

Eun / Resnick / Chuluun

International Financial Management



**Mc
Graw
Hill**

ninth edition

International Financial Management

Ninth Edition



The McGraw-Hill Education Series in Finance, Insurance, and Real Estate

FINANCIAL MANAGEMENT

Block, Hirt, and Danielsen
Foundations of Financial Management

Seventeenth Edition

Brealey, Myers, and Allen
Principles of Corporate Finance

Thirteenth Edition

Brealey, Myers, and Allen
Principles of Corporate Finance, Concise

Second Edition

Brealey, Myers, and Marcus
Fundamentals of Corporate Finance

Tenth Edition

Brooks
FinGame Online 5.0

Bruner, Eades, and Schill
Case Studies in Finance: Managing for Corporate Value Creation

Eighth Edition

Cornett, Adair, and Nofsinger
Finance: Applications and Theory

Fifth Edition

Cornett, Adair, and Nofsinger
M: Finance

Fourth Edition

DeMello
Cases in Finance

Third Edition

Grinblatt (editor)
Stephen A. Ross, Mentor: Influence through Generations

Grinblatt and Titman
Financial Markets and Corporate Strategy

Second Edition

Higgins
Analysis for Financial Management

Twelfth Edition

Ross, Westerfield, Jaffe, and Jordan

Corporate Finance

Twelfth Edition

Ross, Westerfield, Jaffe, and Jordan
Corporate Finance: Core Principles and Applications

Sixth Edition

Ross, Westerfield, and Jordan
Essentials of Corporate Finance

Tenth Edition

Ross, Westerfield, and Jordan
Fundamentals of Corporate Finance

Twelfth Edition

Shefrin
Behavioral Corporate Finance: Decisions That Create Value

Second Edition

INVESTMENTS

Bodie, Kane, and Marcus
Essentials of Investments

Eleventh Edition

Bodie, Kane, and Marcus
Investments

Twelfth Edition

Hirt and Block
Fundamentals of Investment Management

Tenth Edition

Jordan, Miller, and Dolvin
Fundamentals of Investments: Valuation and Management

Ninth Edition

Stewart, Piro, and Heisler
Running Money: Professional Portfolio Management

First Edition

Sundaram and Das
Derivatives: Principles and Practice

Second Edition

FINANCIAL INSTITUTIONS AND MARKETS

Rose and Hudgins
Bank Management and Financial Services

Ninth Edition

Rose and Marquis
Financial Institutions and Markets

Eleventh Edition

Saunders and Cornett
Financial Institutions Management: A Risk Management Approach

Tenth Edition

Saunders and Cornett
Financial Markets and Institutions

Seventh Edition

INTERNATIONAL FINANCE

Eun, Resnick, and Chuluun
International Financial Management

Ninth Edition

REAL ESTATE

Brueggeman and Fisher
Real Estate Finance and Investments

Sixteenth Edition

Ling and Archer
Real Estate Principles: A Value Approach

Fifth Edition

FINANCIAL PLANNING AND INSURANCE

Allen, Melone, Rosenbloom, and Mahoney
Retirement Plans: 401(k)s, IRAs, and Other Deferred Compensation Approaches

Twelfth Edition

Altfest
Personal Financial Planning

Second Edition

Harrington and Niehaus
Risk Management and Insurance

Second Edition

Kapoor, Dlabay, Hughes, and Hart
Focus on Personal Finance: An Active Approach to Help You Achieve Financial Literacy

Sixth Edition

Kapoor, Dlabay, Hughes, and Hart
Personal Finance

Thirteenth Edition

Walker and Walker
Personal Finance: Building Your Future

Second Edition



International Financial Management

Ninth Edition

Cheol S. Eun

Georgia Institute of Technology

Bruce G. Resnick

Wake Forest University

Tuugi Chuluun

Loyola University Maryland

**Mc
Graw
Hill**



INTERNATIONAL FINANCIAL MANAGEMENT, NINTH EDITION

Published by McGraw Hill LLC, 1325 Avenue of the Americas, New York, NY 10121. Copyright © 2021 by McGraw Hill LLC. All rights reserved. Printed in the United States of America. Previous editions © 2018, 2015, and 2012. No part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written consent of McGraw Hill LLC, including, but not limited to, in any network or other electronic storage or transmission, or broadcast for distance learning.

