GLOBAL EDITION

Foundations of Finance

The Logic and Practice of Financial Management

TENTH EDITION

Arthur J. Keown
John D. Martin
J. William Petty

Prepare, Apply, Confirm and Develop Employability Skills with MyLab Finance

MyLab™ Finance is an online homework, tutorial, and assessment program constructed to work with this text to engage students and improve results. It was designed to help students develop and assess the skills and applicable knowledge that they will need to succeed in their courses and their future careers.

85%

of students said MyLab Finance helped them earn higher grades on homework, exams, or the course

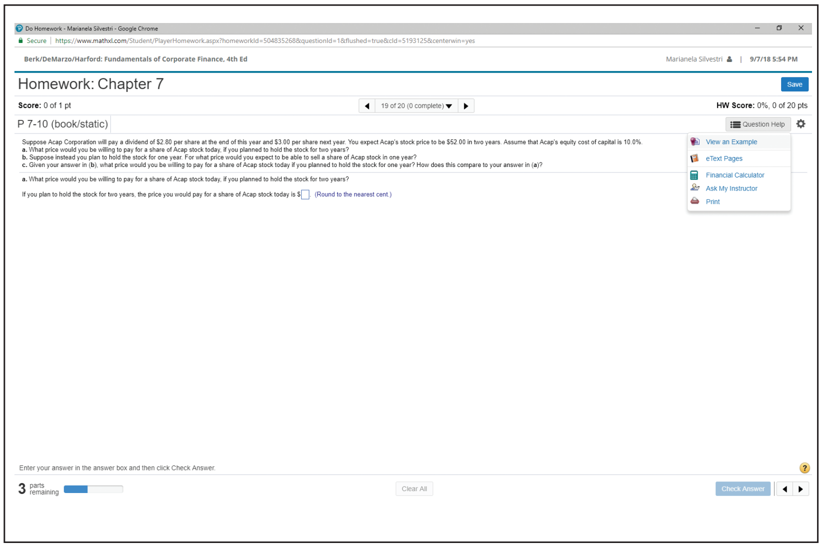
*Source: 2017 Student Survey, n 4703

See what more than 30,000 students had to say about MyLab Finance:

"MyLab Finance's primary benefit was that it helped me to learn how to solve problems and not just memorize information."

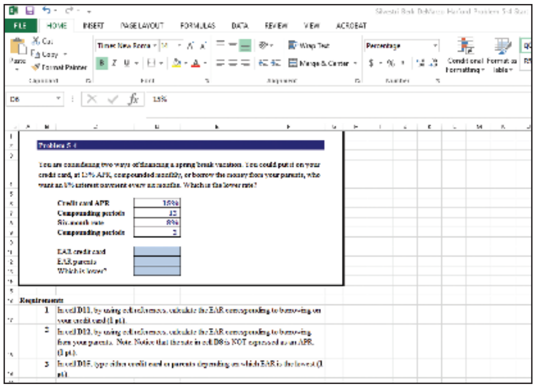
— Student,
Southern New Hampshire University

Question Help consists of homework and practice questions to give students unlimited opportunities to master concepts. **Learning aids** walk students through the problem—giving them assistance when they need it most.



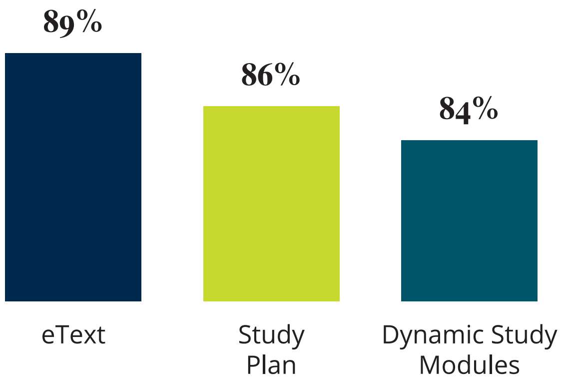
Pearson

Using proven, field-tested technology, auto-graded **Excel Projects** allow instructors to seamlessly integrate Microsoft Excel® content into their course without having to manually grade spreadsheets. Students have the opportunity to practice important **finance skills** in Excel, helping them to master key concepts and gain proficiency with the program.



"I like how the 'give me an example' option works with the homework—it is nice to run through an example with guidance to learn how to solve these problems."

— Student, Virginia Polytechnic Institute and State University



% of students who found learning aid helpful

Dynamic Study Modules use the latest developments in cognitive science and help students study chapter topics by adapting to their performance in real time.

Pearson eText enhances student learning with engaging and interactive lecture and example videos that bring learning to life.

The **Gradebook** offers an easy way for you and your students to see their performance in your course.

85%

of students would tell their instructor to keep using MyLab Finance

For additional details visit: www.pearson.com/mylab/finance

This page intentionally left blank

Foundations of Finance

The Logic and Practice of Financial Management

Tenth Edition

Global Edition

Arthur J. Keown

Virginia Polytechnic Institute and State University
R. B. Pamplin Professor of Finance

John D. Martin

Baylor University
Professor of Finance
Carr P. Collins Chair in Finance

J. William Petty

Baylor University
Retired Professor of Finance

Pearson

Harlow, England • London • New York • Boston • San Francisco • Toronto • Sydney • Dubai • Singapore • Hong Kong
Tokyo • Seoul • Taipei • New Delhi • Cape Town • Sao Paulo • Mexico City • Madrid • Amsterdam • Munich • Paris • Milan

Vice President, Business, Economics, and UK Courseware: Donna Battista
Director of Portfolio Management: Adrienne D'Ambrosio
Editorial Assistant: Catherine Cinque
Acquisitions Editor, Global Edition: Ananya Srivastava
Assistant Project Editor, Global Edition: Jyotis Elizabeth Jacob
Vice President, Product Marketing: Roxanne McCarley
Product Marketer: Kaylee Carlson
Product Marketing Assistant: Marianela Silvestri
Manager of Field Marketing, Business Publishing: Adam Goldstein
Executive Field Marketing Manager: Thomas Hayward
Vice President, Production and Digital Studio, Arts and Business: Etain O'Dea
Director of Production and Digital Studio, Arts and Business: Ashley Santora
Managing Producer, Business: Alison Kalil
Content Producer: Meredith Gertz
Content Producer, Global Edition: Pooja Aggarwal
Senior Manufacturing Controller, Global Edition: Caterina Pellegrino
Operations Specialist: Carol Melville
Design Lead: Kathryn Foot
Manager, Learning Tools: Brian Surette
Senior Learning Tools Strategist: Emily Biberger
Managing Producer, Digital Studio and GLP: James Bateman
Managing Producer, Digital Studio: Diane Lombardo
Digital Studio Producer: Melissa Honig
Digital Studio Producer: Alana Coles
Digital Content Team Lead: Noel Lotz
Digital Content Project Lead: Miguel Leonarte
Manager, Media Production, Global Edition: Vikram Kumar
Project Manager: Kim Fletcher, Integra Software Services Inc.
Interior Design: Integra Software Services Inc.
Cover Design: Lumina Datamatics
Cover Art: andrey_l/Shutterstock

Pearson Education Limited
KAO Two
KAO Park
Hockham Way
Harlow
Essex
CM17 9SR
United Kingdom

and Associated Companies throughout the world

Visit us on the World Wide Web at: www.pearsonglobaleditions.com

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library

ISBN 10: 1-292-31873-2
ISBN 13: 978-1-292-31873-8
eBook ISBN 13: 978-1-292-31880-6

Typeset in Palatino LT Pro by Integra Software Services, Inc.

To my parents, from whom I learned the most.
Arthur J. Keown

To the Martin women—wife Sally and daughter-in-law Mel, the Martin men—sons Dave and Jess, and the Martin boys—grandsons Luke and Burke.
John D. Martin

To Carter and Greg, who are great husbands to our lovely daughters, Krista and Kate, and the fathers of our five wonderful grandchildren—Ashley, Cameron, Erin, John, and Mackenzie. We feel their constant love and friendship.
J. William Petty

About the Authors

Arthur J. Keown is the Department Head and R. B. Pamplin Professor of Finance at Virginia Polytechnic Institute and State University. He received his bachelor's degree from Ohio Wesleyan University, his M.B.A. from the University of Michigan, and his doctorate from Indiana University. An award-winning teacher, he is a member of the Academy of Teaching Excellence; has received five Certificates of Teaching Excellence at Virginia Tech, the W. E. Wine Award for Teaching Excellence, and the Alumni Teaching Excellence Award; and in 1999 received the Outstanding Faculty Award from the State of Virginia. Professor Keown is widely published in academic journals. His work has appeared in the *Journal of Finance, Journal of Financial Economics, Journal of Financial and Quantitative Analysis, Journal of Financial Research, Journal of Banking and Finance, Financial Management*, *Journal of Portfolio Management*, and many others. In addition to *Foundations of Finance*, two others of his books are widely used in college finance classes all over the country—*Basic Financial Management* and *Personal Finance: Turning Money into Wealth*. Professor Keown is a Fellow of the Decision Sciences Institute, was a member of the Board of Directors of the Financial Management Association, and is the head of the finance department at Virginia Tech. In addition, he served as the co-editor of *the Journal of Financial Research* for 6 ½ years and as the co-editor of the Financial Management Association's *Survey and Synthesis* series for 6 years. He lives with his wife in Blacksburg, Virginia, where he collects original art from *Mad Magazine*.

John D. Martin retired from Baylor University where he was the Carr P. Collins Chair of Finance after having retired earlier from the University of Texas at Austin where he held the Margaret and Eugene McDermott Professorship in Finance. He now lives on a small ranch near Crawford, TX where he and his wife raise Braunvieh-Angus cross cattle, bale a little hay and enjoy life. In his prior life as professor of finance, John taught for almost a half century earning a number of teaching awards, published over 50 articles in the leading finance journals, and coauthored ten books including *Financial Management: Principles and Practice* (13^{th} edition, Pearson), *Foundations of Finance* (10^{th} edition Pearson), *Valuation: The Art and Science of Corporate Investment Decisions* (3^{rd} edition, Pearson) and *Value Based Management with Social Responsibility* (2^{nd} edition, Oxford University Press). When not involved in farming and ranching, John feeds his learning habit by remaining an active researcher and writer. His current research interests focus on America's energy dependence problem as it relates to the economics of unconventional energy sources, educating entrepreneurs concerning the true cost of venture funding, and investigating the economic factors underlying differences in the costs of capital among emerging economies. Finally, John's abiding passion is to create a series of digital books that will meet the evolving needs of the next generation of college students.

J. William Petty, PhD, Baylor University, was Professor of Finance and W. W. Caruth Chair of Entrepreneurship from 1990 until 2017. Dr. Petty taught entrepreneurial finance at both the undergraduate and graduate levels. He was designated a University Master Teacher. In 2008, the Acton Foundation for Entrepreneurship Excellence selected him as the National Entrepreneurship Teacher of the Year. His research interests included the financing of entrepreneurial firms and shareholder value-based management. He served as the co-editor for the *Journal of Financial Research* and the editor of the *Journal of Entrepreneurial Finance*. He has published articles in various academic and professional journals, including *Journal of Financial and Quantitative Analysis*, *Financial Management*, *Journal of Portfolio Management*, *Journal of Applied Corporate Finance*, and *Accounting Review*. Dr. Petty is co-author of a leading textbook in small business and entrepreneurship, *Small Business Management: Launching and Growing Entrepreneurial Ventures*. He also co-authored *Value-Based Management: Corporate America's Response to the Shareholder Revolution* (2010). He served on the Board of Directors of a publicly traded oil and gas firm. Finally, he serves on the Board of the Baylor Angel Network, a network of private investors who provide capital to start-ups and early-stage companies.

Contents

Preface

The study of finance focuses on making decisions that enhance the value of the firm. This is done by providing customers with the best products and services in a cost-effective way. In a sense we, the authors of *Foundations of Finance*, share the same purpose. We have tried to create a product that provides value to our customers—both students and instructors who use the text. It was this priority that led us to write *Foundations of Finance: The Logic and Practice of Financial Management*, which was the first "shortened book" of financial management when it was originally published. This text launched a trend that has since been followed by all the major competing texts in this market. The text broke new ground not only by reducing the breadth of materials covered but also by employing a more intuitive approach to presenting new material. From that first edition, the text has met with success beyond our expectations for nine editions. For that success, we are eternally grateful to the multitude of finance instructors who have chosen to use the text in their classrooms.

New to the Tenth Edition

Many of the changes in the 10th edition stem from comments and suggestions made by adopters, and we thank them for all they have done to improve this edition. Other changes were inspired by the passage of the Tax Cuts and Jobs Act of 2017 in the United States of America. This new law brought sweeping changes to corporate taxes. Some of the tax changes that that will impact corporate finance decisions include a dramatic reduction in the corporate tax rate, the ability to depreciate the full purchase price of capital investments in the year the investment is put into service, a limitation on the tax deductibility of interest payments, and a change in the taxation of foreign profits. Needless to say, the impact of these tax changes ripple throughout the book. For example, corporate decision making, with respect to new investments in new projects and how those projects are financed, are impacted by the new tax law.

In addition to the integration of the new tax law throughout the book, we have made some chapter-by-chapter updates in response to the continued development of financial thought and reviewer comments. By chapter, some of these changes include:

Chapter 1
An Introduction to the Foundations of Financial Management

- Revised and updated chapter introduction
- Revised and updated section on the Organizational Form and Taxes to include changes resulting from the new tax laws and changes to pass-through entities

Chapter 2
The Financial Markets and Interest Rates

- Revised and updated chapter introduction
- Revised coverage to include recent changes in the financial markets
- Updated coverage of the term structure of interest rates to address the very low rates that characterize today's markets

Chapter 3
Understanding Financial Statements and Cash Flows

- Streamlined bullet point presentations that can be reviewed by the reader to quickly grasp new concepts
- Updated to illustrate the principles of financial statements, using a company that will be of interest to students—Walmart
- Rather than merely present Walmart's financial statements in isolation, background material is provided about Walmart that will give context to the company's financials

Chapter 4
Evaluating a Firm's Financial Performance

- Streamlined chapter presentation makes it easier for the reader to review the process used in conducting the analysis
- Comparative financial performance analysis provided using retail giants Walmart and Target

Chapter 5
The Time Value of Money

- Revised to make the subject matter more accessible to all students regardless of their level of mathematical skill
- Expanded problem set

Chapter 6
The Meaning and Measurement of Risk and Return

- Updated to show an illustration of the large differences in returns over the time periods of 2007–2009, 2009–2018, and 2007–2018
- Provides an examination of average rates of return and the variability of the returns for different types of securities, such as government bonds, corporate bonds and stock for 90 years, from 1926 to 2016
- Updated to show examples of firms like Nike and eBay, which clearly illustrate the chapter concepts.
- Includes a new mini-case highlighting Walmart and Target

Chapter 7
The Valuation and Characteristics of Bonds

- Provides additional real-world examples
- A new *Finance at Work* feature describes a bond issued by Apple called a *green bond*

Chapter 8
The Valuation and Characteristics of Stock

- Revised to descibe the events leading to Netflix becoming one of the most highly valued stocks in the marketplace
- The *Finance at Work* box has been revised on reading stock quotes in the *Wall Street Journal*
- Includes updated chapter examples

Chapter 9
The Cost of Capital

- All illustrative examples have been updated to reflect changed financial conditions
- Includes an updated discussion of tax considerations to reflect the 2017 revision to the U. S. tax code, which imposes a maximum corporate tax rate of 21 percent

- New *Finance at Work* insert discusses the new tax law and limitations to the deductibility of interest expense to a maximum of 30 percent of firm earnings before interest and taxes plus depreciation and amortization (EBITDA)
- Figure revision illustrates the dramatic differences in capital structures used by firms in very different types of industries to reflect the current capital structures of retailer Bed, Bath and Beyond (BBBY) and oil and gas production company, Wildhorse Resources (WRD)

Chapter 10
Capital-Budgeting Techniques and Practice

- Includes an extensively revised chapter introduction, which looks at Disney's decision to build the Shanghai Disney Resort
- Offers a simplified, intuitive discussion of the IRR and MIRR
- Offers a simplified, intuitive discussion of the ranking of mutually exclusive projects
- Includes an expanded problem set.

Chapter 11
Cash Flows and Other Topics in Capital Budgeting

- Added an appendix to illustrate the calculation of operating cash flows to reflect the changes resulting from passage of the Tax Cuts and Jobs Act of 2017, in particular bonus depreciation
- Includes revised examples and problems
- Includes an expanded problem set.

