehold Improvements</i>	673
<i>Goodwill</i>	673
<i>Use of Intangible Assets</i>	674
Reporting Operational Investments	674
<i>Internal Reporting</i>	674
<i>External Reporting</i>	675
<i>Balance Sheet: Reporting Operational Investments</i>	676
<i>Income Statement: Reporting Gains and Losses from Operational Investments</i>	677
<i>Statement of Cash Flows: Reporting the Acquisition and Disposal of Operational Investments</i>	677
<i>Errors in Reporting</i>	678
Summary	678
Key Terms	679

CHAPTER 21**Recording and Communicating
Nonoperational Investment Activities**

	689
Why Invest?	690
What Are Debt and Equity Investments?	690
Trading Securities	691
<i>Trading Securities: Debt Instruments</i>	691
<i>Trading Securities: Equity Instruments</i>	694
<i>What Are Trading Securities Really Worth?</i>	695
Available-for-Sale Securities	696
<i>Available-for-Sale Securities: Debt</i>	697
<i>What Are Available-for-Sale Securities Really Worth?</i>	698
Held-to-Maturity Securities	699
Acquiring a Significant Influence in or Control of Another Corporation	700
<i>Accounting for an Investment that Creates a Significant Influence over Another Company</i>	700
<i>Accounting for an Investment that Creates Effective Control of Another Company</i>	701
How Do Companies Report Their Investments?	701
<i>External Reporting—The Financial Statements</i>	702
<i>Internal Reporting</i>	703
Summary	704
Key Terms	704



PART SEVEN

FIRM PERFORMANCE: EVALUATION AND CONTROL

CHAPTER 22

<i>Firm Performance: Profitability</i>	716
What Is the Purpose of the Income Statement?	717
How Does GAAP Affect the Income Statement?	717
<i>What Is Reported as Earnings?</i>	719
<i>What Is Reported as Nonowner Changes in Equity?</i>	721
<i>What Are Cumulative Accounting Adjustments?</i>	722
What Does Earnings per Share Represent?	723
<i>Calculating Earnings per Share</i>	724
<i>Calculating Diluted Earnings per Share</i>	724
<i>Other Earnings per Share Disclosures</i>	725
What Is the Purpose of the Statement of Retained Earnings?	725
What Are the Limitations of the Income Statement?	726
<i>Financial Capital Maintenance</i>	727
<i>Physical Capital Maintenance</i>	727
<i>Cost Allocations</i>	728
<i>Full-Absorption Costing Distortion</i>	728
Income Reports: Internal Users	730
<i>Product Line (Divisional) Income Reports</i>	731
<i>Current Cost Income Reports</i>	732
Summary	734
Key Terms	734

CHAPTER 23

<i>Firm Performance: Financial Position</i>	744
What Does Financial Position Tell Us?	745
What Does "Current" Tell the Financial Statement Reader about an Item?	746

Is There Information to Be Gained from Balance Sheet Classifications?	749
Assets	750
<i>Current Assets</i>	750
<i>Investments</i>	752
<i>Property, Plant, and Equipment</i>	752
<i>Intangible Assets</i>	753
<i>Other Assets</i>	754
Liabilities: Debt and Other Obligations	754
<i>Current Liabilities</i>	754
<i>Long-Term Debt</i>	755
<i>Other Long-Term Liabilities</i>	756
<i>Off-Balance-Sheet Financing</i>	758
Stockholders' Equity	759
<i>Contributed Capital</i>	759
<i>Donated and Valuation Capital</i>	760
<i>Retained Earnings</i>	760
There Is More to Annual Reports than Financial Statements	761
<i>Management's View of the Business</i>	761
<i>Business Segment Information</i>	761
<i>Periodic Reports—More Timely Reporting</i>	763
<i>Contingent Liabilities</i>	763
<i>The Auditor's Report</i>	763
Balance Sheets Used for Internal Reporting	768
Summary	769
Key Terms	770