Some ancillaries, including electronic and print components, may not be available to customers outside the United States.

This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 LWI 24 23 22 21 20

ISBN 978-1-260-01387-0 (bound edition)

MHID 1-260-01387-1 (bound edition)

ISBN 978-1-260-78883-9 (loose-leaf edition)

MHID 1-260-78883-0 (loose-leaf edition)

Portfolio Manager: *Chuck Synovec*

Product Developer: *Allison McCabe-Carroll*

Marketing Manager: *Trina Mauer*

Content Project Managers: *Jill Eccher, George Theofanopoulos*

Buyer: *Sandy Ludovissy*

Design: *Matt Diamond*

Content Licensing Specialist: *Jacob Sullivan*

Cover Image: *alice-photo/Shutterstock*

Compositor: *SPi Global*

Printer: *LSC Communications*

All credits appearing on page or at the end of the book are considered to be an extension of the copyright page.

Library of Congress Cataloging-in-Publication Data

Names: Eun, Cheol S., author. | Resnick, Bruce G., author. | Chuluun, Tuugi, author.

Title: International financial management / Cheol Eun, Georgia Institute of Technology, Bruce G. Resnick, Wake Forest University, Tuugi Chuluun, Loyola University Maryland.

Description: Ninth Edition. | New York : McGraw-Hill Education, 2020. |

Revised edition of the authors' International financial management, [2018]

Identifiers: LCCN 2019049973 (print) | LCCN 2019049974 (ebook) |

ISBN 9781260013870 (paperback) | ISBN 9781260788860 (ebook)

Subjects: LCSH: International finance. | International business

enterprises—Finance. | Foreign exchange. | Financial institutions, International.

Classification: LCC HG3881 .E655 2020 (print) | LCC HG3881 (ebook) |

DDC 658.15/99—dc23

LC record available at <https://lcn.loc.gov/2019049973>

LC ebook record available at <https://lcn.loc.gov/2019049974>

The Internet addresses listed in the text were accurate at the time of publication. The inclusion of a website does not indicate an endorsement by the authors or McGraw Hill LLC, and McGraw Hill LLC does not guarantee the accuracy of the information presented at these sites.

To Elizabeth

C.S.E.

To Donna

B.G.R.

To Arig and Amur

T.C.

About the Authors

Cheol S. Eun,

Georgia Institute of Technology

Cheol S. Eun (Ph.D., NYU) is the Thomas R. Williams Chair and Professor of Finance at the Scheller College of Business, Georgia Institute of Technology. Before joining Georgia Tech, he taught at the University of Minnesota and the University of Maryland. He also taught at the Wharton School of the University of Pennsylvania, Korea Advanced Institute of Science and Technology (KAIST), Singapore Management University, and the Esslingen University of Technology (Germany) as a visiting professor. He has published extensively on international finance issues in such major journals as the *Journal of Finance*, *Journal of Financial Economics*, *JFQA*, *Journal of Banking and Finance*, *Journal of International Money and Finance*, *Management Science*, and *Oxford Economic Papers*. Also, he has served on the editorial boards of the *Journal of Banking and Finance*, *Journal of Financial Research*, *Journal of International Business Studies*, and *European Financial Management*. His research is widely quoted and referenced in various scholarly articles and textbooks in the United States as well as abroad.

Dr. Eun is the founding chair of the *Fortis/Georgia Tech Conference on International Finance*. The key objectives of the conference are to promote research on international finance and provide a forum for interactions among academics, practitioners, and regulators who are interested in vital current issues of international finance.

Dr. Eun has taught a variety of courses at the undergraduate, graduate, and executive levels, and was the winner of the Krowe Teaching Excellence Award at the University of Maryland. He also has served as a consultant to many national and international organizations, including the World Bank, Apex Capital, and the Korean Development Institute, advising on issues relating to capital market liberalization, global capital raising, international investment, and exchange risk management. In addition, he has been a frequent speaker at academic and professional meetings held throughout the world.