Chapter 12
Determining the Financing Mix

- Offers a revised chapter introduction using a comparison of social media firm, Snap Inc. and computer chip maker, Broadcom (AVGO)
- Revised problem examples and end-of-chapter exercises reflect the tax code revision of 2017
- A new mini-case that analyzes the capital structure of Wildhorse Resources (WRD) focuses on whether a bank should agree to a loan extension for the firm considering its current capital structure and operating conditions

Chapter 13
Dividend Policy and Internal Financing

- Updated discussion of dividend policy reflects the revision to the U.S. tax code
- A streamlined discussion of tax implications for dividend policy focuses on the applicable tax rates for dividends and capital gains
- Revised end-of-chapter study problems reflect changes in the tax code

Chapter 14
Short-Term Financial Planning

- Revised end-of-chapter problems and in-chapter examples reflect changes to the U.S. tax code

Chapter 15
Working-Capital Management

- New *Finance at Work* insert evaluates the cost of Payday loans using the same method used to evaluate the cost of trade credit. Students will be surprised to see how expensive these loans are and the fact that they are indeed legal

Chapter 16
International Business Finance

- Extensive revisions reflect changes in exchange rates and global financial markets
- A new section titled "Repatriation of Profits and Taxation of Profits Abroad" deals with the changes resulting from the passage of the Tax Cuts and Jobs Act of 2017

Chapter 17
Cash, Receivables, and Inventory Management

- Discussion of cash management has been simplified and reduced in coverage so that students can more easily grasp the important concepts underlying its management

The *Foundations of Finance* Tenth Edition Program

The 10th Edition of *Foundations of Finance* continues its drive to provide the student with an intuitive understanding of financial management while providing them with the concepts and skills needed for the successful manager. An understanding that emphasizes the logic and fundamental principles that drive the field of finance allows students to effectively deal with financial problems in an ever-changing financial enviromement.

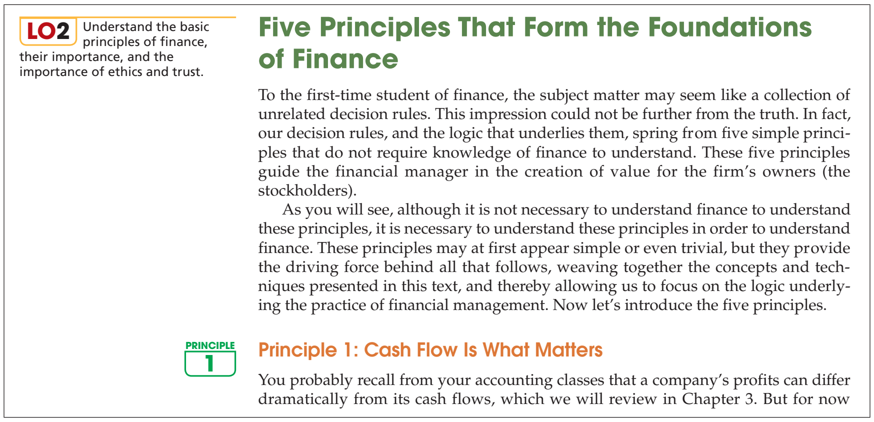
To improve student results, we recommend pairing the text content with MyLab Finance, which is the teaching and learning platform that empowers you to reach every student. By combining trusted author content with digital tools and a flexible platform, MyLab personalizes the learning experience and will help your students learn and retain key course concepts while developing skills that future employers are seeking in their candidates. Select end-of-chapter problems in the text are now offered in MyLab Finance as auto-graded Excel Projects. Using proven, field-tested technology, auto-graded Excel Projects allow instructors to seamlessly integrate Microsoft Excel content into their course without having to manually grade spreadsheets. Students have the opportunity to practice important finance skills in Excel, helping them to master key concepts and gain proficiency with the program.

Another form of learning technology offered with this course is the lecture video. We have recorded brief (10–15 minute) lecture videos to accompany all the numbered in-text examples so that the students can replay them as many times as they need to help them understand more fully each of the in-text examples. Students will benefit from being "tutored" when it comes to the primary examples in the text. The videos can be found in the Multimedia Library as well as the eText within MyLab Finance.

Solving Teaching and Learning Challenges

In our opinion, the success of this textbook derives from our focus on maintaining *pedagogy that works*. We endeavor to provide students with a conceptual understanding of the financial decision-making process that includes a survey of the tools and techniques of finance. For the student, it is all too easy to lose sight of the logic that drives finance and to focus instead on memorizing formulas and procedures. As a result, students have a difficult time understanding the interrelationships among the topics covered. Moreover, later in life, when the problems encountered do not match the textbook presentation, students may find themselves unprepared to abstract from what they have learned. We have worked to be "good at the basics." To achieve this goal, we have refined the book over the last ten editions to include the following features.

Building on Foundational Finance Principles



LO2 Understand the basic principles of finance, their importance, and the importance of ethics and trust.

Five Principles That Form the Foundations of Finance

To the first-time student of finance, the subject matter may seem like a collection of unrelated decision rules. This impression could not be further from the truth. In fact, our decision rules, and the logic that underlies them, spring from five simple principles that do not require knowledge of finance to understand. These five principles guide the financial manager in the creation of value for the firm's owners (the stockholders).

As you will see, although it is not necessary to understand finance to understand these principles, it is necessary to understand these principles in order to understand finance. These principles may at first appear simple or even trivial, but they provide the driving force behind all that follows, weaving together the concepts and techniques presented in this text, and thereby allowing us to focus on the logic underlying the practice of financial management. Now let's introduce the five principles.

PRINCIPLE 1

Principle 1: Cash Flow Is What Matters

You probably recall from your accounting classes that a company's profits can differ dramatically from its cash flows, which we will review in Chapter 3. But for now

Chapter 1 presents five foundational principles of finance which are the threads that bind all the topics of the book. Then throughout the text, we provide reminders of the foundational principles in "Remember Your Principles" boxes.

The five principles of finance allow us to provide an introduction to financial decision making rooted in current financial theory and in the current state of world economic conditions. What results is an introductory treatment of a discipline rather than the treatment of a series of isolated financial problems that managers encounter.

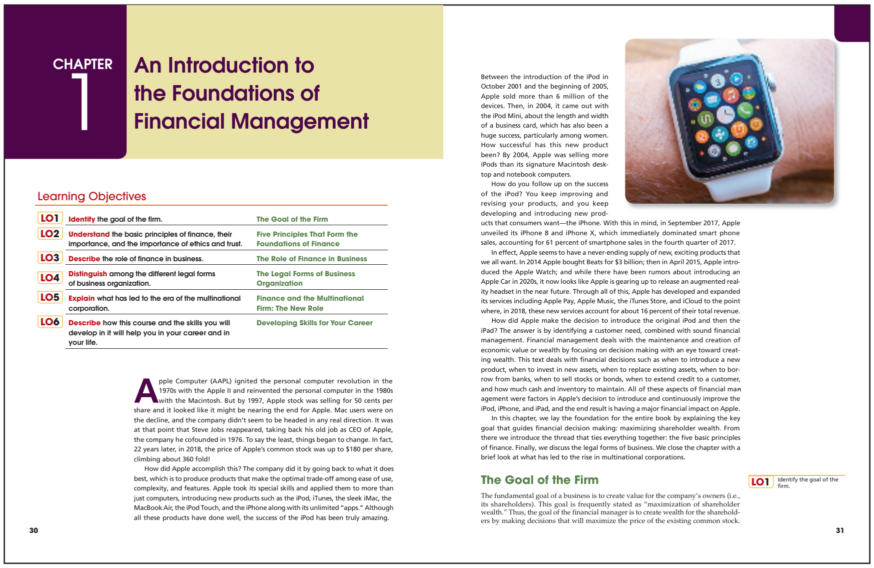
Use of an Integrated Learning System

The text is organized around the learning objectives that appear at the beginning of each chapter to provide the instructor and student with an easy-to-use integrated learning system. Numbered icons identifying each objective appear next to the related material throughout the text and in the summary, allowing easy location of material related to each objective.

A Focus on Valuation

Although many professors and instructors make valuation the central theme of their course, students often lose sight of this focus when reading their text. We reinforce this focus in the content and organization of our text in some very concrete ways:

- We build our discussion around the five finance principles that provide the foundation for the valuation of any investment.
- We introduce new topics in the context of "what is the value proposition?" and "how is the value of the enterprise affected?"



CHAPTER 1

An Introduction to the Foundations of Financial Management

Learning Objectives

LO1	**Identify** the goal of the firm.	The Goal of the Firm
LO2	**Understand** the basic principles of finance, their importance, and the importance of ethics and trust.	Five Principles That Form the Foundations of Finance
LO3	**Describe** the role of finance in business.	The Role of Finance in Business
LO4	**Distinguish** among the different legal forms of business organization.	The Legal Forms of Business Organization
LO5	**Explain** what has led to the era of the multinational corporation.	Finance and the Multinational Firm: The New Role
LO6	**Describe** how this course and the skills you will develop in it will help you in your career and in your life.	Developing Skills for Your Career

Apple Computer (AAPL) ignited the personal computer revolution in the 1970s with the Apple II and reinvented the personal computer in the 1980s with the Macintosh. But by 1997, Apple stock was selling for 50 cents per share and it looked like it might be nearing the end for Apple. Mac users were on the decline, and the company didn't seem to be headed in any real direction. It was at that point that Steve Jobs reappeared, taking back his old job as CEO of Apple, the company he cofounded in 1976. To say the least, things began to change. In fact, 22 years later, in 2018, the price of Apple's common stock was up to $180 per share, climbing about 360 fold!

How did Apple accomplish this? The company did it by going back to what it does best, which is to produce products that make the optimal trade-off among ease of use, complexity, and features. Apple took its special skills and applied them to more than just computers, introducing new products such as the iPod, iTunes, the sleek iMac, the MacBook Air, the iPod Touch, and the iPhone along with its unlimited "apps." Although all these products have done well, the success of the iPod has been truly amazing.

30

Between the introduction of the iPod in October 2001 and the beginning of 2005, Apple sold more than 6 million of the devices. Then, in 2004, it came out with the iPod Mini, about the length and width of a business card, which has also been a huge success, particularly among women. How successful has this new product been? By 2004, Apple was selling more iPods than its signature Macintosh desktop and notebook computers.

How do you follow up on the success of the iPod? You keep improving and revising your products, and you keep developing and introducing new products that consumers want—the iPhone. With this in mind, in September 2017, Apple unveiled its iPhone 8 and iPhone X, which immediately dominated smart phone sales, accounting for 61 percent of smartphone sales in the fourth quarter of 2017.

In effect, Apple seems to have a never-ending supply of new, exciting products that we all want. In 2014 Apple bought Beats for $3 billion; then in April 2015, Apple introduced the Apple Watch; and while there have been rumors about introducing an Apple Car in 2020s, it now looks like Apple is gearing up to release an augmented reality headset in the near future. Through all of this, Apple has developed and expanded its services including Apple Pay, Apple Music, the iTunes Store, and iCloud to the point where, in 2018, these new services account for about 16 percent of their total revenue.

How did Apple make the decision to introduce the original iPod and then the iPad? The answer is by identifying a customer need, combined with sound financial management. Financial management deals with the maintenance and creation of economic value or wealth by focusing on decision making with an eye toward creating wealth. This text deals with financial decisions such as when to introduce a new product, when to invest in new assets, when to replace existing assets, when to borrow from banks, when to sell stocks or bonds, when to extend credit to a customer, and how much cash and inventory to maintain. All of these aspects of financial management were factors in Apple's decision to introduce and continuously improve the iPod, iPhone, and iPad, and the end result is having a major financial impact on Apple.

In this chapter, we lay the foundation for the entire book by explaining the key goal that guides financial decision making: maximizing shareholder wealth. From there we introduce the thread that ties everything together: the five basic principles of finance. Finally, we discuss the legal forms of business. We close the chapter with a brief look at what has led to the rise in multinational corporations.

The Goal of the Firm

LO1 Identify the goal of the firm.

The fundamental goal of a business is to create value for the company's owners (i.e., its shareholders). This goal is frequently stated as "maximization of shareholder wealth." Thus, the goal of the financial manager is to create wealth for the shareholders by making decisions that will maximize the price of the existing common stock.

31

Real-World Opening Vignettes

Each chapter begins with a story about a current, real-world company faced with a financial decision related to the chapter material that follows. These vignettes have been carefully prepared to stimulate student interest in the topic to come and can be used as a lecture tool to provoke class discussion.

A Step-by-Step Approach to Problem Solving and Analysis

As anyone who has taught the core undergraduate finance course knows, students demonstrate a wide range of math comprehension and skill. Students who do not have the math skills needed to master the subject sometimes end up memorizing formulas rather than focusing on the analysis of business decisions using math as a tool. We address this problem in terms of both text content and pedagogy.

- First, we present math only as a tool to help us analyze problems, and only when necessary. We do not present math for its own sake.
- Second, finance is an analytical subject and requires that students be able to solve problems. To help with this process, numbered chapter examples appear throughout the book. All of these examples follow a very detailed and structured three-step approach to problem solving that helps students develop their problem-solving skills:

  Step 1: Formulate a Solution Strategy. For example, what is the appropriate formula to apply? How can a calculator or spreadsheet be used to "crunch the numbers"?
  Step 2: Crunch the Numbers. Here we provide a completely worked out step-by-step solution. We present first a description of the solution in prose and then a corresponding mathematical implementation.
  Step 3: Analyze Your Results. We end each solution with an analysis of what the solution means. This stresses the point that problem solving is about analysis and decision making. Moreover, in this step we emphasize that decisions are often based on incomplete information, which requires the exercise of managerial judgment, a fact of life that is often learned on the job.

STEP 1: Formulate a Decision Strategy

A company's financing decisions can be evaluated by considering two questions: (1) How much debt is used to finance the firm's assets? (2) Does a company have the ability to service its debt interest payments? These two issues can be assessed by using the debt ratio and the times interest earned ratio, respectively, calculated as follows:

$$\text{Debt ratio} = \frac{\text{total debt}}{\text{total assets}}$$

$$\text{Times interest earned} = \frac{\text{operating profits}}{\text{interest expense}}$$

STEP 2: Crunch the Numbers

A comparison of Disney's debt ratio and times interest earned with the industry is as follows:

	Disney	Industry
Debt ratio	56%	34.21%
Times interest earned	36.81X	8.50X

STEP 3: Analyze Your Results

Disney uses significantly more debt financing than the average firm in the industry. The higher debt ratio implies that the firm has greater financial risk. Even so, Disney appears to have no difficulty servicing its debt, covering its interest 36.81 times compared only to 8.5 times for the average firm in the industry. Disney's higher *times interest earned* is attributable to a significantly higher operating return on its assets (14.79% for Disney and 9.24% for the industry), which more than offsets the firm's use of more debt.

"Can You Do It?" and "Did You Get It?"

The text provides examples for the students to work at the conclusion of each major section of a chapter, which we call "Can You Do It?," followed by "Did You Get It?" later in the chapter. This tool provides an essential ingredient in the building-block approach to the material that we use.

CAN YOU DO IT?

Solving for the Real Rate of Interest

Your banker just called and offered you the chance to invest your savings for 1 year at a quoted rate of 10 percent. You also saw on the news that the inflation rate is 6 percent. What is the real rate of interest you would be earning if you made the investment? (The solution can be found on page 42.)

DID YOU GET IT?

Solving for the Real Rate of Interest

$$\text{Nominal or quoted rate of interest} = \text{real rate of interest} + \text{anticipated rate of inflation} + \text{product of the real rate of interest and the inflation rate}$$

$$0.10 = \text{real rate of interest} + 0.06 + 0.06 \times \text{real rate of interest}$$

$$0.04 = 1.06 \times \text{real rate of interest}$$

Solving for the real rate of interest:

$$\text{Real rate of interest} = 0.0377 = 3.77\%$$

Concept Check

At the end of major chapter sections we include a brief list of questions that are designed to highlight key ideas presented in the section.

Concept Check

1. According to Principle 3, how do investors decide where to invest their money?
2. What is an efficient market?
3. What is the agency problem, and why does it occur?
4. Why are ethics and trust important in business?

Financial Decision Tools

A feature that has proven popular with students has been our recapping of key equations shortly after their discussion. Students get to see an equation within the context of related equations.

FINANCIAL DECISION TOOLS

Name of Tool	Formula	What It Tells You
Bond value when interest is paid semiannually	$V_b = \frac{\$I_1/2}{\left(1+\frac{r_b}{2}\right)^1} + \frac{\$I_2/2}{\left(1+\frac{r_b}{2}\right)^2} + \frac{\$I_3/2}{\left(1+\frac{r_b}{2}\right)^3} + \cdots + \frac{\$I_{2n}/2}{\left(1+\frac{r_b}{2}\right)^{2n}} + \frac{\$M}{\left(1+\frac{r_b}{2}\right)^{2n}}$	Calculates the value of a bond as the present value of both future interest payments received semiannually and the par value of the bond to be received at maturity.