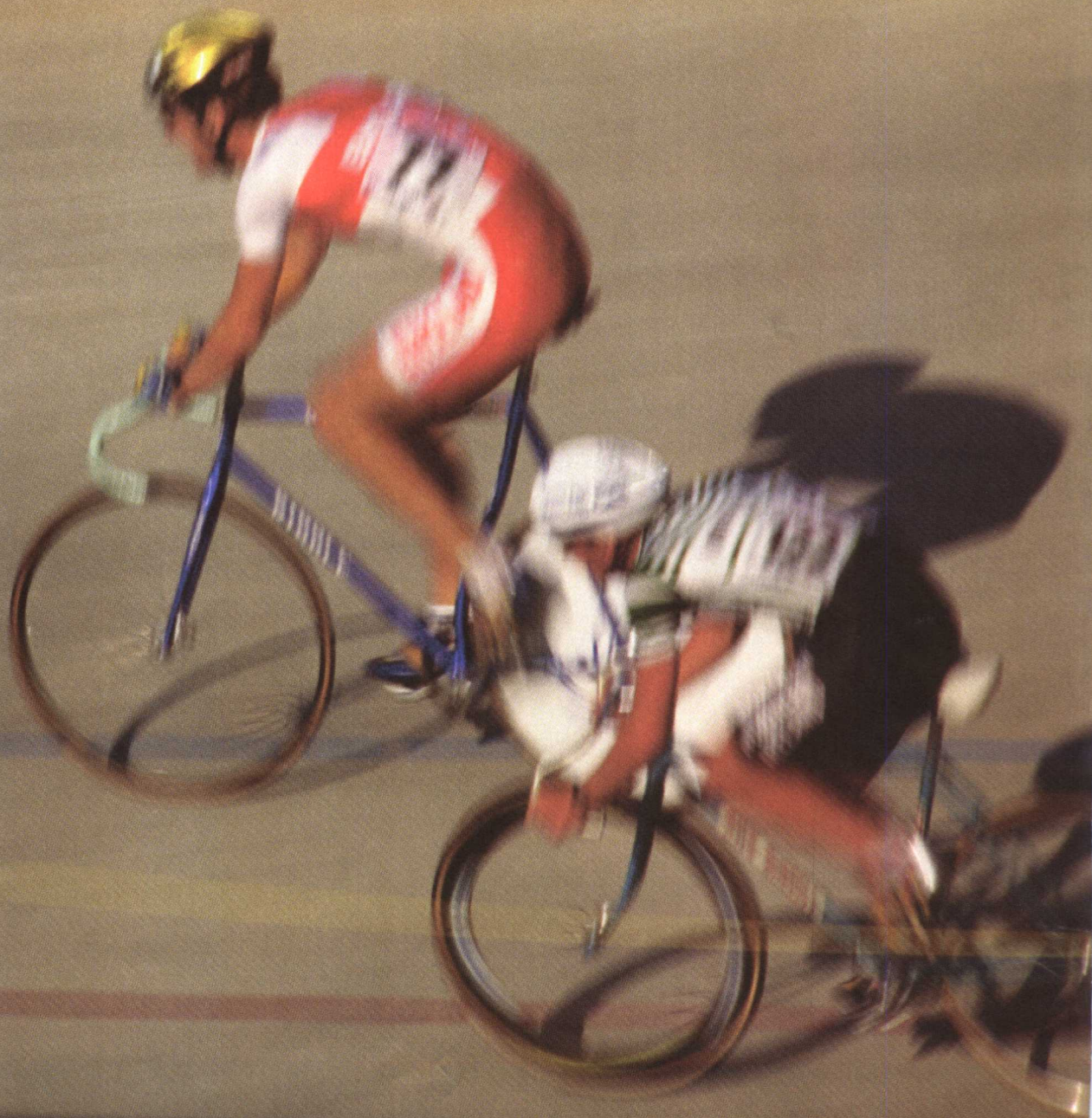
CHAPTER 24

<i>Firm Performance: Cash Flows</i>	780
GAAP and the Statement of Cash Flows	781
<i>What Is the Purpose of the Statement of Cash Flows?</i>	781
<i>Why Are the Sections of the Statement of Cash Flows Important?</i>	782
Determination and Analysis of Operating Cash Flows	784
<i>Determination of Operating Cash Flows: Direct Format</i>	785
<i>Analysis of Cash Flows from Operating Activities: Direct Format</i>	791
<i>Determination of Operating Cash Flows: Indirect Format</i>	791
<i>Analysis of Cash Flows from Operating Activities: Indirect Format</i>	795
Determination and Analysis of Cash Flows from Investing Activities	795
<i>Determination of Cash Flows from Investing Activities</i>	795
<i>Analysis of Cash Flows from Investing Activities</i>	796
Determination and Analysis of Financing Cash Flows	796
<i>Determination of Financing Cash Flows: Nonowner</i>	796
<i>Determination of Financing Cash Flows: Owner</i>	796
<i>Analysis of Cash Flows from Financing Activities</i>	797
Determination and Analysis of Other Investing and Financing Activities	797