Bruce G. Resnick,

Wake Forest University

Bruce G. Resnick is Professor Emeritus of Finance at the Wake Forest University School of Business in Winston-Salem, North Carolina. Prior to retiring, he was the Joseph M. Bryan Jr. Professor of Banking and Finance. He has a D.B.A. in finance from Indiana University. Additionally, he has an M.B.A. from the University of Colorado and a B.B.A. from the University of Wisconsin-Oshkosh. Prior to coming to Wake

Forest, he taught at Indiana University for ten years, the University of Minnesota for five years, and California State University, Chico for two years. He has also taught as a visiting professor at Bond University, Gold Coast, Queensland, Australia, and at the Helsinki School of Economics and Business Administration in Finland. Additionally, he served as the Indiana University resident director at the Center for European Studies at Maastricht University, the Netherlands. He also served as an external examiner to the Business Administration Department of Singapore Polytechnic and as the faculty advisor on Wake Forest University study trips to Japan, China, and Hong Kong.

Dr. Resnick taught M.B.A. courses at Wake Forest University. He specialized in the areas of investments, portfolio management, and international financial management. Dr. Resnick's research interests include market efficiency studies of options and financial futures markets and empirical tests of asset pricing models. A major interest has been the optimal design of internationally diversified portfolios constructed to control for parameter uncertainty and exchange rate risk. In recent years, he has focused on information transmission in the world money markets and yield spread comparisons of domestic and international bonds. His research articles have been published in most of the major academic journals in finance. His research is widely cited by other researchers and textbook authors. He served as an associate editor for the *Journal of Financial Research*, *Emerging Markets Review*, *Journal of Economics and Business*, and the *Journal of Multinational Financial Management*.

Tuugi Chuluun,

Loyola University Maryland

Tuugi Chuluun is an Associate Professor of Finance at Sellinger School of Business and Management at Loyola University Maryland. Her research areas include international finance, corporate finance, and behavioral finance. She has published in journals such as *Journal of Banking and Finance*, *Financial Management*, *Journal of Corporate Finance*, *Journal of Economic Behavior and Organization*, and *Small Business Economics*. Her research has also been featured in magazines such as *The Economist* and *Forbes Mongolia* and on popular websites such as HBR.org and Inc.com. She holds a Ph.D. in Finance from Georgia Institute of Technology, a master's in Financial Economics and a bachelor's degree in Economics from Ohio University. Dr. Chuluun has taught a variety of undergraduate and graduate courses, including international finance, corporate finance, investments, microeconomics, and macroeconomics at Loyola University Maryland, Georgia Institute of Technology, and West Virginia University–Parkersburg, often incorporating innovative teaching practices. At Loyola University Maryland, she was selected as the EL MBA Program Distinguished Professor of the Year and received the Sellinger School STAR Award in Research. She has also received the Financial Management Association's Superior Faculty Advisor award.

Dr. Chuluun holds the Chartered Financial Analyst (CFA) designation. She is the former president of the CFA Society Baltimore, Maryland's largest membership organization for investment professionals, and has served on the board of the society since 2013. She was also the co-chair of the "Alpha and Gender Diversity Baltimore Conference 2018" that was designed to offer collaborative discussion on how gender diversity creates a competitive advantage for investment professionals and the broader finance industry. Dr. Chuluun was a Visiting Scholar at the Brookings Institution and has international consulting experience.

Preface

Our Reason for Writing this Textbook

We (Cheol and Bruce) have been teaching international financial management to undergraduates and M.B.A. students at Georgia Institute of Technology, Wake Forest University, and at other universities we have visited for more than three decades. During this time period, we conducted many research studies, published in major finance and statistics journals, concerning the operation of international financial markets. As one might imagine, in doing this we put together an extensive set of teaching materials that we used successfully in the classroom. As the years went by, we individually relied more on our own teaching materials and notes and less on any one of the major existing textbooks in international finance (most of which we tried at some point). In this Ninth Edition, we introduce Tuugi Chuluun from Loyola University Maryland, who joins us as a co-author and will continue the tradition we have established in offering up-to-date and timely coverage of the subject of international financial management.