Financial Calculators and Excel Spreadsheets

The use of financial calculators and Excel spreadsheets has been integrated throughout the text, especially with respect to presentation of the time value of money and valuation. Where appropriate, actual calculator and spreadsheet solutions appear in the text.

CALCULATOR SOLUTION

Data Input	Function Key
360	N
6.5/12	I/Y
−1,250	PMT
0	FV
Function Key	**Answer**
CPT	
PV	197,763.52

	A	B
1	interest rate (rate) =	0.5417%
2	number of periods (nper) =	360
3	payment (pmt) =	1,250
4	future value (fv) =	0
5		
6	present value (pv) =	($197,763.52)
7		
8		

Entered values in cell b6:
=PV((6.5/12)%,b2,b3,b4)

Chapter Summaries That Bring Together Concepts, Terminology, and Applications

The chapter summaries have been written in a way that connects them to the in-chapter sections and learning objectives. For each learning objective, the student sees in one place the concepts, new terminology, and key equations that were presented in the objective.

Chapter Summaries

LO1 Explain the purpose and importance of financial analysis.
(pgs. 128–131)

SUMMARY: A variety of groups find financial ratios useful. For instance, both managers and shareholders use them to measure and track a company's performance over time. Financial analysts outside of the firm who have an interest in its economic well-being also use financial ratios. An example of this group would be a loan officer of a commercial bank who wishes to determine the creditworthiness of a loan applicant and its ability to pay the interest and principal associated with the loan request.

KEY TERMS

Financial ratios, page 129 accounting data restated in relative terms to help people identify some of the financial strengths and weaknesses of a company.

Revised Study Problems

With each edition, we have provided new and revised end-of-chapter study problems to refresh their usefulness in teaching finance. Also, the study problems continue to be organized according to learning objective so that both the instructor and student can readily align text and problem materials. New to this edition, the Study Problems with Excel icons indicate that Auto Graded Excel Project spreadsheets are available in MyLab Finance.

MyLab **10-12.** (*NPV with different required rates of return*) Mooby's is considering building a new theme park. After future cash flows were estimated, but before the project could be evaluated, the economy picked up and with that surge in the economy interest rates rose. That rise in interest rates was reflected in the required rate of return Mooby's used to evaluate new projects. As a result, the required rate of return for the new theme park jumped from 9.5 percent to 11.00 percent. If the initial outlay for the park is expected to be $250 million and the project is expected to return free cash flows of $50 million in years 1 through 5 and $75 million in years 6 and 7, what is the project's *NPV* using the new required rate of return? How much did the project's *NPV* change as a result of the rise in interest rates?

MyLab **10-13.** (*IRR with uneven cash flows*) Perodua Automobiles is considering expanding its capacity to produce Aruz, its most popular model. Adding to capacity will increase daily output by 15 percent. The required rate of return on this expansion is 13 percent. What is the *IRR* on this project if it is expected to produce the following free cash flows?

Comprehensive Mini Cases

A comprehensive Mini Case appears at the end of almost every chapter, covering all the major topics included in that chapter. Each Mini Case can be used as a lecture or review tool by the professor. For the students, the Mini Case provides an opportunity to apply all the concepts presented within the chapter in a realistic setting, thereby strengthening their understanding of the material.

Mini Case

This Mini Case is available in MyLab Finance.

Assume you are an assistant financial analyst at an international corporation, Occulocorp, and you are being interviewed by a radio broadcast journalist. You are asked to introduce and explain basic financial concepts to a local audience, for which you are given a set of questions.

Please respond to the following questions:

a. What is one of the primary goals of a firm with domestic and/or international operations?
b. As a company grows, the separation of ownership and management becomes a critical issue. What might be the reasons for this? Which theory is essential in this framework?
c. Why does finance play such an important role in business?
d. Are market prices generally right?
e. Why do ethics and ethical behavior play such an important role in financial decisions?
f. Why is the time value of money important?
g. What is the reason for the growth of multinational corporations over the last few decades?

Additional MyLab Finance Features

A Powerful Homework and Test Manager. A powerful homework and test manager lets you create, import, and manage online homework assignments, quizzes, and tests that are automatically graded. You can choose from a wide range of assignment options, including time limits, proctoring, and maximum number of attempts allowed. The bottom line: MyLab Finance means less time grading and more time teaching. Please visit www.pearson.com/mylab/finance to access the full set of features available in MyLab Finance.

Study Plan. The Study Plan gives personalized recommendations for each student, based on his or her ability to master the learning objectives in your course. This allows students to focus their study time by pinpointing the precise areas they need to review, and allowing them to use customized practice and learning aids — such as videos, eTexts, tutorials, and more — to help students stay on track.

Pearson eText. Pearson eText enhances learning — both in and out of the classroom. Students can take notes, highlight, and bookmark important content, or engage with interactive lecture and example videos that bring learning to life anytime, anywhere via MyLab or the app. Pearson eText enhances learning — both in and out of the classroom. Worked examples, videos, and interactive tutorials engage students while algorithmic practice and self-assessment opportunities test students' understanding of the material via MyLab or the app.

Learning Management System (LMS) Integration. You can now link from Blackboard Learn, Brightspace by D2L, Canvas, or Moodle to MyLab Finance. Access assignments, rosters, and resources, and synchronize grades with your LMS gradebook. For students, single sign-on provides access to all the personalized learning resources that make studying more efficient and effective.

Excel Projects. Using proven, field-tested technology, auto-graded Excel Projects let you seamlessly integrate Microsoft Excel content into your course without having to manually grade spreadsheets. Students can practice important statistical skills in Excel, helping them master key concepts and gain proficiency with the program. They simply download a spreadsheet, work live on a statistics problem in Excel, and then upload that file back into MyLab Finance. Within minutes, they receive a report that provides personalized, detailed feedback to pinpoint where they went wrong in the problem.

Financial Calculator. Students can access a fully functional Financial Calculator inside MyLab Finance and a financial calculator app that they can download to their iPhone®, iPad®, or Android device — so they can perform financial calculations and complete assignments, all in the same place.

Question Help. Question Help consists of homework and practice questions to give students unlimited opportunities to master concepts. If students get stuck, learning aids like Help Me Solve This, View an Example, eText Pages, and a Financial Calculator walk them through the problem and show them helpful info in the text — giving them assistance when they need it most.

Worked Out Solutions. Worked Out Solutions are available to students when they are reviewing their submitted and graded homework. They provide step-by-step explanations on how to solve the problem using the exact numbers and data presented in the original problem. Instructors have access to Worked Out Solutions in preview and review mode.

Please visit www.pearson.com/mylab/finance to access the full set of features available in MyLab Finance.

Developing Employability Skills

For students to succeed in a rapidly changing job market, they should be aware of their career options and how to go about developing the necessary skills. With MyLab Finance and *Foundations of Finance*, we focus on developing these skills in the following ways:

Excel Skills Today, Excel is the primary spreadsheet analysis and modeling tool used in business, and a basic competence in Excel will go a long way towards a successful business career. The power to import data from various files and documents makes Excel the perfect tool for business analysis. In MyLab Finance, there are numerous problems available as auto-graded Excel Projects, which are identified in the text with an Excel icon. Using proven, field-tested technology, these projects seamlessly integrate Microsoft Excel content into the course while avoiding the need to manually grade spreadsheets. This feature allows students the opportunity to practice important finance skills in Excel, helping them to master key concepts and gain proficiency with the program.

Critical Thinking Skills This text begins with the presentation of five foundational principles of finance, which are the threads that bind all the topics of the book. Then, throughout the book, these five foundational principles are revisited in "Remember Your Principles" boxes. These five principles of finance allow us to tie the material together and, as a result, demonstrate the common root of financial theory and financial practice. The end result is an introductory treatment of a discipline rather than the treatment of a series of isolated financial problems that managers encounter. This approach allows students to learn more than simply how to calculate the correct answers to problems. It allows them to understand why problems are approached in different ways and to critically interpret problems, design solutions, and analyze and evaluate their solutions. In effect, students learn the tools of analysis, but more importantly, develop an intuitive understanding of why and what they are doing in their analysis. To conduct this analysis, forecast the future, and discount those cash flows, they must make many assumptions about specific variables. By tying together the logic and fundamental principles that drive the field of finance, students are encouraged to develop their critical thinking skills and effectively deal with financial problems in an ever-changing financial environment.

Data Analysis Skills Finance deals with decision making within the firm—when to introduce a new product, make an investment, or how to value a financial asset like a bond or a share of common stock. Gaining an understanding of the decision-making process and the analytical tool set necessary to make those decisions reflects the core of finance and this text.

Table of Contents Overview

Part 5	Working-Capital Management and International Business Finance	
	14 Short-Term Financial Planning	In order to assure that the firm has the funds it needs to support its day-to-day operations, it is crucial that it forecast those financing needs as part of its planning process. In this chapter we discuss the percent of sales method for preparing a financial forecast as well as the cash budget.
	15 Working-Capital Management	Overviews working capital management as it relates to the analysis of the firm's investment in short-term or current assets and its use of short-term or current liabilities. Discusses how the balancing of these two accounts will determine the ability of the firm to pay its bills on time or firm liquidity.
	16 International Business Finance	Examines foreign exchange markets and currency exchange rates; the concepts of interest rate parity, purchasing power parity, and the law of one price; and capital budgeting for direct foreign investment.
	17 Cash, Receivables, and Inventory Management	Discusses the theory behind managing a firm's liquidity by managing its working capital and the fact that this is primarily accomplished by the management of cash, accounts receivables, and inventories.

Instructor Teaching Resources

The Instructor's Resource Center, accessible at **www.pearsonglobaleditions.com**, hosts all of the instructor resources that follow. Instructors can register online for access or may contact their sales representative for further information.

Supplements available to instructor at www.pearsonglobaleditions.com	Features of the Supplement
Instructor's Resource Manual Authored by Sonya Britt-Lutter from Kansas State University	• Chapter orientations • Chapter outlines • Solutions to end-of-chapter Review Questions, Study Problems, and Mini Cases, as well as any associated Excel files
Test Bank Authored by Rodrigo J. Hernandez from Radford University	More than 1600 multiple-choice, true/false, short-answer, and graphing Questions with these annotations: • Type (multiple-choice, true/false, short-answer, essay • Topic (the term or concept the question supports) • Learning outcome • AACSB learning standard (written and oral communication; ethical understanding and reasoning; analytical thinking; information technology; interpersonal relations and teamwork; diverse and multicultural work; reflective thinking; application of knowledge)
Computerized TestGen	TestGen allows instructors to: • Customize, save, and generate classroom tests • Edit, add, or delete questions from the test item files • Analyze test results • Organize a database of tests and student results.
PowerPoints Authored by Sonya Britt-Lutter from Kansas State University	PowerPoints include lecture notes, key equations, and figures and tables from the text. In addition, these the slides meet accessibility standards for students with disabilities. Features include, but are not limited to: • Keyboard and screen reader access • Alternative text for images • High color contrast between background and foreground colors

Acknowledgments

We gratefully acknowledge the assistance, support, and encouragement of those individuals who have contributed to *Foundations of Finance*. Specifically, we wish to recognize the very helpful insights provided by many of our colleagues. For this edition, we are especially grateful to the following reviewers for their thoughtful comments:

Nazli Alan, Fairfield University
Paul Bursik, St. Norbert College
Jonathan Daigle, Monmouth University
Puneet Jaiprakash, Minnesota State University Mankato
Hui Liang James, University of Texas at Tyler
Sophie Kong, Western Washington University
Stephen Levkoff, Hampden Sydney College
Andrew Wagner, Cal State University Stanislaus
Ann Marie Whyte, University of Central Florida

We are also indebted to many other professionals for their careful reviews and helpful comments in past editions:

Haseeb Ahmed, Johnson C. Smith University
Joan Anderssen, Arapahoe Community College
Chris Armstrong, Draughons Junior College
Curtis Bacon, Southern Oregon University
Deb Bauer, University of Oregon
Pat Bernson, County College of Morris
Ed Boyer, Temple University
Joe Brocato, Tarleton State University
Joseph Brum, Fayetteville Technical Community College
Lawrence Byerly, Thomas More College
Juan R. Castro, LeTourneau University
Janice Caudill, Auburn University
Ting-Heng Chu, East Tennessee State University
David Daglio, Newbury College
Julie Dahlquist, University of Texas at San Antonio
David Darst, Central Ohio Technical College
Maria de Boyrie, New Mexico State University
Kate Demarest, Carroll Community College
Khaled Elkhal, University of Southern Indiana
Cheri Etling, University of Tampa
Robert W. Everett, Lock Haven University
Cheryl Fetterman, Cape Fear Community College
David R. Fewings, Western Washington University
Dr. Charles Gahala, Benedictine University
Harry Gallatin, Indiana State University
Deborah Giarusso, University of Northern Iowa
Gregory Goussak, University of Nevada, Las Vegas
Lori Grady, Bucks County Community College
Ed Graham, University of North Carolina, Wilmington
Barry Greenberg, Webster University
Gary Greer, University of Houston Downtown
Indra Guertler, Simmons College
Bruce Hadburg, University of Tampa
Thomas Hiebert, University of North Carolina, Charlotte
Marlin Jensen, Auburn University
John Kachurick, Misericordia University
Okan Kavuncu, University of California at Santa Cruz

Gary Kayakachoian, The University of Rhode Island
David F. Kern, Arkansas State University
Brian Kluger, University of Cincinnati
Lynn Phillips Kugele, University of Mississippi
Mary LaPann, Adirondack Community College
Carlos Liard-Muriente, Central Connecticut State University
Christopher Liberty, College of Saint Rose, Empire State College
Lynda Livingston, University of Puget Sound
Y. Lal Mahajan, Monmouth University
Edmund Mantell, Pace University
Peter Marks, Rhode Island College
Mario Mastrandrea, Cleveland State University
Anna McAleer, Arcadia University
Robert Meyer, Parkland College
Ronald Moy, St. John's University
Elisa Muresan, Long Island University
Michael Nugent, Stony Brook University
Tony Plath, University of North Carolina at Charlotte
Anthony Pondillo, Siena College
Walter Purvis, Coastal Carolina Community College
Emil Radosevich, Central New Mexico Community College
Deana Ray, Forsyth Technical Community College
Clarence Rose, Radford University
Ahmad Salam, Widener University
Mary Schranz, University of Wisconsin, Madison (retired)
Jeffrey Schultz, Christian Brothers University
Thomas W. Secrest, Coastal Carolina University
Ken Shakoori, California State University, Bakersfield
Michael Slates, Bowling Green State University
Suresh Srivastava, University of Alaska, Anchorage
Maurry Tamarkin, Clark University
Fang Wang, West Virginia University
Paul Warrick, Westwood College
Jill Wetmore, Saginaw Valley State University
Kevin Yost, Auburn University
Jingxue Yuan, Texas Tech University
Mengxin Zhao, Bentley College

We also thank our friends at Pearson. They are a great group of folks. We offer our personal expression of appreciation to Vice President, Business, Economics, and UK Courseware Donna Battista, who provided the leadership and direction to this project. She is the best, and she settles for nothing less than perfection—thanks, Donna. We would also like to thank Kate Fernandes, our previous finance editor. Kate's energy, drive, and amazing insights taught us a lot about what makes a great book. Additionally, Meredith Gertz, our content producer, helped us develop new technology—videos and animations—for this edition. She also guided us through the writing and production processes, helping to keep us on schedule while maintaining extremely high quality. Our thanks also go to Kim Fletcher of Integra Software Services Inc., who served as the project manager and did a superb job keeping us on task. Kerri Tomasso also assisted in the overall project management on this edition. Miguel Leonarte, who helped develop MyLab Finance, also deserves a word of thanks for making MyLab Finance flow so seamlessly with the book. He has continued to refine and improve MyLab Finance, and as a result of his efforts, it has become a learning tool without equal. We also thank Melissa Honig, our digital studio producer, who did a great job of making sure we are on the cutting edge in terms of Web applications and offerings.

As a final word, we express our sincere thanks to those who are using *Foundations of Finance* in the classroom. We thank you for making us a part of your teaching–learning team. Please feel free to contact any member of the author team should you have questions or needs.

—A.J.K./J.D.M./J.W.P.