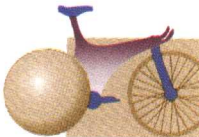
Cash Flow Analysis: Internal Users	797	Ratio Analysis for Lending and Investing	823
<i>Comparison of Budgeted and Actual Cash Flows</i>	798	<i>Activity Ratios</i>	823
<i>Actual versus Budgeted Cash Inflows from Customers</i>	798	<i>Assessing Short-Term Liquidity</i>	827
<i>Actual versus Budgeted Cash Outflows to Inventory Suppliers</i>	798	<i>Long-term Debt Repayment</i>	828
<i>Other Cash Flow Differences</i>	799	<i>Profitability: The Source of a Firm's Value</i>	829
Summary	800	<i>Dividends: Cash Flows for Investors</i>	834
Key Terms	801	Using Stock Price Information for Investing	835
CHAPTER 25		<i>Organized Stock Markets</i>	835
Firm Performance:		<i>Stock Prices</i>	835
A Comprehensive Evaluation	812	<i>Using Information from Stock Markets</i>	835
External Stakeholder's Decision: Whether to Invest	814	Summary	837
<i>Different Investment Perspectives: Lenders and Investors</i>	814	Key Terms	838
The Societal Role of Capital Markets	814	Appendix	849
<i>Trading in Capital Markets</i>	815	Answers to Pause & Reflects	859
<i>Information for Capital Markets</i>	816	Photo Credits	867
Statement Analysis for External Users	818	Index	869
<i>First, Study the Statements</i>	818		
<i>A Basis for Evaluation</i>	820		
<i>Sources of Comparative Standards</i>	823		



PART FIVE



Planning and Decision Making



In part 5, the planning section, the processes and procedures firms use for planning investing and financing activities are discussed. These chapters discuss how operating leverage, various types of available financing, and various capital budgeting techniques are used in planning and decision making.



The Time Value of Money: A Tool for Decision Making

Learning Objectives

1. Explain the cyclical relationship of financing, investing, and operating decisions.
2. Describe the distinction between return of and return on investment and the difference between rate of return and expected rate of return.
3. Explain the risk-return relationship.
4. Describe the difference between simple and compound interest and how interest relates to the time value of money.
5. Illustrate how to use the future value of the amount of \$1 and the present value of \$1 to solve problems that involve lump-sum cash flows at different points in time.
6. Demonstrate how to use the future value of an annuity and the present value of an annuity to solve problems that involve annuity cash flow.

Want to retire with a million dollars? Would you like your five-year-old child to have \$50,000 when he or she is ready for college? Reputable investment companies like Fidelity

Investments and the Vanguard Group offer tax-deferred in-

vestments that make these goals a reality with relatively small investments.

Investment companies like these achieve their investment goals because they understand the risk-return relationship, the time value of money, and the way to utilize the power of compound interest. 





In prior chapters, we focused on examining how businesses operate, how decision makers use accounting information for planning business operations, how the accounting system captures the operating information surrounding business events, and how internal and external stakeholders use accounting information to evaluate a firm's operations. The remaining chapters of the text explore how businesses obtain and invest financial resources. We examine the financing and investing activities of a business enterprise, learn how management uses accounting information to plan for these types of activities, how the accounting system captures these events, and how internal and external stakeholders use accounting information to evaluate the firm's financing and investing decisions.

Exhibit 14.1 depicts the interdependent and cyclical nature of financing, investing, and operating decisions. When starting a business enterprise, the person(s) responsible for obtaining the necessary funds must determine not only the amount of funds needed, but also the source of the financing. The firm can acquire funds through debt financing (creditors) or equity financing (owner contributions).

Next the decision makers must determine how to invest the funds obtained. In general, the firm invests in either current assets or long-term assets. Current assets, such as inventory and office supplies, are necessary to sell the firm's products or to render its services. Investments in long-term assets, such as buildings and equipment, provide the infrastructure necessary to support the daily operating activities of the firm.