As you may be aware, the scope and content of international finance have been fast evolving due to cycles of deregulations and regulations of financial markets, product innovations, and technological advancements. As capital markets of the world are becoming more integrated, a solid understanding of international finance has become essential for astute corporate decision making. Reflecting the growing importance of international finance as a discipline, we have seen a sharp increase in the demand for experts in the area in both the corporate and academic worlds.

In writing *International Financial Management*, Ninth Edition, our goal was to provide well-organized, comprehensive, and up-to-date coverage of the topics that take advantage of our many years of teaching and research in this area. We hope the text is challenging to students. This does not mean that it lacks readability. The text discussion is written so that a self-contained treatment of each subject is presented in a *user-friendly* fashion. The text is intended for use at both the advanced undergraduate and M.B.A. levels.

The Underlying Philosophy

Emphasis on the Basics

International Financial Management, Ninth Edition, like the first eight editions, is written based on two tenets: emphasis on the basics and emphasis on a managerial perspective.

We believe that any subject is better learned if one first is well grounded in the basics. Consequently, we initially devote several chapters to the fundamental concepts of international finance. After these are learned, the remaining material flows easily from them. We always bring the reader back, as the more advanced topics are developed, to their relationship to the fundamentals. By doing this, we believe students will be left with a framework for analysis that will serve them well when they need to apply this material in their careers in the years ahead.

We believe this approach has produced a successful textbook: *International Financial Management* is used in many of the best business schools in the world. Various editions

of the text have been translated into Chinese (in both traditional and simplified forms), Spanish, and Indonesian. In addition, local co-authors have assisted in preparing Canadian, Malaysian, and Indian adaptations.

Ninth Edition Organization

International Financial Management, Ninth Edition, has been completely updated. All data tables and statistics are the most current available when the text went to press. Additionally, the chapters incorporate several new International Finance in Practice boxes that contain real-world illustrations of chapter topics and concepts. In the margins below, we highlight specific changes in the Ninth Edition.

This part lays the macroeconomic foundation for all the topics to follow.

Recent economic developments such as the global financial crisis, sovereign debt crisis of Europe, and Brexit.

Updated coverage of monetary developments, including the euro zone crisis.

New presentation of balance of payments and updated balance of payments statistics.

Review of corporate governance systems in different countries, the Dodd-Frank Act, and managerial implications.

This part describes the market for foreign exchange and introduces currency derivatives that can be used to manage foreign exchange exposure.

Fully updated market data and two new International Finance in Practice boxes. Presentation of triangular arbitrage is reconstructed and enhanced with new examples.

Integrated coverage of key parity conditions and currency carry trade with fully updated market data and empirical evidence. A new International Finance in Practice box.

Fully updated market data and examples.

This part describes the various types of foreign exchange risk and discusses methods available for risk management.

Content is reorganized and new subsections comparing the hedging strategies are added for enhanced understanding of foreign currency transaction exposure management.

Conceptual and managerial analysis of economic exposure to currency risk.

Part ONE

Foundations of International Financial Management 1

- 1 Globalization and the Multinational Firm 3
- 2 International Monetary System 29
- 3 Balance of Payments 65
- 4 Corporate Governance Around the World 87

Part TWO

The Foreign Exchange Market, Exchange Rate Determination, and Currency Derivatives 117

- 5 The Market for Foreign Exchange 119
- 6 International Parity Relationships and Forecasting Foreign Exchange Rates 151
- 7 Futures and Options on Foreign Exchange 185

Part THREE

Foreign Exchange Exposure and Management 209

- 8 Management of Transaction Exposure 211
- 9 Management of Economic Exposure 241
- 10 Management of Translation Exposure 261

A Managerial Perspective

The text presentation never loses sight of the fact that it is teaching students how to make managerial decisions. *International Financial Management*, Ninth Edition, is founded in the belief that the fundamental job of the financial manager is to maximize shareholder wealth. This belief permeates the decision-making process we present from cover to cover. To reinforce the managerial perspective, we provide numerous real-world examples whenever appropriate.