Global Edition Acknowledgments

Pearson would like to thank the following people for contributing to and reviewing the Global Edition and sharing their insightful comments and suggestions:

CONTRIBUTOR

Gary Rangel, Chartered Financial Analyst

REVIEWERS

Dayang Hasliza, Universiti Malaysia Perlis
Chioma Nwafor, Glasgow Caledonian University
Hameedah Sayani, Mohammed Bin Rashid School of Government

CHAPTER 1

An Introduction to the Foundations of Financial Management

Learning Objectives

LO1	**Identify** the goal of the firm.	The Goal of the Firm
LO2	**Understand** the basic principles of finance, their importance, and the importance of ethics and trust.	Five Principles That Form the Foundations of Finance
LO3	**Describe** the role of finance in business.	The Role of Finance in Business
LO4	**Distinguish** among the different legal forms of business organization.	The Legal Forms of Business Organization
LO5	**Explain** what has led to the era of the multinational corporation.	Finance and the Multinational Firm: The New Role
LO6	**Describe** how this course and the skills you will develop in it will help you in your career and in your life.	Developing Skills for Your Career

Apple Computer (AAPL) ignited the personal computer revolution in the 1970s with the Apple II and reinvented the personal computer in the 1980s with the Macintosh. But by 1997, Apple stock was selling for 50 cents per share and it looked like it might be nearing the end for Apple. Mac users were on the decline, and the company didn't seem to be headed in any real direction. It was at that point that Steve Jobs reappeared, taking back his old job as CEO of Apple, the company he cofounded in 1976. To say the least, things began to change. In fact, 22 years later, in 2018, the price of Apple's common stock was up to $180 per share, climbing about 360 fold!

How did Apple accomplish this? The company did it by going back to what it does best, which is to produce products that make the optimal trade-off among ease of use, complexity, and features. Apple took its special skills and applied them to more than just computers, introducing new products such as the iPod, iTunes, the sleek iMac, the MacBook Air, the iPod Touch, and the iPhone along with its unlimited "apps." Although all these products have done well, the success of the iPod has been truly amazing.

Between the introduction of the iPod in October 2001 and the beginning of 2005, Apple sold more than 6 million of the devices. Then, in 2004, it came out with the iPod Mini, about the length and width of a business card, which has also been a huge success, particularly among women. How successful has this new product been? By 2004, Apple was selling more iPods than its signature Macintosh desktop and notebook computers.

How do you follow up on the success of the iPod? You keep improving and revising your products, and you keep developing and introducing new products that consumers want—the iPhone. With this in mind, in September 2017, Apple unveiled its iPhone 8 and iPhone X, which immediately dominated smart phone sales, accounting for 61 percent of smartphone sales in the fourth quarter of 2017.

In effect, Apple seems to have a never-ending supply of new, exciting products that we all want. In 2014 Apple bought Beats for $3 billion; then in April 2015, Apple introduced the Apple Watch; and while there have been rumors about introducing an Apple Car in 2020s, it now looks like Apple is gearing up to release an augmented reality headset in the near future. Through all of this, Apple has developed and expanded its services including Apple Pay, Apple Music, the iTunes Store, and iCloud to the point where, in 2018, these new services account for about 16 percent of their total revenue.

How did Apple make the decision to introduce the original iPod and then the iPad? The answer is by identifying a customer need, combined with sound financial management. Financial management deals with the maintenance and creation of economic value or wealth by focusing on decision making with an eye toward creating wealth. This text deals with financial decisions such as when to introduce a new product, when to invest in new assets, when to replace existing assets, when to borrow from banks, when to sell stocks or bonds, when to extend credit to a customer, and how much cash and inventory to maintain. All of these aspects of financial management were factors in Apple's decision to introduce and continuously improve the iPod, iPhone, and iPad, and the end result is having a major financial impact on Apple.

In this chapter, we lay the foundation for the entire book by explaining the key goal that guides financial decision making: maximizing shareholder wealth. From there we introduce the thread that ties everything together: the five basic principles of finance. Finally, we discuss the legal forms of business. We close the chapter with a brief look at what has led to the rise in multinational corporations.

The Goal of the Firm

LO1 Identify the goal of the firm.

The fundamental goal of a business is to create value for the company's owners (i.e., its shareholders). This goal is frequently stated as "maximization of shareholder wealth." Thus, the goal of the financial manager is to create wealth for the shareholders by making decisions that will maximize the price of the existing common stock.

Not only does this goal directly benefit the shareholders of the company, but it also provides benefits to society as scarce resources are directed to their most productive use by businesses competing to create wealth.

We have chosen maximization of shareholder wealth—that is, maximizing the market value of the existing shareholders' common stock—because all financial decisions ultimately affect the firm's stock price. Investors react to poor investment or dividend decisions by causing the total value of the firm's stock to fall, and they react to good decisions by pushing up the price of the stock. In effect, under this goal, good decisions are those that create wealth for the shareholder.

Obviously, some serious practical problems arise when we use changes in the value of the firm's stock to evaluate financial decisions. Many things affect stock prices. Attempting to identify a reaction to a particular financial decision would simply be impossible, and fortunately, unnecessary. To employ this goal, we need not consider every stock price change to be a market interpretation of the worth of our decisions. Other factors, such as changes in the economy, also affect stock prices. What we do focus on is the effect that our decision *should have* on the stock price if everything else were held constant. The market price of the firm's stock reflects the value of the firm as seen by its owners and takes into account the complexities and complications of the real-world risk. As we follow this goal throughout our discussions, we must keep in mind one more question: Who exactly are the shareholders? The answer: Shareholders are the legal owners of the firm.

Concept Check

1. What is the goal of the firm?
2. How would you apply this goal in practice?

LO2 Understand the basic principles of finance, their importance, and the importance of ethics and trust.

Five Principles That Form the Foundations of Finance

To the first-time student of finance, the subject matter may seem like a collection of unrelated decision rules. This impression could not be further from the truth. In fact, our decision rules, and the logic that underlies them, spring from five simple principles that do not require knowledge of finance to understand. These five principles guide the financial manager in the creation of value for the firm's owners (the stockholders).

As you will see, although it is not necessary to understand finance to understand these principles, it is necessary to understand these principles in order to understand finance. These principles may at first appear simple or even trivial, but they provide the driving force behind all that follows, weaving together the concepts and techniques presented in this text, and thereby allowing us to focus on the logic underlying the practice of financial management. Now let's introduce the five principles.

PRINCIPLE 1

Principle 1: Cash Flow Is What Matters

You probably recall from your accounting classes that a company's profits can differ dramatically from its cash flows, which we will review in Chapter 3. But for now understand that cash flows, not profits, represent money that can be spent. Consequently, it is cash flow, not profits, that determines the value of a business. For this reason when we analyze the consequences of a managerial decision, we focus on the resulting cash flows, not profits.

In the movie industry, there is a big difference between accounting profits and cash flow. Many a movie is crowned a success and brings in plenty of cash flow for the studio but doesn't produce a profit. Even some of the most successful box office hits—*Forrest Gump, Coming to America, Batman,* and *My Big Fat Greek Wedding*—realized no accounting profits at all after accounting for various movie studio costs. That's because "Hollywood Accounting" allows for overhead costs not associated with the movie to be added on to the true cost of the movie. In fact, the movie *Harry Potter and the Order of the Phoenix*, which grossed almost $1 billion worldwide, actually lost $167 million according to the accountants. Was *Harry Potter and the Order of the Phoenix* a successful movie? It certainly was—in fact, it was the 42nd highest grossing film of all time. Without question, it produced cash, but it didn't make any profits.

We need to make another important point about cash flows. Recall from your economics classes that we should always look at marginal, or **incremental**, **cash flows** when making a financial decision. The incremental cash flow to the company as a whole is *the difference between the cash flows the company will produce with* ***versus*** *without the investment it's thinking about making*. To understand this concept, let's think about the incremental cash flows of the movie *Frozen*. Not only did Disney make money on this movie, but it also made an awful lot of money on merchandise from the movie. While Anna and Elsa pulled in an incredible $1.3 billion at the box office, sales of *Frozen* toys, clothing, and games along with the soundtrack brought in about that same amount. And now, with *Frozen* on Broadway and a sequel coming in late 2019, Disney is singing "Let It Go" all the way to the bank.

incremental cash flow the difference between the cash flows a company will produce both with and without the investment it is thinking about making.

Principle 2: Money Has a Time Value

PRINCIPLE 2

Perhaps the most fundamental principle of finance is that money has a "time" value. Very simply, a dollar received today is more valuable than a dollar received one year from now because we can invest the dollar we have today to earn interest so that at the end of one year we will have more than one dollar.

For example, suppose you have a choice of receiving $1,000 either today or one year from now. If you decide to receive it a year from now, you will have passed up the opportunity to earn a year's interest on the money. Economists would say you suffered an "opportunity loss" or an "opportunity cost." The cost is the interest you could have earned on the $1,000 if you had invested it for one year. The concept of opportunity costs is fundamental to the study of finance and economics. Very simply, the **opportunity cost** of any choice you make is *the highest-valued alternative that you had to give up when you made the choice*. So if you loan money to your brother at no interest, money that otherwise would have been loaned to a friend (who is equally likely to repay you) for 8 percent interest, then the opportunity cost of making the loan to your brother is 8 percent.

opportunity cost the cost of making a choice in terms of the next best alternative that must be foregone.

In the study of finance, we focus on the creation and measurement of value. To measure value, we use the concept of the time value of money to bring the future benefits and costs of a project, measured by its cash flows, back to the present. Then, if the benefits or cash inflows outweigh the costs, the project creates wealth and should be accepted; if the costs or cash outflows outweigh the benefits or cash inflows, the project destroys wealth and should be rejected. Without recognizing the existence of the time value of money, it is impossible to evaluate projects with future benefits and costs in a meaningful way.

Principle 3: Risk Requires a Reward

PRINCIPLE 3

Even the novice investor knows there are an unlimited number of investment alternatives to consider. But without exception, investors will not invest if they do not expect to receive a return on their investment. They will want a return that satisfies two requirements:

- *A return for delaying consumption.* Why would anyone make an investment that would not at least pay them something for delaying consumption? They won't—even if there is no risk. In fact, investors will want to receive at least the same return that is available for risk-free investments, such as the rate of return being earned on U.S. government securities.

- *An additional return for taking on risk.* Investors generally don't like risk. Thus, risky investments are less attractive—*unless* they offer the prospect of higher returns. That said, the more unsure people are about how an investment will perform, the higher the return they will demand for making that investment. So, if you are trying to persuade investors to put money into a risky venture you are pursuing, you will have to offer them a higher expected rate of return.

FIGURE 1-1 The Risk–Return Trade-off

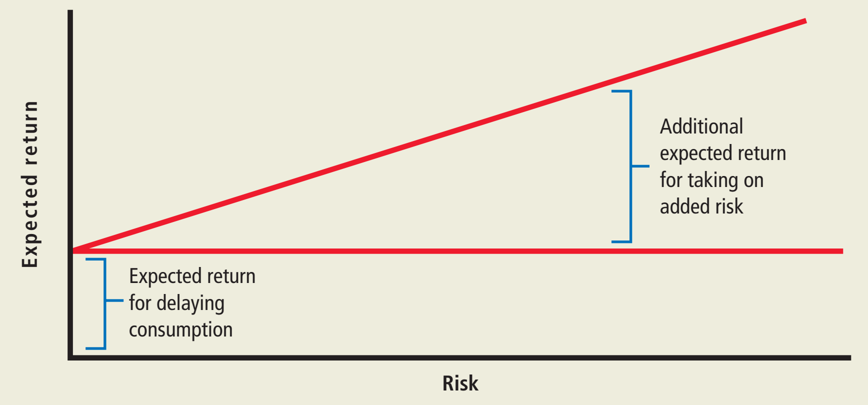


Figure 1-1 depicts the basic notion that an investor's rate of return should equal a rate of return for delaying consumption plus an additional return for assuming risk. For example, if you have $5,000 to invest and are considering either buying stock in Apple (AAPL) or investing in a new biotech startup firm that has no past record of success, you would want the startup investment to offer the prospect of a higher expected rate of return than the investment in an established company like Apple.

Notice that we keep referring to the *expected* return rather than the *actual* return. As investors, we have expectations about what returns our investments will earn. However, we can't know for certain what they *will* be. For example, if investors could have seen into the future, no one would have bought stock in Tetraphase Pharmaceuticals (TTPH) on February 13, 2018. Why? Because on that day the company reported that the clinical trials of its IGNITE3 drug did not meet its primary endpoints. The result was that, within minutes of the announcement, the company's stock price dropped by a whopping 60 percent.

The risk–return relationship will be a key concept as we value stocks, bonds, and proposed new investment projects throughout this text. We will also spend some time determining how to measure risk. Interestingly, much of the work for which the 1990 Nobel Prize for economics was awarded centered on the relationship depicted in the graph in Figure 1-1 and how to measure risk. Both the graph and the risk–return relationship it depicts will reappear often in our study of finance.

PRINCIPLE 4

Principle 4: Market Prices Are Generally Right

efficient market a market in which the prices of securities at any instant in time fully reflect all publicly available information about the securities and their actual public values.

To understand how securities such as bonds and stocks are valued or priced in the financial markets, it is necessary to understand the concept of an efficient market. An **efficient market** is *one in which the prices of the assets traded in that market fully reflect all available information at any instant in time*.

Security markets such as the stock and bond markets are particularly important to our study of finance because these markets are the place where firms can go to raise money to finance their investments. Whether a security market such as the New York Stock Exchange (NYSE) is efficient depends on the speed with which newly released information is impounded into prices. Specifically, an efficient stock market is characterized by a large number of profit-driven individuals who act very quickly by buying (or selling) shares of stock in response to the release of new information.

If you are wondering just how vigilant investors in the stock market are in watching for good and bad news, consider the following set of events. While Nike (NKE) CEO William Perez flew aboard the company's Gulfstream jet one day in November 2005, traders on the ground sold off a significant amount of Nike's stock. Why? Because the plane's landing gear was malfunctioning, and they were watching TV coverage of the event! Before Perez landed safely, Nike's stock dropped 1.4 percent. Once Perez's plane landed, Nike's stock price immediately bounced back. This example illustrates that in the financial market there are ever-vigilant investors who are looking to act even *in the anticipation* of the release of new information.

Another example of the speed with which stock prices react to new information deals with Disney. Beginning with *Toy Story* in 1995, Disney (DIS) was on a roll, making one hit after another, including *Monsters, Inc.*, *Finding Nemo*, the *Pirates of the Caribbean* series, *The Incredibles*, the *Ironman* series, *Frozen* and *Guardians of the Galaxy*. In spite of all this success, in 2018, Disney took a big gamble and released *Black Panther*. Based on a relatively unknown Marvel comic book series about T'Challa a.k.a. "Black Panther" returning to his fictitious African Country of Wakanda to begin his reign as king after his father was killed in *Captain America: Civil War*. This movie was very different from previous superhero movies as it featured a black cast, black writers, and a black director. No one had a good idea of how it might be received. In the movie's opening weekend, however, receipts were truly amazing. It earned $192 million. Within a month its revenues had reached $1 billion. How did the stock market respond to the unexpected box office reaction during the movie's opening weekend? On the Tuesday following the opening weekend (it was released over Presidents' Day weekend), Disney stock opened over 1.3 percent higher, on a day where the stock market barely moved. Apparently, the news of the surprisingly strong box office receipts was reflected in Disney's opening stock price, even before it traded! The same speed in the market reaction to new information also happened to United Airlines in April 2017. Video footage went viral showing two security officers forcibly removing a 69-year-old doctor by dragging him from an overbooked flight. His head smacked against an arm rest as he was pulled down the aisle. As a result, United Airlines stock dropped by $1.4 billion even before the stock market opened the next day.

The key learning point is the following: Stock market prices are a useful barometer of the value of a firm. Specifically, managers can expect their company's share prices to respond quickly to investors' assessment of their decisions. On the one hand, if investors on the whole agree that the decision is a good one that creates value, then they will push up the price of the firm's stock to reflect that added value. On the other hand, if investors feel that a decision is bad for share prices, then the firm's share value will be driven down.

Unfortunately, this principle doesn't always work perfectly in the real world. You just need to look at the housing price bubble that helped bring on the economic downturn in 2008–2009 to realize that prices and value don't always move in lockstep. Like it or not, the psychological biases of individuals impact decision making and, as a result, our decision-making process is not always rational. Behavioral finance considers this type of behavior and takes what we already know about financial decision making and adds in human behavior with all its apparent irrationality.

We'll try and point out the impact of human behavior on decisions throughout our study. But understand that the field of behavioral finance is a work in progress—we understand only a small portion of what may be going on. We can say, however, that behavioral biases have an impact on our financial decisions. As an example, people tend to be overconfident and many times mistake luck for skill. As Robert Shiller, a well-known economics professor at Yale, put it, "people think they know more than they do."[1] This overconfidence applies to their abilities, their knowledge and understanding, and forecasting the future. Because they have confidence in their valuation estimates, they may take on more risk than they should. These behavioral biases impact everything in finance, ranging from making investment analyses to analyzing new projects to forecasting the future.