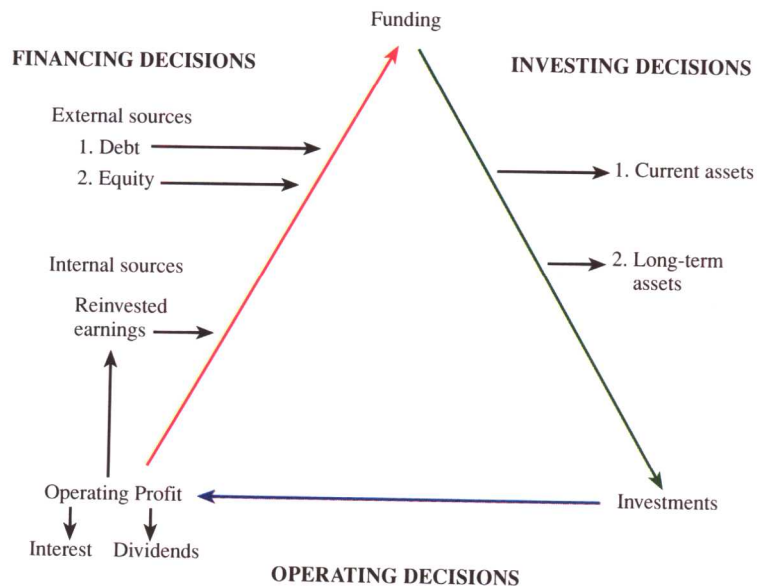
Using the resources at its disposal, management next makes the various operating decisions that will generate an operating profit if management utilizes the resources effectively.

Operating profits generated are used for three primary purposes: (1) to pay the interest on borrowed funds, (2) to reward the owners in the form of dividends (or in the form of withdrawals in proprietorships and partnerships), and (3) to reinvest funds in the firm to maintain the existing operational capacity and finance additional long-term investments in the firm.

The operating cycle starts again when the funds from profits retained in the company are reinvested in the firm. If additional investments are needed, the firm will again borrow from creditors or solicit contributions from new or existing owners. The amount and sources of funds needed for new investments depend on management's operating plans and the long-term assets needed to successfully implement the plans.

EXHIBIT 14.1

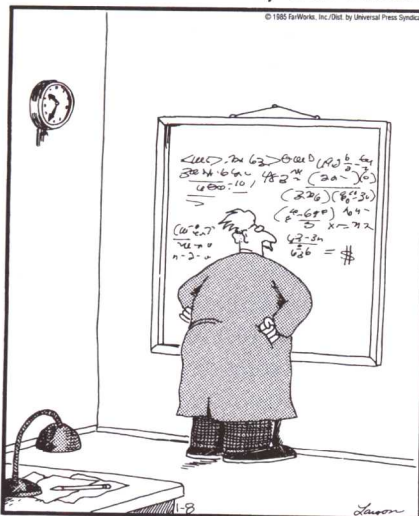
Operating and Decision Cycle



Time affects the value of money because when invested it accumulates to a larger amount at some point in the future. (THE FAR SIDE © FarWorks, Inc./ Dist. by UNIVERSAL PRESS SYNDICATE. Reprinted with permission. All rights reserved.)

THE FAR SIDE

By GARY LARSON



Einstein discovers that time is actually money.

Before going any further, however, it is imperative that you understand the fundamental concepts underlying financing and investing decisions. In this chapter we expand the definitions of return and risk and introduce the concept of the time value of money. These essential tools for making financing and investing decisions are as important as hammers, saws, and tape measures are to a carpenter building a house. With these tools, you can make informed financing and investing decisions for a business enterprise. In addition, they are also useful for making personal financial decisions, such as determining how much to save for your retirement or children's college education and the best way to finance the purchase of a car or a house or to start a business after graduation.

RETURN OF AND RETURN ON INVESTMENT: WHAT IS THE DIFFERENCE?

The concept of *return* is associated with investing decisions involving the acquisition of assets, such as certificates of deposit, government bonds, and new equipment. As discussed in Chapter 1, there are two types of return: return of investment and return on investment. When assessing investment alternatives, investors expect to receive a return of investment. That is, investors only make investments that they believe will return their initial investment. For example, if you invest \$1,000 in a savings account for one year, you expect, at a minimum, to receive \$1,000 at the end of the year. The \$1,000 you receive at the end of the year is your return of investment.

Return on investment is money received in excess of the initial investment. If the \$1,000 in the savings account generates \$1,050 at the end of one year, there is a *return* of the initial \$1,000 investment, and a *return on* the investment of interest of \$50.

The Importance of Time

Return on investment is not adequate to differentiate among investments because it does not consider the length of time that investments are held or the amount of the initial investment. For example, investments X and Y shown in Exhibit 14.2 generate a return on investment of \$300 and \$400, respectively. How would you choose between the two investments based on the dollar amount of the return? You might select investment Y because its return is \$100 greater than investment X. However, this does not consider the length of time investments X and Y were held. If the \$1,300 accumulated by investment X on January 1, 1996, is reinvested and held as long as investment Y (until July 1, 1996), it could generate an additional return that equals or exceeds the \$100 difference between the two investments.