Part FOUR World Financial Markets and Institutions 279	This part provides a thorough discussion of international financial institutions, assets, and marketplaces.
11 International Banking and Money Market 281	Fully updated market data and statistics. Updated discussion on Basel III capital adequacy standards. Updated discussion on the causes and consequences of the global financial crisis.
12 International Bond Market 321	Fully updated market data and a new International Finance in Practice box.
13 International Equity Markets 339	Fully updated market data, new examples, a new International Finance in Practice box, and updated discussion of empirical findings on cross-listing and ADRs.
14 Interest Rate and Currency Swaps 365	Introductory International Finance in Practice box rewritten to provide clarifying detail. Examples and exhibits reconstructed to enhance understanding of swap characteristics and uses.
15 International Portfolio Investment 385	Reorganized content, updated statistics, and expanded discussions of ETFs and industry, style, and factor portfolios.
Part FIVE Financial Management of the Multinational Firm 419	This part covers topics on financial management practices for the multinational firm.
16 Foreign Direct Investment and Cross-Border Acquisitions 421	Updated trends in cross-border investment and M&A deals. Updated political risk scores for countries.
17 International Capital Structure and the Cost of Capital 449	New analysis of home bias and the cost of capital around the world. Also, comparison of capital structure across countries.
18 International Capital Budgeting 477	APV model modified to recognize U.S. tax law change from a worldwide to a territorial taxation of foreign source income.
19 Multinational Cash Management 497	Updated examples and two new International Finance in Practice boxes.
20 International Trade Finance 509	Fully updated comparative national income tax rate table with updated examples. New discussion concerning the 2017 U.S. Tax Cuts and Jobs Act providing for territorial taxation system on certain foreign source income. Updated discussion and examples of applying foreign tax credits to foreign source income.
21 International Tax Environment and Transfer Pricing 521	

Key Features

EXAMPLE | 11.1: Rollover Pricing of a Eurocredit

Teltrex International can borrow \$3,000,000 at LIBOR plus a lending margin of 0.75 percent per annum on a three-month rollover basis from Barclays in London. Suppose that three-month LIBOR is currently 5.53 percent. Further suppose that over the second three-month interval LIBOR falls to 5.12 percent. How much will Teltrex pay in interest to Barclays over the six-month period for the Eurodollar loan?

Solution: $\$3,000,000 \times (.0553 + .0075)/4 + \$3,000,000 \times (.0512 + .0075)/4 = \$47,100 + \$44,025 = \$91,125$

Examples—These are integrated throughout the text, providing students with immediate application of the text concepts.

International Finance in Practice

Boxes—Selected chapters contain International Finance in Practice boxes. These real-world illustrations offer students a practical look at the major concepts presented in the chapter.



INTERNATIONAL FINANCE IN PRACTICE

Electronification of the Foreign Exchange Market

Technological advances ranging from greater processing power to instantaneous data transfer are transforming financial markets around the world, and the foreign exchange market is no exception. Currency traders dealing currencies on behalf of their clients by holding multiple telephone conversations and yelling into their phones is no longer the norm. The Bank for International Settlements⁵ suggests that more than 70 percent of spot trading since 2013 is executed electronically. According to the North American Foreign Exchange Volume Survey conducted by the Federal Reserve Bank of New York in October 2018, about 58 percent of all foreign exchange transactions and 62 percent of spot transactions in North America are executed

electronically instead of relying on traditional voice trading. For trades in some currency pairs, the share of electronic trade was even higher in October 2018 such as 63 percent and 71 percent for trading in U.S. dollars–British pounds and U.S. dollars–Singaporean dollars, respectively. Similarly, some large financial institutions nowadays almost exclusively rely on electronic trading. Automation is a development that goes hand in hand with electronification, and the Bank for International Settlements reports that an estimated 70 percent of orders on Electronic Broking Services (EBS) are now submitted by algorithms, rather than manually. This trend of increasing electronification is depicted in the figure below.