PRINCIPLE 5

Principle 5: Conflicts of Interest Cause Agency Problems

Throughout this book we will describe how to make financial decisions that increase the value of a firm's shares. However, managers do not always follow through with these decisions. Often they make decisions that actually lead to a decrease in the value of the firm's shares. When this happens, it is frequently because the managers' own interests are best served by ignoring shareholder interests. In other words, there is a conflict of interest between what is best for the managers and what is best for the stockholders. For example, shutting down an unprofitable plant may be in the best interests of the firm's stockholders, but in so doing the managers will find themselves out of a job or having to transfer to a different job. This very clear conflict of interest might lead the management of the plant to continue running the plant at a loss.

agency problem problems and conflicts resulting from the separation of the management and ownership of the firm.

Conflicts of interest lead to what economists describe as an agency cost or **agency problem**. That is, managers are the agents of the firm's stockholders (the owners), and if the agents do not act in the best interests of their principal, this leads to an agency cost. Although the goal of the firm is to maximize shareholder value, in reality the agency problem may interfere with implementation of this goal. *The agency problem results from the separation of the management and ownership of the firm*. For example, a large firm may be run by professional managers or agents who have little or no ownership in the firm. Because of this separation between decision makers and owners, managers may make decisions that are not in line with the goal of maximizing shareholder wealth. They may approach work less energetically and attempt to benefit themselves in terms of salary and perquisites at the expense of shareholders.

Managers might also avoid any projects that have risk associated with them—even if they are great projects with huge potential returns and a small chance of failure. Why is this so? Because if the project isn't successful, these agents of the shareholders may lose their jobs.

Agency problems also contributed to our recent financial crisis, with some mortgage brokers being paid to find borrowers. The brokers would then make the loan and sell the mortgage to someone else. Because they didn't hold the mortgage but only created it, they didn't care about the quality of the mortgage. In effect, they wrote mortgages when the borrower had a low chance of being able to pay off the mortgage because they got paid per mortgage and then sold the mortgage to someone else almost immediately. There was no incentive to screen for the quality of the borrower, and as a result both the borrower who was misled into thinking he could afford the mortgage and the holder of the mortgage were hurt.

The costs associated with the agency problem are difficult to measure, but occasionally we see the problem's effect in the marketplace. If the market feels management is damaging shareholder wealth, removal of that management may cause a positive reaction in stock price. For example, on the announcement of the death of Roy Farmer, the CEO of Farmer Brothers (FARM), a seller of coffee-related products, Farmer Brothers' stock price rose about 28 percent. Generally, the tragic loss of a company's top executive raises concerns over a leadership void, causing the share price to drop; in the case of Farmer Brothers, however, investors thought a change in management would have a positive impact on the company.

---

[1] See Robert J. Shiller, *Irrational Exuberance* (New York: Broadway Books, 2000), p. 142.

If the firm's management works for the owners, who are the shareholders, why doesn't the management get fired if it doesn't act in the shareholders' best interest? In theory, the shareholders pick the corporate board of directors, and the board of directors in turn picks the management. Unfortunately, in reality the system frequently works the other way around. Management selects the board of director nominees and then distributes the ballots. In effect, shareholders are generally offered a slate of nominees selected by the management. The end result is that management effectively selects the directors, who then may have more allegiance to managers than to shareholders. This, in turn, sets up the potential for agency problems, with the board of directors not monitoring managers on behalf of the shareholders as it should.

The root cause of agency problems is conflict of interest. Whenever such conflicts exist in business, individuals may do what is in their own rather than the organization's best interests. For example, in 2000 Edgerrin James was a running back for the Indianapolis Colts and was told by his coach to get a first down and then fall down. That way the Colts wouldn't be accused of running up the score against a team they were already beating badly. However, since James's contract included incentive payments associated with rushing yards and touchdowns, he acted in his own self-interest and ran for a touchdown on the very next play.

We will spend considerable time discussing monitoring managers and the methods used to align their interests with those of shareholders. As an example, managers can be monitored by rating agencies and by auditing financial statements, and compensation packages may be used to align the interests of managers and shareholders. Additionally, the interests of managers and shareholders can be aligned by establishing management stock options, bonuses, and perquisites that are directly tied to how closely managers' decisions coincide with the interests of shareholders. In other words, what is good for shareholders must also be good for managers. If that is not the case, managers will make decisions in their best interest rather than maximizing shareholder wealth. It is this logic that caused Tesla's Elon Musk to implement a bold compensation plan in 2018. Musk is only paid if the company succeeds, over the long term, with significant gains in value—that is, if the shareholders end up much, much better off—otherwise he gets nothing.

The Essential Elements of Ethics and Trust

Though not one of the five principles of finance, ethics and trust are essential elements of the business world. In fact, without ethics and trust, nothing works. This statement could be applied to almost everything in life. Virtually everything we do involves some dependence on others. Although businesses frequently try to describe the rights and obligations of their dealings with others using contracts, it is impossible to write a perfect contract. Consequently, business dealings between people and firms ultimately depend on the willingness of the parties to trust one another.

Ethics or, rather, a lack of ethics in finance is a recurring theme in the news. Financial scandals at Enron, WorldCom, Arthur Andersen, and Bernard L. Madoff Investment Securities demonstrate that ethical lapses are not forgiven in the business world. Not only is acting in an ethical manner morally correct, it is a necessary ingredient to long-term business and personal success.

In 2017, Equifax found itself hacked and the social security numbers, birth dates, addresses, and other information of 145 million people stolen in one of the largest data breaches of all times. Equifax discovered the breach in July, but did not disclose it until September, in spite of the fact that U.S. companies are required by law to quickly report any new information that could materially affect its financial outlook. What happened to Equifax? Its market value dropped by over 20 percent—that's a bit over $4 billion. How this will all play out for Equifax may take years to determine, but clearly, no one wants to do business with someone they don't trust. More recently, in 2018, Steve Wynn, the CEO of Wynn Resorts, was accused of a pattern of sexual misconduct which he denied. Still, Wynn Resorts almost immediately lost

$3.5 billion. Just a week later, shares of the apparel company Guess Inc. fell 18 percent after model and actress Kate Upton accused the company's co-founder of using his power in the industry to harass women. Why might this have happened? If consumers don't feel good about a company, they are less likely to spend money on its products, and that impacts stock prices.

Ethical behavior is easily defined. It's simply "doing the right thing." But what is the right thing? For example, Bristol-Myers Squibb (BMY) gives away heart medication to people who can't afford it. Clearly, the firm's management feels this is the socially responsible and right thing to do. But is it? Should companies give away money and products, or should they leave such acts of benevolence to the firm's shareholders? Perhaps the shareholders should decide if they personally want to donate some of their wealth to worthy causes.

As is true of most ethical questions, the dilemma posited above has no clear-cut solution. We acknowledge that people have a right to disagree about what "doing the right thing" means and that each of us has his or her personal set of values. These values form the basis for what we think is right and wrong. Moreover, every society adopts a set of rules or laws that prescribe what it believes constitutes "doing the right thing." In a sense, we can think of laws as a set of rules that reflect the values of a society as a whole.

You might ask yourself, "As long as I'm not breaking society's laws, why should I care about ethics?" The answer to this question lies in consequences. Everyone makes errors of judgment in business, which is to be expected in an uncertain world. But ethical errors are different. Even if they don't result in anyone going to jail, they tend to end careers and thereby terminate future opportunities. Why? Because unethical behavior destroys trust, and businesses cannot function without a certain degree of trust.

Concept Check

1. According to Principle 3, how do investors decide where to invest their money?
2. What is an efficient market?
3. What is the agency problem, and why does it occur?
4. Why are ethics and trust important in business?

LO3 Describe the role of finance in business.

The Role of Finance in Business

Finance is the study of how people and businesses evaluate investments and raise capital to fund them. Our interpretation of an investment is quite broad. When Apple designed its Apple Watch, it was clearly making a long-term investment. The firm had to devote considerable expenses to designing, producing, and marketing the device with the hope that it would eventually become indispensable to everyone. Similarly, Apple is making an investment decision whenever it hires a fresh new graduate, knowing that it will be paying a salary for at least 6 months before the employee will have much to contribute.

Thus, the study of finance addresses three basic types of issues:

1. What long-term investments should the firm undertake? This area of finance is generally referred to as **capital budgeting**.
2. How should the firm raise money to fund these investments? The firm's funding choices are generally referred to as **capital structure decisions**.
3. How can the firm best manage its cash flows as they arise in its day-to-day operations? This area of finance is generally referred to as **working capital management**.

capital budgeting the decision-making process with respect to investment in fixed assets.

capital structure decisions the decision-making process with funding choices and the mix of long-term sources of funds.

working capital management the management of the firm's current assets and short-term financing.

We'll be looking at each of these three areas of business finance—capital budgeting, capital structure, and working capital management—in the chapters ahead.

Why Study Finance?

Even if you're not planning a career in finance, a working knowledge of finance will take you far in both your personal and professional life.

Those interested in management will need to study topics such as strategic planning, personnel, organizational behavior, and human relations, all of which involve spending money today in the hopes of generating more money in the future. For example, in late 2017 Daimler AG, parent company to Mercedes-Benz, announced that it would invest at least $10 billion in development of next-generation electric vehicles and over $1 billion in battery production, and this doesn't guarantee success. After all, electric cars don't always work out as planned as GM found out after it invested $740 million to produce the Chevy Volt, only to find car buyers balking at the $40,000 sticker price. Similarly, marketing majors need to understand and decide how aggressively to price products, the amount to spend on advertising, and what media to use for those ads. Since aggressive marketing today costs money but allows firms to reap rewards in the future, it should be viewed as an investment that the firm needs to finance. Production and operations management majors need to understand how best to manage a firm's production and control its inventory and supply chain. These are all topics that involve risky choices that relate to the management of money over time, which is the central focus of finance. *Although finance is primarily about the management of money, a key component of finance is the management and interpretation of information.* Indeed, if you pursue a career in management information systems or accounting, the finance managers are likely to be your most important clients. For the student with entrepreneurial aspirations, an understanding of finance is essential—after all, if you can't manage your finances, you won't be in business very long.

Finally, an understanding of finance is important to you as an individual. The fact that you are reading this book indicates that you understand the importance of investing in yourself. By obtaining a higher education degree, you are clearly making sacrifices in the hopes of making yourself more employable and improving your chances of having a rewarding and challenging career. Some of you are relying on your own earnings and the earnings of your parents to finance your education, whereas others are raising money or borrowing it from the **financial markets**, or *institutions and procedures that facilitate financial transactions*.

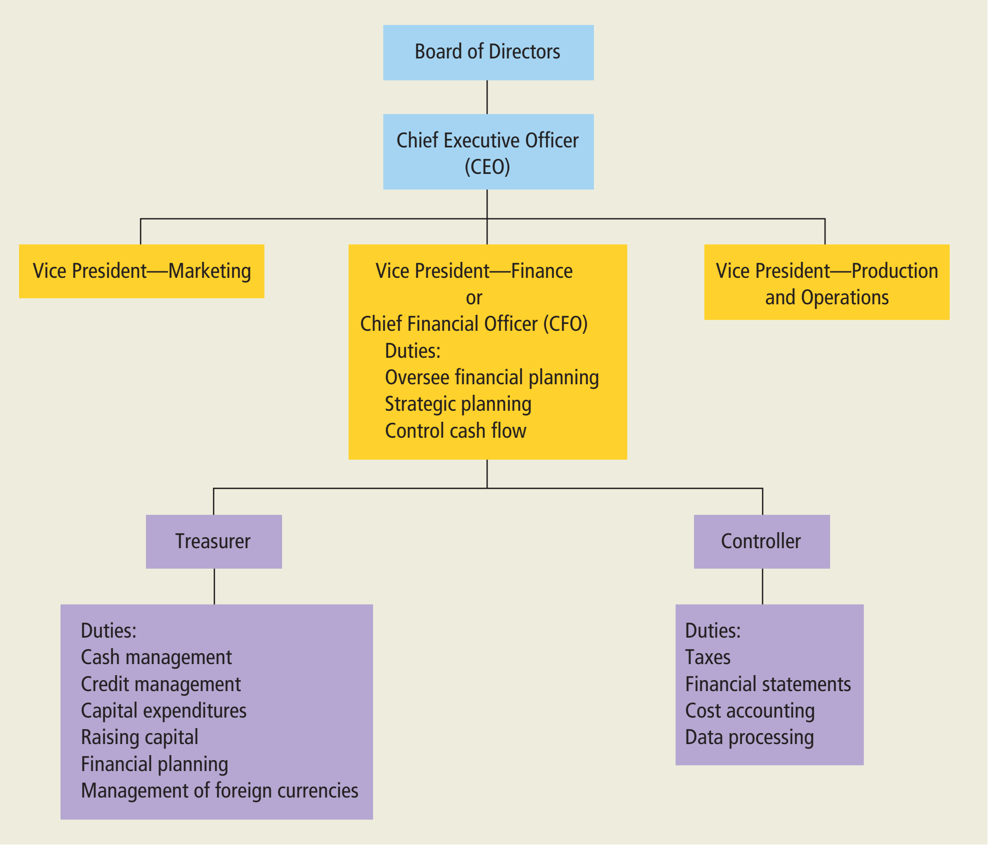
financial markets those institutions and procedures that facilitate transactions in all types of financial claims.

Although the primary focus of this book is on developing corporate finance tools that are used in business, much of the logic and many of the tools we develop will also apply to the decisions you will have to make regarding your own personal finances. Financial decisions are everywhere, for both you and the firm you work for. In the future, both your business and personal lives will be spent in the world of finance. Since you're going to be living in that world, it's time to learn the basics about it.

The Role of the Financial Manager

A firm can assume many different organizational structures. Figure 1-2 shows a typical presentation of how the finance area fits into a firm. The vice president for finance, also called the chief financial officer (CFO), serves under the firm's chief executive officer (CEO) and is responsible for overseeing financial planning, strategic planning, and controlling the firm's cash flow. Typically, a treasurer and controller serve under the CFO. In a smaller firm, the same person may fill both roles, with just one office handling all the duties. The treasurer generally handles the firm's financial activities, including cash and credit management, making capital expenditure decisions, raising funds, financial planning, and managing any foreign currency received by the firm. The controller is responsible for managing the firm's accounting duties, including producing financial statements, cost accounting, paying taxes, and gathering and monitoring the data necessary to oversee the firm's financial well-being. In this textbook, we focus on the duties generally associated with the treasurer and on how investment decisions are made.

FIGURE 1-2 How the Finance Area Fits into a Firm



Concept Check

1. What are the basic types of issues addressed by the study of finance?
2. What are the duties of a treasurer? Of a controller?

LO4 Distinguish among the different legal forms of business organization.

The Legal Forms of Business Organization

In the chapters ahead, we focus on financial decisions of corporations because, although the corporation is not the only legal form of business available, it is the most logical choice for a firm that is large or growing. It is also the dominant business form in terms of sales in this country. In this section we explain why this is so.

Although numerous and diverse, the legal forms of business organization fall into three categories: the sole proprietorship, the partnership, and the corporation. To understand the basic differences among these forms, we need to define each one and understand its advantages and disadvantages. As the firm grows, the advantages of the corporation begin to dominate. As a result, most large firms take on the corporate form.

Sole Proprietorships

sole proprietorship a business owned by a single individual.

A **sole proprietorship** is *a business owned by an individual*. The owner retains the title to the business's assets and is responsible, generally without limitation, for the liabilities incurred. The proprietor is entitled to the profits from the business but must also absorb any losses. This form of business is initiated by the mere act of beginning the business operations. Typically, no legal requirement must be met in starting the operation, particularly if the proprietor is conducting the business in his or her own name. If a special name is used, an assumed-name certificate should be filed, requiring a small registration fee. Termination of the sole proprietorship occurs on the owner's death or by the owner's choice. Briefly stated, the sole proprietorship is for all practical purposes the absence of any formal *legal* business structure.

Partnerships

The primary difference between a partnership and a sole proprietorship is that the partnership has more than one owner. A **partnership** is *an association of two or more persons coming together as co-owners for the purpose of operating a business for profit*. Partnerships fall into two types: (1) general partnerships and (2) limited partnerships.

partnership an association of two or more individuals joining together as co-owners to operate a business for profit.

General Partnerships

In a **general partnership** *each partner is fully responsible for the liabilities incurred by the partnership*. Thus, any partner's faulty conduct, even having the appearance of relating to the firm's business, renders the remaining partners liable as well. The relationship among partners is dictated entirely by the partnership agreement, which may be an oral commitment or a formal document.

general partnership a partnership in which all partners are fully liable for the indebtedness incurred by the partnership.

Limited Partnerships

In addition to the general partnership, in which all partners are jointly liable without limitation, many states provide for **limited partnerships**. The state statutes permit *one or more of the partners to have limited liability, restricted to the amount of capital invested in the partnership*. Several conditions must be met to qualify as a limited partner. First, at least one general partner must have unlimited liability. Second, the names of the limited partners may not appear in the name of the firm. Third, the limited partners may not participate in the management of the business. Thus, a limited partnership provides limited liability for a partner who is purely an investor.

limited partnership a partnership in which one or more of the partners has limited liability, restricted to the amount of capital he or she invests in the partnership.

Corporations

The **corporation** has been a significant factor in the economic development of the United States. As early as 1819, U.S. Supreme Court Chief Justice John Marshall set forth the legal definition of a corporation as "an artificial being, invisible, intangible, and existing only in the contemplation of law."[2] This entity *legally functions separate and apart from its owners*. As such, the corporation can individually sue and be sued and purchase, sell, or own property, and its personnel are subject to criminal punishment for crimes. However, despite this legal separation, the corporation is composed of owners who dictate its direction and policies. The owners elect a board of directors, whose members in turn select individuals to serve as corporate officers, including the company's president, vice president, secretary, and treasurer. Ownership is reflected in common stock certificates, each designating the number of shares owned by its holder. The number of shares owned relative to the total number of shares outstanding determines the stockholder's proportionate ownership in the business. Because the shares are transferable, ownership in a corporation may be changed by a shareholder simply remitting the shares to a new shareholder. The shareholder's liability is confined to the amount of the investment in the company, thereby preventing creditors from confiscating stockholders' personal assets in settlement of unresolved claims. This is an extremely important advantage of a corporation. After all, would you be willing to invest in United Airlines if you would be held liable if one of its planes crashed? Finally, the life of a

corporation an entity that legally functions separate and apart from its owners.

---

[2] *The Trustees of Dartmouth College* v. *Woodard*, 4 Wheaton 636 (1819).

corporation is not dependent on the status of the investors. The death or withdrawal of an investor does not affect the continuity of the corporation. Its managers continue to run the corporation when stock is sold or when it is passed on through inheritance.

Organizational Form and Taxes: The Double Taxation on Dividends and Pass-Through Entities

Historically, one of the drawbacks of the corporate form was the double taxation of dividends. This occurs when a corporation earns a profit, pays taxes on those profits (the first taxation of earnings), and pays some of those profits back to the shareholders in the form of dividends, and then the shareholders pay personal income taxes on those dividends (the second taxation of those earnings). This double taxation of earnings does not take place with proprietorships and partnerships. Needless to say, that had been a major disadvantage of corporations.

Under the current law, qualified dividends from domestic corporations and qualified foreign corporations are now taxed at a maximum rate of 20 percent. Moreover, if you are in the bottom two income tax rate brackets, you don't pay any taxes on your dividend income; if you are in the middle tax bracket, you pay 15 percent; and if you are in the top bracket, you pay 20 percent on qualified dividends. However, since the new tax law reduces the top corporate tax rate from 35 percent to 21 percent, the taxes taken out at the corporate level are greatly reduced.

The new tax law also impacts pass-through entities. What is a pass-through entity? It is one in which the profits from the business flow through to the business owner's personal tax return and then are taxed at ordinary income tax rates. That would include sole proprietorships and partnerships, along with S-corporations and LLCs that we will be discussing next. Since corporate rates dropped, it only seemed fair to lower rates on businesses not set up as corporations. To do this, Congress changed the laws so that some pass-through entities can qualify for a 20 percent pass-through deduction and as a result will only be taxed on 80 percent of their pass-through income. This tax benefit phases out for higher earning taxpayers, but it does allow a tax break for small pass-through entities and also for larger pass-through entities that employ a lot of workers.

S-Corporations and Limited Liability Companies (LLCs)

One of the problems that entrepreneurs and small business owners face is that they need the benefits of the corporate form to expand, but the double taxation of earnings that comes with the corporate form makes it difficult to accumulate the necessary wealth for expansion. Fortunately, the government recognizes this problem and has provided two business forms that are, in effect, crosses between a partnership and a corporation with the tax benefits of partnerships (no double taxation of earnings and the tax benefits of a pass-through entity) and the limited liability benefit of corporations (your liability is limited to what you invest).

S-corporation a corporation that, because of specific qualifications, is taxed as though it were a partnership.

The first is the **S-corporation**, which *provides limited liability while allowing the business's owners to be taxed as if they were a partnership*—that is, distributions back to the owners are not taxed twice as is the case with dividends distributed by regular corporations. Unfortunately, a number of restrictions accompany the S-corporation that detract from the desirability of this business form. Thus, an S-corporation cannot be used for a joint venture between two corporations. As a result, this business form has been losing ground in recent years in favor of the limited liability company.

limited liability company (LLC) a cross between a partnership and a corporation under which the owners retain limited liability but the company is run and is taxed like a partnership.

The **limited liability company (LLC)** is also *a cross between a partnership and a corporation*. Just as with the S-corporation, the LLC retains limited liability for its owners, but it runs and is taxed like a partnership. In general, it provides more flexibility than the S-corporation. For example, corporations can be owners in an LLC. However, because LLCs operate under state laws, both states and the IRS have rules for what qualifies as an LLC, and different states have different rules. But the bottom line in all this is that the LLC must not look too much like a corporation or it will be taxed as one.

TABLE 1-1 The Different Business Organizational Forms

Type of Organization	Number of Owners	Liability for Firm's Debts	Change in Ownership Dissolves the Firm	Taxation
Sole Proprietorship	**One**	**Yes**	**Yes**	**Personal/Pass-Through**
Types of Partnerships				
• General Partnership	No limit	Each partner is liable for the entire amount	Yes	Personal/Pass-Through
• Limited Partnership	At least one general partner (GP), no limit on limited partners (LP)	GP—Yes LP—No	GP—Yes LP—No	Personal/Pass-Through
Types of Corporations				
• Corporation	No limit	No	No	Both corporate and personal taxes
• S-corporation	Maximum of 100	No	No	Personal/Pass-Through
Limited Liability Company (LLC)	No limit	No	No	Personal/Pass-Through

Which Organizational Form Should Be Chosen?

Owners of new businesses have some important decisions to make in choosing an organizational form. Whereas each business form seems to have some advantages over the others, the advantages of the corporation begin to dominate as the firm grows and needs access to the capital markets to raise funds. Table 1-1 provides a summary of the differences among the major organizational forms.

Because of the limited liability, the ease of transferring ownership through the sale of common shares, and the flexibility in dividing the shares, the corporation is the ideal business entity in terms of attracting new capital. In contrast, the unlimited liabilities of the sole proprietorship and the general partnership are deterrents to raising equity capital. Between the extremes, the limited partnership does provide limited liability for limited partners, which has a tendency to attract wealthy investors. However, the impracticality of having a large number of partners and the restricted marketability of an interest in a partnership prevent this form of organization from competing effectively with the corporation. Therefore, when developing our decision models, we assume we are dealing with the corporate form and corporate tax codes.

Concept Check

1. What are the primary differences among a sole proprietorship, a partnership, and a corporation?
2. Explain why large and growing firms tend to choose the corporate form.
3. What is an LLC?

Finance and the Multinational Firm: The New Role

LO5 Explain what has led to the era of the multinational corporation.

In the search for profits, U.S. corporations have been forced to look beyond our country's borders. This movement was spurred on by the collapse of communism and the acceptance of the free market system in Third World countries. All this has taken place at a time when information technology has experienced a revolution brought on by the personal computer and the Internet. Concurrently, the United States went through an unprecedented period of deregulation of industries. These changes resulted in the opening of new international markets, and U.S. firms experienced a period of price competition here at home that made it imperative that businesses look across borders for investment opportunities. The end result is that many U.S. companies, including IBM, Walt Disney, and American Express, have restructured their operations to expand internationally. The bottom line is that what you think of as a U.S. firm may be much more of a multinational firm than you would expect. For example, Coca-Cola earns around 60 percent of its profits from overseas sales, and this is not uncommon for numerous U.S. firms.

Just as U.S. firms have ventured abroad, foreign firms have also made their mark in the United States. You need only look to the auto industry to see what effects the entrance of Toyota, Honda, Hyundai, BMW, and other foreign car manufacturers has had on the industry. In addition, foreigners have bought and now own such companies as Dr. Pepper, Snapple, Brooks Brothers, Budweiser, Ben & Jerrys, Burger King, Trader Joe's, 7-Eleven, and Sunglasses Hut. Consequently, even if we wanted to, we couldn't keep all our attention focused on the United States, and even more important, we wouldn't want to ignore the opportunities that are available across international borders.

Concept Check

1. What has brought on the era of the multinational corporation?
2. Has looking beyond U.S. borders been a profitable experience for U.S. corporations?

LO6 Describe how this course and the skills you will develop in it will help you in your career and in your life.

Developing Skills for Your Career

Regardless of your major, you'll be spending the rest of your life in the "world of finance." In the business world, deciding to develop a new product line, build a new plant, open a new store, or figuring out how to raise money to finance all this, you are facing finance questions. In fact, most decision making actually boils down to a finance question: what is its value? If you can determine the value of the introduction of a new product, or the decision to build a new hotel resort, you can make a better decision. If it is worth more in today's dollars than it costs, go ahead with it, otherwise don't do it. Also, if you can value a stock or a bond, you can decide whether or not to buy it—if it is worth more than it costs, buy it; otherwise don't. Valuation is what we do in this class—we value real assets like Disney's decision to build Disney Shanghai. We also learn how to value financial assets like stocks and bonds.

Let's say you end up deciding not to go into business and end up teaching high school, you'll also find yourself in the world of finance. That's because you might want to buy a house or a vacation home or save for your children's education (or deal with your own student loans). Even if you don't do those things, you'll certainly want to save for retirement—and without an understanding of the basics of finance you'll have a tough time. Because, after all, if you don't know how the world of finance works, you'll find it tough to be successful in it and it is all around you.

In addition to gaining the skills necessary to succeed in the "world of finance" you'll also gain skills that will help you succeed in your career. Some of those skills you'll develop are highlighted below.

Critical Thinking Skills – This text begins with the presentation of five foundational principles of finance which are the threads that bind all the topics of the book. Then throughout the book, these five foundational principles are revisited in "Remember Your Principles" boxes. These five principles of finance allow us to tie the material together, and as a result demonstrate the common root of the disciple of financial theory and financial practice. The end result is an introductory treatment of a discipline rather than the treatment of a series of isolated financial problems that managers encounter. These principles will allow you to learn more than simply *how* to calculate the correct answers to problems. They will allow you to understand *why* problems are approached in different ways and how to critically interpret problems, design solutions, and analyze and evaluate their solutions. In effect, you'll not only learn the tools of analysis, but more importantly you'll develop an intuitive understanding of why the problem is approached as it is, and what is actually being done in the analysis. And as you'll see, much of what is being done deals with valuation. To value assets, forecast the future, and discount those cash flows, many assumptions must be made about specific variables. This approach of the logic and fundamental principles that drive the field of finance, allows students to develop their critical thinking skills and effectively deal with financial along with other business problems in an ever-changing business and financial environment.

Excel Skills – Today, Excel is the primary spreadsheet analysis and modeling tool used in business, and a basic competence in Excel will go a long way toward a successful business career. The power to import data from various files and documents makes Excel the perfect tool for business analysis. Although not everyone in business has to create Excel models, everyone in business has to understand them and understand how the data that they are using to make their decisions is generated. You'll need to understand how to communicate with programmers and how to interpret their results. You'll find that being fluent in the "language of Excel" will not only make you look more knowledgeable, but will actually help you make decisions in your job.

Data Analysis Skills – Finance deals with decision making within the firm – when to introduce a new product, make an investment, or how to value a financial asset like a bond or a share of common stock. Gaining an understanding of the decision-making process and acquiring the analytical tool set necessary to make those decisions reflects the core of finance and this text. With those skills and understanding you should be able to anticipate decisions before they are made.

Collaboration and Communication Skills – Developing an understanding of the tools and techniques used in finance along with an understanding of Excel and how financial models are developed will allow you to talk the talk of finance. Just being able to communicate with those in finance and other areas will go a long way toward helping you develop the collaborative skills to be successful in business. Most decisions involve input from several areas within business, and if you can't communicate, you won't be able to do your job effectively.

Concept Check

1. What has brought on the era of the multinational corporation?
2. Has looking beyond U.S. borders been a profitable experience for U.S. corporations?

Chapter Summaries

Identify the goal of the firm. (pgs. 31–32) LO1

SUMMARY: This chapter outlines the framework for the maintenance and creation of shareholder wealth, which should be the goal of the firm and its managers. The goal of maximization of shareholder wealth is chosen because it deals well with uncertainty and time in a real-world environment. As a result, the maximization of shareholder wealth is found to be the proper goal for the firm.

LO2 Understand the basic principles of finance, their importance, and the importance of ethics and trust. (pgs. 32–38)

SUMMARY: The five basic principles of finance are:

1. **Cash Flow Is What Matters**—Incremental cash received, not accounting profits, drives value.
2. **Money Has a Time Value**—A dollar received today is more valuable to the recipient than a dollar received in the future.
3. **Risk Requires a Reward**—The greater the risk of an investment, the higher will be the investor's required rate of return, and, other things remaining the same, the lower will be the investment's value.
4. **Market Prices Are Generally Right**—For example, product market prices are often slower to react to important news than are prices in financial markets, which tend to be very efficient and quick to respond to news.
5. **Conflicts of Interest Cause Agency Problems**—Large firms are typically run by professional managers who own a small fraction of the firms' equity. The individual actions of these managers are often motivated by self-interest, which may result in managers not acting in the best interests of the firm's owners. When this happens, the firm's stock will lose value.

Though not one of the five principles of finance, ethics and trust are also essential elements of the business world, and without them, nothing works.

KEY TERMS

Incremental cash flow, page 33 the difference between the cash flows a company will produce both with and without the investment it is thinking about making.

Opportunity cost, page 33 the cost of making a choice in terms of the next best alternative that must be foregone.

Efficient market, page 34 a market in which the prices of securities at any instant in time fully reflect all publicly available information about the securities and their actual public values.

Agency problem, page 36 problems and conflicts resulting from the separation of the management and ownership of the firm.

LO3 Describe the role of finance in business. (pgs. 38–40)

SUMMARY: Finance is the study of how people and businesses evaluate investments and raise capital to fund them. The three basic types of issues addressed by the study of finance are: (1) What long-term investments should the firm undertake? This area of finance is generally referred to as capital budgeting. (2) How should the firm raise money to fund these investments? The firm's funding choices are generally referred to as capital structure decisions. (3) How can the firm best manage its cash flows as they arise in its day-to-day operations? This area of finance is generally referred to as working capital management.

KEY TERMS

Capital budgeting, page 38 the decision-making process with respect to investment in fixed assets.

Capital structure decisions, page 38 the decision-making process with funding choices and the mix of long-term sources of funds.

Working capital management, page 38 the management of the firm's current assets and short-term financing.

Financial markets, page 39 those institutions and procedures that facilitate transactions in all types of financial claims.

Distinguish among the different legal forms of business organization. (pgs. 40–43)

LO4

SUMMARY: The legal forms of business are examined. The sole proprietorship is a business operation owned and managed by an individual. Initiating this form of business is simple and generally does not involve any substantial organizational costs. The proprietor has complete control of the firm but must be willing to assume full responsibility for its outcomes.

The general partnership, which is simply a coming together of two or more individuals, is similar to the sole proprietorship. The limited partnership is another form of partnership sanctioned by states to permit all but one of the partners to have limited liability if this is agreeable to all partners.

The corporation increases the flow of capital from public investors to the business community. Although larger organizational costs and regulations are imposed on this legal entity, the corporation is more conducive to raising large amounts of capital. Limited liability, continuity of life, and ease of transfer in ownership, which increase the marketability of the investment, have contributed greatly in attracting large numbers of investors to the corporate environment. The formal control of the corporation is vested in the parties who own the greatest number of shares. However, day-to-day operations are managed by the corporate officers, who theoretically serve on behalf of the firm's stockholders.

KEY TERMS

Sole proprietorship, page 40 a business owned by a single individual.

Partnership, page 41 an association of two or more individuals joining together as co-owners to operate a business for profit.

General partnership, page 41 a partnership in which all partners are fully liable for the indebtedness incurred by the partnership.

Limited partnership, page 41 a partnership in which one or more of the partners has limited liability, restricted to the amount of capital he or she invests in the partnership.

Corporation, page 41 an entity that legally functions separate and apart from its owners.

S-corporation, page 42 a corporation that, because of specific qualifications, is taxed as though it were a partnership.

Limited liability company (LLC), page 42 a cross between a partnership and a corporation under which the owners retain limited liability but the company is run and is taxed like a partnership.

Explain what has led to the era of the multinational corporation. (pgs. 43–44)

LO5

SUMMARY: With the collapse of communism and the acceptance of the free market system in Third World countries, U.S. firms have been spurred on to look beyond their own boundaries for new business. The end result has been that it is not uncommon for major U.S. companies to earn over half their income from sales abroad. Foreign firms are also increasingly investing in the United States.