FX Electronic Trading Share (% of total monthly trades executed electronically)

In More Depth

European Option-Pricing Formula

In the last section, we examined a simple one-step version of binomial option-pricing model. Instead, we could have assumed the stock price followed a multiplicative binomial process by subdividing the option period into many subperiods. In this case, S_t and C_t could be many different values. When the number of subperiods into which the option period is subdivided goes to infinity, the European call and put pricing formulas presented in this section are obtained. Exact European call and put pricing formulas are:⁵

$$C_e = S_t e^{-i_e T} N(d_1) - E e^{-i_e T} N(d_2) \quad (7.12)$$

and

$$P_e = E e^{-i_e T} N(-d_2) - S_t e^{-i_e T} N(-d_1) \quad (7.13)$$

The interest rates i_e and i_d are assumed to be annualized and constant over the term-to-maturity T of the option contract, which is expressed as a fraction of a year.

Invoking IRP, where with continuous compounding $F_T = S_t e^{(i_d - i_e)T}$, C_e and P_e in Equations 7.12 and 7.13 can be, respectively, restated as:

$$C_e = [F_T N(d_1) - EN(d_2)]e^{-i_d T} \quad (7.14)$$

⁵The European option-pricing model was developed by Biger and Hull (1983), Garman and Kohlhagen (1983), and Grabbe (1983). The evolution of the model can be traced back to European option-pricing models developed by Merton (1973) and Black (1976).

In More Depth—Some topics are by nature more complex than others. The chapter sections that contain such material are indicated by the section heading “In More Depth” and are in *colored text*. These sections may be skipped without loss of continuity, enabling the instructor to easily tailor the reading assignments to the students. End-of-chapter Questions and Problems relating to the In More Depth sections of the text are also indicated by *blue type*.

QUESTIONS

1. How would you define *transaction exposure*? How is it different from economic exposure?
2. Discuss and compare hedging transaction exposure using the forward contract versus money market instruments. When do alternative hedging approaches produce the same result?
3. Discuss and compare the costs of hedging by forward contracts and options contracts.

PROBLEMS

The spreadsheet TRNSEXP.xls may be used in solving parts of problems 2, 3, 4, and 6.

1. Cray Research sold a supercomputer to the Max Planck Institute in Germany on credit and invoiced €10 million payable in six months. Currently, the six-month forward exchange rate is \$1.10/€ and the foreign exchange adviser for Cray Research predicts that the spot rate is likely to be \$1.05/€ in six months.
 - a. What is the expected gain/loss from a forward hedge?
 - b. If you were the financial manager of Cray Research, would you recommend

Questions and Problems—Each chapter contains a set of Questions and Problems. This material can be used by students on their own to test their understanding of the material, or as homework exercises assigned by the instructor. Questions and Problems relating to the In More Depth sections of the text are indicated by *blue type*.

Questions with Excel Software—An icon in the margin indicates that the end-of-chapter question is linked to an Excel program created by the authors. See the Ancillary Materials section for more information on the software.



CFA Questions—Many chapters include problems from CFA Program Curriculum study materials. These CFA problems, indicated with the CFA logo, show students the relevancy of what is expected of certified professional analysts.



Case Applications—Case Applications are incorporated within selected chapters throughout the text in order to enhance specific topics and help students apply theories and concepts to real-world situations.

CASE APPLICATION

Richard May's Options

It is Tuesday afternoon, February 14, 2012. Richard May, Assistant Treasurer at American Digital Graphics (ADG), sits in his office on the 34th floor of the building that dominates Rockefeller Plaza's west perimeter. It's Valentine's Day, and Richard and his wife have dinner reservations with another couple at Balthazar at 7:30. I must get this hedging memo done, thinks May, and get out of here. Foreign exchange options? I had better get the story straight before someone in the Finance Committee starts asking questions. Let's see, there are two ways in which I can envision us using options now. One is to hedge a dividend due on September 15th from ADG Germany. The other is to hedge our upcoming payment to Matsumerda for their spring RAM chip statement. With the yen at 78 and increasing I'm glad we haven't covered the payment so far, but now I'm getting nervous and I would like to protect my posterior. An option to buy yen on June 10 might be just the thing.