Describe how this course and the skills you will develop in it will help you in your career and in your life. (pgs. 44–45)

LO6

SUMMARY: Regardless of your major, you'll be spending the rest of your life in the "world of finance." In this course, you will not only learn a lot about the "world of finance," but you'll also gain important critical thinking skills, Excel skills, data analysis skills, and collaboration and communication skills. All this will help you do your job more effectively.

Review Questions

Select Review Questions are available in MyLab Finance.

1-1. What are some of the problems involved in implementing the goal of maximization of shareholder wealth?

1-2. Firms often involve themselves in projects that do not result directly in profits. For example, Apple, which we featured in the chapter introduction, donated $50 million to Stanford University hospitals and another $50 million to the African aid organization (Product) RED, a charity fighting against AIDS, tuberculosis, and malaria. Do these projects contradict the goal of maximization of shareholder wealth? Why or why not?

1-3. What is the relationship between financial decision making and risk and return? Would all financial managers view risk–return trade-offs similarly?

1-4. What is the agency problem, and how might it impact the goal of maximization of shareholder wealth?

1-5. List the key advantages and disadvantages of (a) sole proprietorship, (b) partnership, and (c) corporation.

1-6. Identify the main drawbacks of a corporate firm.

1-7. Using the following criteria, specify the differences between each form of legal business organization: (a) number of owners, (b) liability for firm's debts, (c) change in ownership and/or dissolution of the firm, and (d) taxation.

1-8. There are a lot of great business majors. Check out the Careers in Business website at www.careers-in-business.com. It covers not only finance but also marketing, accounting, and management. Find out about and provide a short write-up describing the opportunities investment banking and financial planning offer.

1-9. Like it or not, ethical problems seem to be an issue in finance in the current global business environment. Several websites, like Bloomberg and CNN Money, have analyzed and discussed some of the worst financial scandals. Take a look at these articles and provide a brief summary regarding bad practices of the major organizations involved in these scandals. Include instances from different countries, like the Volkswagen emissions scandal, the Toshiba accounting scandal, the Libor scandal, among others.

1-10. We know that if a corporation is to maximize shareholder wealth, the interests of the managers and the shareholders must be aligned. The simplest way to align these interests is to structure executive compensation packages appropriately to encourage managers to act in the best interests of shareholders through stock and option awards. However, has executive compensation gotten out of control? Take a look at the Executive Pay Watch website at www.aflcio.org/corporatewatch/paywatch to see to whom top salaries have gone (click on "100 Highest" after scrolling down to the very bottom of the page). What are the most recent total compensation packages for the head of Oracle (ORCL), CBS Corporation (CBS), and Charter Communications (CHTR)?

Mini Case

This Mini Case is available in MyLab Finance.

Assume you are an assistant financial analyst at an international corporation, Occulocorp, and you are being interviewed by a radio broadcast journalist. You are asked to introduce and explain basic financial concepts to a local audience, for which you are given a set of questions.

Please respond to the following questions:

a. What is one of the primary goals of a firm with domestic and/or international operations?
b. As a company grows, the separation of ownership and management becomes a critical issue. What might be the reasons for this? Which theory is essential in this framework?
c. Why does finance play such an important role in business?
d. Are market prices generally right?
e. Why do ethics and ethical behavior play such an important role in financial decisions?
f. Why is the time value of money important?
g. What is the reason for the growth of multinational corporations over the last few decades?

CHAPTER 2

The Financial Markets and Interest Rates

Learning Objectives

LO1	**Describe** key components of the U.S. financial market system and the financing of business.	Financing of Business: The Movement of Funds Through the Economy
LO2	**Understand** how funds are raised in the capital markets.	Selling Securities to the Public
LO3	**Be acquainted** with recent rates of return.	Rates of Return in the Financial Markets
LO4	**Explain** the fundamentals of interest rate determination and the popular theories of the term structure of interest rates.	Interest Rate Determinants in a Nutshell

Back in 1995, when they first met, Larry Page and Sergey Brin were not particularly fond of one another. Larry was on a weekend visit to Stanford University, and Sergey was in a group of students assigned to show him around. Nonetheless, in short time the two began to collaborate and even built their own computer housings in Larry's dorm room. That computer housing later became Google's first data center. From there things didn't move as smoothly as one might expect; there just wasn't the interest from the search-engine players of the day, so Larry and Sergey decided to go it alone. Stuck in a dorm room with maxed-out credit cards, the problem they faced was money—they didn't have any. So they put together a business plan and went looking for money. Fortunately for all of us who use Google today, they met up with one of the founders of Sun Microsystems, and after a short demo he had to run off somewhere and upon leaving said, "Instead of us discussing all the details, why don't I just write you a check?" It was made out to Google Inc. and was for $100,000.

With that, Google Inc. (GOOGL) which reorganized under the name Alphabet (GOOGL) in 2015, was founded, and over the next 10 years it became anything but a conventional company, with an official motto of "don't be evil"; a goal to make the world a better place; on-site meals prepared by a former caterer for the Grateful Dead;

lava lamps; a fleet of Segways to move employees about the Google campus; roller-hockey games in the parking lot; and other on-site diversions. It was not unexpected that when Google needed more money in 2004, it would raise that money in an unusual way—it would sell shares of stock through a "Dutch auction." With a Dutch auction investors submit bids, saying how many shares they'd like and at what price. Next, Google used these bids to calculate an issue price that was just low enough to ensure that all the shares were sold, and everyone who bid at least that price got to buy shares at the issue price.

Eventually, Google settled on an issue price of $85 per share, and on August 19, 2004, it raised $1.76 billion. How did those initial investors do? On the first day of trading, Google's shares rose by 18 percent, and by mid-March 2005 the price of Google stock had risen to about $340 per share! In September 2005, Google went back to the financial markets and sold another 14.18 million shares at $295 per share, and by October 2018 Google stock was selling at around $1,120 per share.

In addition to issuing common stock, many firms also issue debt. In fact, in 2016 Alphabet (GOOGL), again, the parent company of Google, sold $2 billion of bonds on top of some $3 billion of bonds they sold in 2011. It is not uncommon to issue bonds. In fact, both Microsoft (MSFT) and Apple (AAPL) have raised money by selling corporate bonds—Apple sold $17 billion worth of them in 2013 and Microsoft sold $17 billion worth of them in 2017.

As you read this chapter , you will learn about how funds are raised in the financial markets. This will help you, as an emerging business executive specializing in accounting, finance, marketing, or strategy, understand the basics of acquiring financial capital in the funds marketplace.

Long-term sources of financing, such as bonds and common stock, are raised in the capital markets. By the term **capital markets**, we mean *all the financial institutions that help a business raise long-term capital*, where "long term" is defined as a security with a maturity date of more than 1 year. After all, most companies are in the business of selling products and services to their customers and do not have the expertise on their own to raise money to finance the business. Examples of these financial institutions that you may have heard of include Bank of America (BAC), Goldman Sachs (GS), Citigroup (C), Morgan Stanley (MS), UBS AG (UBS), and Deutsche Bank (DB).

capital markets all institutions and procedures that facilitate transactions in long-term financial instruments.

This chapter focuses on the procedures by which businesses raise money in the capital markets. It helps us understand how the capital markets work. We will introduce the logic of how investors determine their required rate of return for making an investment. In addition, we will study the historical rates of return in the capital markets so that we have a perspective on what to expect. This knowledge of financial market history will permit you as both a financial manager and an investor to realize that earning, say, a 40 percent annual return on a common stock investment does not occur very often.

As you work through this chapter, be on the lookout for direct applications of several of our principles from Chapter 1 that form the basics of business financial management. Specifically, your attention will be directed to Principle 3: Risk Requires a Reward and Principle 4: Market Prices Are Generally Right.

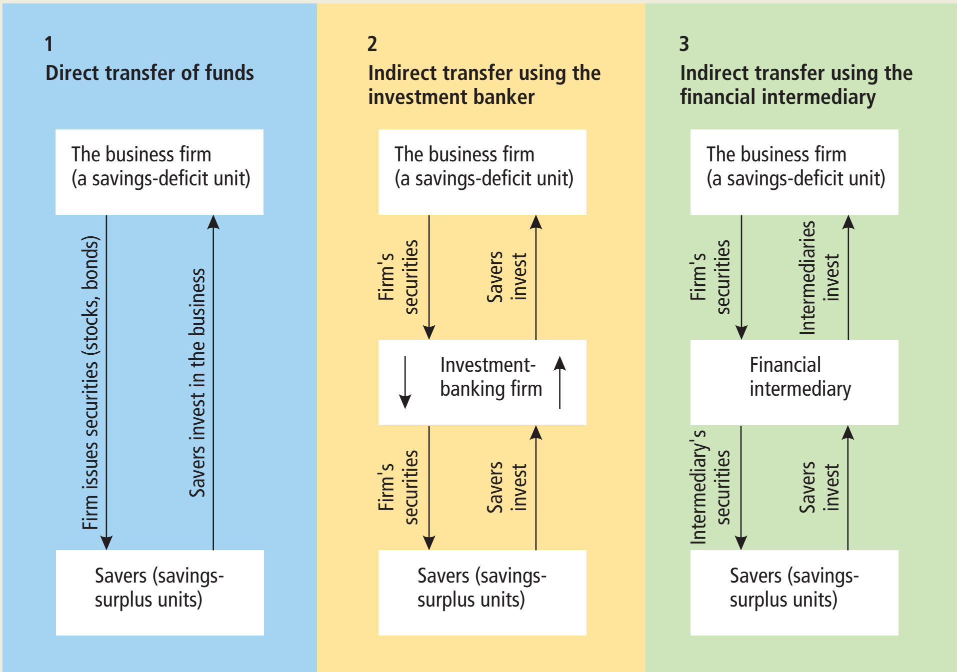
LO1 Describe key components of the U.S. financial market system and the financing of business.

Financing of Business: The Movement of Funds Through the Economy

Financial markets play a critical role in a capitalist economy. In fact, when money quit flowing through the financial markets in 2008, our economy ground to a halt. When our economy is healthy, funds move from saving-surplus units—that is, those who spend less money than they take in—to savings-deficit units—that is, those who have a need for additional funding. What are some examples of savings-deficit units? Our federal government, which is running a huge deficit, takes much less in from taxes than it is spending. Hulu, the online video service, would like to build new facilities but does not have the $50 million it needs to fund the expansion. Rebecca Swank, the sole proprietor of the Sip and Stitch, a yarn and coffee shop, would like to open a second store but needs $100,000 to finance a second shop. Emily and Michael Dimmick would like to buy a house for $240,000 but have only $50,000 saved up. In these cases, our government, a large company, a small business owner, and a family are all in the same boat—they would like to spend more than they take in.

Where will this money come from? It will come from savings-surplus units in the economy—that is, from those who spend less than they take in. Examples of savings-surplus units might include individuals, companies, and governments. For example, John and Sandy Randolph have been saving for retirement and earn $10,000 more each year than they spend. In addition, the firm John works for contributes $5,000 every year to his retirement plan. Likewise, ExxonMobil (XOM) generates about $50 billion in cash annually from its operations and invests about half of that on new exploration—the rest is available to invest. Also, a number of governments around

FIGURE 2-1 Three Ways to Transfer Capital in the Economy



the world bring in more money than they spend—countries like China, the United Arab Emirates, and Saudi Arabia.

Now let's take a look at how savings are transferred to those who need the money. Actually, there are three ways that savings can be transferred through the financial markets to those in need of funds (see Figure 2-1).

Let's take a closer look at these three methods:

1. **Direct transfer of funds** Here the firm seeking cash sells its securities directly to savers (investors) who are willing to purchase them in hopes of earning a large return. A start-up company is a good example of this process at work. The new business may go directly to *a wealthy private investor* called an **angel investor** or business angel for funds, or it may go to a **venture capitalist** for early funding. That's how Koofers.com got up and running. The founders of Koofers were students at Virginia Tech who put together an interactive website that provides a place for students to share class notes and course and instructor ratings/grade distributions, along with study guides and past exams. The website proved to be wildly popular, and it received $2 million of funding from two venture capitalists to expand, who, in return, received part ownership of Koofers.
2. **Indirect transfer using an investment-banking firm** An investment-banking firm is a financial institution that helps companies raise capital, trades in securities, and provides advice on transactions such as mergers and acquisitions. In helping firms raise capital, an investment banker frequently works together with other investment bankers in what is called a syndicate. The syndicate will buy the entire issue of securities from the firm that is in need of financial capital. The syndicate will then sell the securities at a higher price to the investing public (the savers) than it paid for them. Morgan Stanley and Goldman Sachs are examples of banks that perform investment-banking duties. Notice that under this second method of transferring savings, the securities being issued just pass through the investment-banking firm. They are not transformed into a different type of security.
3. **Indirect transfer using a financial intermediary** This is the type of system in which life insurance companies, mutual funds, and pension funds operate. The financial intermediary collects the savings of individuals and issues its own (indirect) securities in exchange for these savings. The intermediary then uses the funds collected from the individual savers to acquire the business firm's (direct) securities, such as stocks and bonds.

angel investor a wealthy private investor who provides capital for a business start-up.

venture capitalist an investment firm (or individual investor) that provides money to business start-ups.

A good financial system is one that efficiently takes money from savers and gets it to the individuals who can best put that money to use, and that's exactly what our system does. This may seem like common sense, but it is not necessarily common across the world. In spite of the fact that the U.S. financial system experienced problems in 2008 and 2009 that were tough to fix, it provides more choices for both borrowers and savers than most other financial systems, and so it does a better job of allocating capital to those who can more productively use it. As a result, we all benefit from the three transfer mechanisms displayed in Figure 2-1, and capital formation and economic wealth are greater than they would be in the absence of this financial market system.

There are numerous ways to classify the financial markets. These markets can take the form of anything from an actual building on Wall Street in New York City to an electronic hookup among security dealers all over the world. Let's take a look at five sets of dichotomous terms that are used to describe the financial markets.

Public Offerings Versus Private Placements

When a corporation decides to raise external capital, those funds can be obtained by making a public offering or a private placement. In a **public offering**, both *individual and institutional investors have the opportunity to purchase the securities*. The securities are usually made available to the public at large by an investment-banking firm, which is a firm that specializes in helping other firms raise money. This process of

public offering a security offering in which all investors have the opportunity to acquire a portion of the financial claims being sold.

acting as an intermediary between an issuer of a security and the investing public is called underwriting, and the investment firm that does this is referred to as an underwriter. This is a very impersonal market, and the issuing firm never actually meets the ultimate purchasers of the securities.

private placement a security offering limited to a small number of potential investors.

In a **private placement**, also called a direct placement, the *securities are offered and sold directly to a limited number of investors*. The firm will usually hammer out, on a face-to-face basis with the prospective buyers, the details of the offering. In this setting, the investment-banking firm may act as a finder by bringing together potential lenders and borrowers. The private placement market is a more personal market than its public counterpart.

A venture capital firm is an example of investors who are active in the private placement market. A venture capital firm first *raises money from institutional investors and high net worth individuals, then pools the funds and invests in start-ups and early-stage companies* that have high-return potential but are also very risky investments. These companies are not appealing to the broader public markets owing to their (1) small absolute size, (2) very limited or nonexistent historical track record of operating results, (3) obscure growth prospects, and (4) inability to sell the stock easily or quickly. Most venture capitalists invest for 5 to 7 years, in the hopes of selling the firms or taking them public through an initial public offering.

PRINCIPLE 3

Because of the high risk, the venture capitalist will occupy a seat or seats on the young firm's board of directors and will take an active part in monitoring the company's management activities. *This situation should remind you of* **Principle 3: Risk Requires a Reward.**

Primary Markets Versus Secondary Markets

primary market a market in which securities are offered for the first time for sale to potential investors.

A **primary market** is *a market in which new, as opposed to previously issued, securities are traded.* For example, if Alphabet, Google's parent company, issues a new batch of stock, this issue would be considered a primary market transaction. In this case, Alphabet would issue new shares of stock and receive money from investors. The primary market is akin to the new car market. For example, the only time that Ford ever gets money for selling a car is the first time the car is sold to the public. The same is true with securities in the primary market. That's the only time the issuing firm ever gets any money for the securities, and it is the type of transaction that introduces new financial assets—for example, stocks and bonds—into the economy. *The first time a company issues stock to the public* is referred to as an **initial public offering** or **IPO**. For example, this is what this is what Snap (SNAP), the photo sharing company that runs Snapchat, did in 2017 when it first issued common stock to the public. This is also what happened with Google on August 19, 2004, when it first sold its common stock to the public. When Google went back to the primary market in September 2005 and sold more Google stock, it was considered a **seasoned equity offering,** or **SEO**. A seasoned equity offering is *the sale of additional shares by a company whose shares are already publicly traded* and is also called a secondary share offering.

initial public offering (IPO) the first time a company issues its stock to the public.

seasoned equity offering (SEO) the sale of additional stock by a company whose shares are already publicly traded.

secondary market a market in which currently outstanding securities are traded.

The **secondary market** is *where currently outstanding securities are traded*. You can think of it as akin to the used car market. If a person who bought some shares of the Google stock subsequently sells them, he or she does so in the secondary market. Those shares can go from investor to investor, and Google never receives any money when they are traded. In effect, all transactions after the initial purchase in the primary market take place in the secondary market. These sales do not affect the total amount of financial assets that exists in the economy.

The job of regulating the primary and secondary markets falls on the Security and Exchange Commission, or SEC. For example, before a firm can offer its securities for sale in the primary markets, it must register them with the SEC, and it is the job of the SEC to make sure that the information provided to investors is adequate and accurate. The SEC also regulates the secondary markets, making sure that investors are provided with enough accurate information to make intelligent decisions when buying and selling in the secondary markets.

The Money Market Versus the Capital Market

The key feature distinguishing the money and capital markets is the maturity period of the securities traded in them. The **money market** refers to *transactions in short-term debt instruments*, with "short-term" meaning maturity periods of 1 year or less. Short-term securities are generally issued by borrowers with very high credit ratings. The major instruments issued and traded in the money market are U.S. Treasury bills, various federal agency securities, bankers' acceptances, negotiable certificates of deposit, and commercial paper. Stocks, either common or preferred, are not traded in the money market. Keep in mind that the money market isn't a physical place. You do not walk into a building on Wall Street that has the words "Money Market" etched in stone over its arches. Rather, the money market is primarily a telephone and computer market.

As we explained, the capital market refers to the market for long-term financial instruments. "Long-term" here means having maturity periods that extend beyond 1 year. In the broad sense, this encompasses term loans, financial leases, and corporate stocks and bonds.

REMEMBER YOUR PRINCIPLES

In this chapter, we cover material that introduces the financial manager to the process involved in raising funds in the nation's capital markets and to the way interest rates in those markets are determined.

Without question the United States has a highly developed, complex, and competitive system of financial markets that allows for the quick transfer of savings from people and organizations with a surplus of savings to those with a savings deficit. Such a system of highly developed financial markets allows great ideas (such as the personal computer) to be financed and increases the overall wealth of the economy. Consider your wealth, for example, compared to that of the average family in Russia. Russia lacks the complex system of financial markets to facilitate securities transactions. As a result, real capital formation there has suffered.

Thus, we return now to **Principle 4: Market Prices Are Generally Right.** Financial managers like the U.S. system of capital markets because they trust it. This trust stems from the fact that the markets are efficient, and so prices quickly and accurately reflect all available information about the value of the underlying securities. This means that the expected risks and expected cash flows matter more to market participants than do simpler things such as accounting changes and the sequence of past price changes in a specific security. With security prices and returns (such as interest rates) competitively determined, more financial managers (rather than fewer) participate in the markets and help ensure the basic concept of efficiency.

Spot Markets Versus Futures Markets

Cash markets are markets in which something sells today, right now, on the spot—in fact, cash markets are often called **spot markets**. **Futures markets** are markets in which you can *buy or sell something at some future date*—in effect, you sign a contract that states what you're buying, how much of it you're buying, at what price you're buying it, and when you will actually make the purchase. The difference between purchasing something in the spot market and purchasing it in the futures market is when it is delivered and when you pay for it. For example, say it is May right now and you need 250,000 euros in December. You could purchase 125,000 euros today in the spot market and another 125,000 euros in the futures market for delivery in December. You get the euros you purchased in the spot market today, and you get the euros you purchased in the futures market seven months later.

money market all institutions and procedures that facilitate transactions for short-term instruments issued by borrowers with very high credit ratings.

spot market cash market.

futures markets markets in which you can buy or sell something at a future date.

Stock Exchanges: Organized Security Exchanges Versus Over-the-Counter Markets, a Blurring Difference

Many times markets are differentiated as being organized security exchanges or over-the-counter markets. Because of the technological advances over the past 10 years coupled with deregulation and increased competition, the difference between an organized exchange and the over-the-counter market has been blurred. Still, these remain important elements of the capital markets. **Organized security exchanges** are tangible entities; that is, they physically occupy space (such as a building or part of a building), and financial instruments are traded on their premises. The **over-the-counter markets** include all security markets except the organized exchanges. The money market, then, is an over-the-counter market because it doesn't occupy a physical location. Because both markets are important to financial officers concerned with raising long-term capital, some additional discussion is warranted.

organized security exchanges formal organizations that facilitate the trading of securities.

over-the-counter markets all security markets except organized exchanges. The money market is an over-the-counter market. Most corporate bonds also are traded in the over-the-counter market.

Today, the mechanics of trading have changed dramatically, and 80 to 90 percent of all trades are done electronically, blurring the difference between trading on an organized exchange versus trading on the over-the-counter market. Even if your stock is listed on the New York Stock Exchange (NYSE), the odds are that it won't be executed on the floor of the exchange, but rather will be executed electronically in the maze of computers that make up the global trading network. In effect, today there is little difference between how a security is traded on an organized security exchange versus the over-the-counter market.

Organized Security Exchanges The New York Stock Exchange is considered a national stock exchange, and in addition to it there are several others generally termed regional stock exchanges. If a firm's stock trades on a particular exchange, it is said to be listed on that exchange. Securities can be listed on more than one exchange. All of these active exchanges are registered with the SEC. Firms whose securities are traded on the registered exchanges must comply with the reporting requirements of both the specific exchange and the SEC.

The NYSE, also called the "Big Board," is the oldest of all the organized exchanges. Without question, the NYSE is the big player, with the total value of the shares of stock listed in 2018 at over $22 trillion. Today, the NYSE is a hybrid market, allowing for face-to-face trading between individuals on the floor of the stock exchange in addition to automated, electronic trading. As a result, during times of extreme flux in the market, at the opening or close of the market, or on large trades, human judgment can be called on to make sure that the trade is executed appropriately.

Over-the-Counter Markets Many publicly held firms either don't meet the listing requirements of the organized stock exchanges or simply would rather be listed on NASDAQ, which is an electronic stock exchange. In effect, NASDAQ is a computerized system that provides price quotes on over 5,000 over-the-counter stocks and also facilitates trades by matching up buyers and sellers. Recently, Facebook decided to list its stock on NASDAQ rather than the NYSE because of its lower fees and its expertise with technology companies.

Stock Exchange Benefits Both corporations and investors enjoy several benefits provided by the existence of organized security exchanges, including:

1. **Providing a continuous market** This may be the most important function of an organized security exchange. A continuous market provides a series of continuous security prices. Price changes from trade to trade tend to be smaller than they would be in the absence of organized markets. The reasons are that there is a relatively large sales volume of each security traded, trading orders are executed quickly, and the range between the price asked for a security and the offered price tends to be narrow. The result is that price volatility is reduced.
2. **Establishing and publicizing fair security prices** An organized exchange permits security prices to be set by competitive forces. They are not set by negotiations off the floor of the exchange, where one party might have a bargaining advantage. The bidding process flows from the supply and demand underlying each security. This means the specific price of a security is determined in the manner of an auction. In addition, the security prices determined at each exchange are widely publicized.
3. **Helping business raise new capital** Because a continuous secondary market exists, it is easier for firms to float, or issue, new security offerings at competitively determined prices. This means that the comparative values of securities offered in these markets are easily observed.

Concept Check

1. Explain the difference between (a) public offerings and private placements, (b) primary markets and secondary markets, (c) the money market and the capital market, and (d) organized security exchanges and over-the-counter markets.
2. Name the benefits derived from the existence of stock exchanges.

Selling Securities to the Public

LO2 Understand how funds are raised in the capital market.

Most corporations do not raise long-term capital frequently. The activities of working capital management go on daily, but attracting long-term capital is, by comparison, episodic. The sums involved can be huge, so these situations are considered of great importance to financial managers. Because most managers are unfamiliar with the subtleties of raising long-term funds, they enlist the help of an expert, an investment banker. It is with the help of an **investment banker** serving as the underwriter that stocks and bonds are generally sold in the primary markets. The **underwriting** process involves the purchase and subsequent resale of a new security issue, with the risk of selling the new issue at a satisfactory price being assumed by the investment banker. *The difference between the price the corporation gets and the public offering price* is called the **underwriter's spread**.

investment banker a financial specialist who underwrites and distributes new securities and advises corporate clients about raising new funds.

underwriting the purchase and subsequent resale of a new security issue. The risk of selling the new issue at a satisfactory (profitable) price is assumed (underwritten) by the investment banker.

underwriter's spread the difference between the price the corporation raising money gets and the public offering price of a security.

Actually, we use the term *investment banker* to describe both the firm itself and the individuals who work for it in that capacity. Just what does this intermediary role involve? The easiest way to understand it is to look at the basic investment-banking functions.

Functions

The investment banker performs three basic functions: (1) underwriting, (2) distributing, and (3) advising.

Underwriting The term *underwriting* is borrowed from the field of insurance. It means *assuming a risk*. The investment banker assumes the risk of selling a security issued at a satisfactory price. A satisfactory price is one that generates a profit for the investment-banking house.

The procedure goes like this. The managing investment banker and its syndicate will buy the security issue from the corporation in need of funds. The **syndicate** is *a group of other investment bankers that is invited to help buy and resell the issue*. The managing house is the investment-banking firm that originated the business because its corporate client decided to raise external funds. On a specific day, the client that is raising capital is presented with a check from the managing house in exchange for the securities being issued. At this point the investment-banking syndicate owns the securities. The client has its cash, so it is immune from the possibility that the security markets might turn sour. That is, if the price of the newly issued security falls below that paid to the firm by the syndicate, the syndicate will suffer a loss. The syndicate, of course, hopes that the opposite situation will result. Its objective is to sell the new issue to the investing public at a price per security greater than its cost.

syndicate a group of investment bankers who contractually assist in the buying and selling of a new security issue.

Distributing Once the syndicate owns the new securities, it must get them into the hands of the ultimate investors. This is the distribution or selling function of investment banking. The investment banker may have branch offices across the United States, or it may have an informal arrangement with several security dealers who regularly buy a portion of each new offering for final sale. It is not unusual to have 300 to 400 dealers involved in the selling effort. The syndicate can properly be viewed as the security wholesaler, and the dealer organization can be viewed as the security retailer.

Advising The investment banker is an expert in the issuance and marketing of securities. A sound investment-banking house will be aware of prevailing market conditions and can relate those conditions to the particular type of security and the price at which it should be sold at a given time. For example, business conditions may be pointing to a future increase in interest rates, so the investment banker might advise the firm to issue its bonds in a timely fashion to avoid the higher interest rates that are forthcoming. The banker can analyze the firm's capital structure and make recommendations about what general source of capital should be issued. In many instances the firm will invite its investment banker to sit on the board of directors. This permits the banker to observe corporate activity and make recommendations on a regular basis.

Distribution Methods

Several methods are available to the corporation for placing new security offerings in the hands of investment bankers followed by final investors. The investment banker's role is different in each of these methods. (Sometimes, in fact, it is possible to bypass the investment banker.) These methods are described in this section; private placements, because of their importance, are treated later in the chapter .

A Negotiated Purchase In a negotiated underwriting, the firm that needs funds makes contact with an investment banker, and deliberations concerning the new issue begin. If all goes well, a *method* is negotiated for determining the price the investment banker and the syndicate will pay for the securities. For example, the agreement might state that the syndicate will pay $2 less than the closing price of the firm's common stock on the day before the offering date of a new stock issue. The negotiated purchase is the most prevalent method of securities distribution in the private sector. It is generally thought to be the most profitable technique as far as investment bankers are concerned.

A Competitive Bid Purchase The method by which the underwriting group is determined distinguishes the competitive bid purchase from the negotiated purchase. In a competitive underwriting, several underwriting groups bid for the right to purchase the new issue from the corporation that is raising funds. The firm does not directly select the investment banker. Instead, the investment banker that underwrites and distributes the issue is chosen by an auction process. The one willing to pay the greatest dollar amount per new security will win the competitive bid.

Most competitive bid purchases are confined to three situations, compelled by legal regulations: (1) railroad issues, (2) public utility issues, and (3) state and municipal bond issues. The argument in favor of competitive bids is that any undue influence of an investment banker over the firm is mitigated and the price received by the firm for each security should be higher. Thus, we would intuitively suspect that the cost of capital in a competitive bidding situation would be less than in a negotiated purchase situation. Evidence on this question, however, is mixed. One problem with the competitive bidding purchase as far as the fund-raising firm is concerned is that the benefits gained from the advisory function of the investment banker are lost. It may be necessary to use an investment banker for advisory purposes and then by law exclude the banker from the competitive bid process.

A Commission or Best-Efforts Basis Here, the investment banker acts as an agent rather than as a principal in the distribution process. The securities are *not* underwritten. The investment banker attempts to sell the issue in return for a fixed commission on each security actually sold. Unsold securities are then returned to the corporation. This arrangement is typically used for more speculative issues. The issuing firm may be smaller or less established than the banker would like. Because the underwriting risk is not passed on to the investment banker, this distribution method is less costly to the issuer than a negotiated or competitive bid purchase. On the other hand, the investment banker only has to give it his or her "best effort." A successful sale is not guaranteed.

privileged subscription the process of marketing a new security issue to a select group of investors.

A Privileged Subscription Occasionally, the firm may feel that a distinct market already exists for its new securities. When *a new issue is marketed to a definite and select group of investors*, it is called a **privileged subscription**. Three target markets are typically involved: (1) current stockholders, (2) employees, or (3) customers of the firm. Of these, distributions directed at current stockholders are the most prevalent. Such offerings are called *rights offerings*. In a privileged subscription, the investment banker may act only as a selling agent. It is also possible that the issuing firm and the investment banker might sign a *standby agreement*, which obligates the investment banker to underwrite the securities that are not purchased by the privileged investors.

A Dutch Auction As we explained at the beginning of the chapter, with a **Dutch auction**, investors first bid on the number of shares they would like to buy and the price they are willing to pay for them. Once all the bids are in, the prices that were bid along with the number of shares are ranked from the highest price to the lowest price. The selling price for the stock is then calculated as the highest price that allows for all the stock to be sold. Although Google really brought this method to the public's eye, it has been used by a number of other companies as well, including Overstock.com (OSTK) and Salon (SLNM). Figure 2-2 explains in more detail how a Dutch auction works.

Dutch auction a method of issuing securities (common stock) by which investors place bids indicating how many shares they are willing to buy and at what price. The price the stock is then sold for becomes the lowest price at which the issuing company can sell all the available shares.

A Direct Sale In a **direct sale** *the issuing firm sells the securities directly to the investing public without involving an investment banker*. Even among established corporate giants, this procedure is relatively rare. A variation of the direct sale involves the private placement of a new issue by the fund-raising corporation *without* the use of an investment banker as an intermediary. Texaco (now Chevron (CVX)), Mobil Oil (now ExxonMobil (XOM)), and International Harvester (now Navistar (NAV)) are examples of large firms that have followed this procedure.

direct sale the sale of securities by a corporation to the investing public without the services of an investment-banking firm.

More recently, Spotify, the streaming music company, tried something new—definitely not a traditional IPO, but probably closer to a direct sale than anything else. One big difference between what Spotify did and what is done in a traditional IPO is that Spotify did not issue new shares to raise new money. Instead, they opened Spotify stock for trading, which gave investors of all size an opportunity to own existing shares of what has until now been a privately held company. Spotify did this by listing its shares directly on a stock exchange without relying on underwriters to help assess demand and set a price. Once Spotify directly listed its stock on the New York Stock Exchange, the stock began trading, and it eventually settled on a price. The benefit to Spotify was that it saved bank fees and allowed executives to sell shares immediately (executives are generally barred from selling their stock for a period after the IPO). It also gave small investors a better shot at buying Spotify shares at the same price and time that large institutional investors do.

Private Debt Placements

Earlier we discussed the private placement market. Here we take a closer look at the debt side of the private placement market and how seasoned corporations use it as distinct from start-ups. Thus, when we talk of private placements in this section, we are focusing on debt contracts rather than stock offerings. This debt side of the private placement market makes up a significant portion of the total private market.

Private placements are an alternative to the sale of securities to the public or to a restricted group of investors through a privileged subscription. Any type of security can be privately placed (directly placed). The major investors in private placements are large financial institutions. Based on the volume of securities purchased, the three most important investor groups are (1) life insurance companies, (2) state and local retirement funds, and (3) private pension funds.

In arranging a private placement, the firm may (1) avoid the use of an investment banker and work directly with the investing institutions or (2) engage the services of an investment banker. If the firm does not use an investment banker, of course, it