MINI CASE

Airbus' Dollar Exposure

Airbus sold an A400 aircraft to Delta Airlines, a U.S. company, and billed \$30 million payable in six months. Airbus is concerned about the euro proceeds from international sales and would like to control exchange risk. The current spot exchange rate is \$1.05/€ and the six-month forward exchange rate is \$1.10/€. Airbus can buy a six-month put option on U.S. dollars with a strike price of €0.95/\$ for a premium of €0.02 per U.S. dollar. Currently, six-month interest rate is 2.5 percent in the euro zone and 3.0 percent in the United States.

1. Compute the guaranteed euro proceeds from the American sale if Airbus decides to hedge using a forward contract.
2. If Airbus decides to hedge using money market instruments, what action does Airbus need to take? What would be the guaranteed euro proceeds from the American sale in this case?
3. If Airbus decides to hedge using put options on U.S. dollars, what would be the "expected" euro proceeds from the American sale? Assume that Airbus regards the current forward exchange rate as an unbiased predictor of the future spot exchange rate.
4. At what future spot exchange do you think Airbus will be indifferent between the option and money market hedge?

Mini Cases—Almost every chapter includes a mini case for student analysis of multiple concepts covered throughout the chapter. These Mini Case problems are real world in nature to show students how the theory and concepts in the textbook relate to the everyday world.

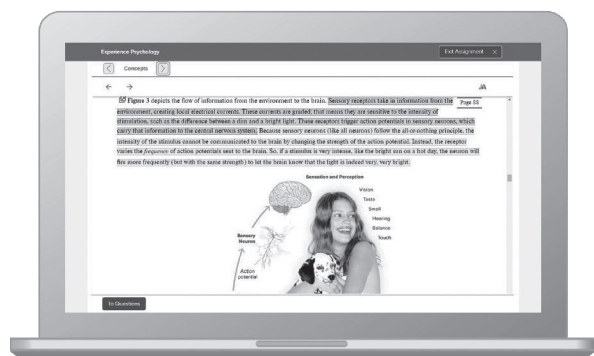
FOR INSTRUCTORS

You're in the driver's seat.

Want to build your own course? No problem. Prefer to use our turnkey, prebuilt course? Easy. Want to make changes throughout the semester? Sure. And you'll save time with Connect's auto-grading too.

65%

**Less Time
Grading**



Laptop: McGraw-Hill; Woman/dog: George Doyle/Getty Images

They'll thank you for it.

Adaptive study resources like SmartBook® 2.0 help your students be better prepared in less time. You can transform your class time from dull definitions to dynamic debates. Find out more about the powerful personalized learning experience available in SmartBook 2.0 at www.mheducation.com/highered/connect/smartbook

Make it simple, make it affordable.



Connect makes it easy with seamless integration using any of the major Learning Management Systems—Blackboard®, Canvas, and D2L, among others—to let you organize your course in one convenient location. Give your students access to digital materials at a discount with our inclusive access program. Ask your McGraw-Hill representative for more information.

Padlock: Jobalou/Getty Images

Solutions for your challenges.



A product isn't a solution. Real solutions are affordable, reliable, and come with training and ongoing support when you need it and how you want it. Our Customer Experience Group can also help you troubleshoot tech problems—although Connect's 99% uptime means you might not need to call them. See for yourself at **status.mheducation.com**

Checkmark: Jobalou/Getty Images

SUPPORT ^{AT}
every step

FOR STUDENTS

Effective, efficient studying.

Connect helps you be more productive with your study time and get better grades using tools like SmartBook 2.0, which highlights key concepts and creates a personalized study plan. Connect sets you up for success, so you walk into class with confidence and walk out with better grades.

Study anytime, anywhere.

Download the free ReadAnywhere app and access your online eBook or SmartBook 2.0 assignments when it's convenient, even if you're offline. And since the app automatically syncs with your eBook and SmartBook 2.0 assignments in Connect, all of your work is available every time you open it. Find out more at www.mheducation.com/readanywhere

"I really liked this app—it made it easy to study when you don't have your textbook in front of you."

- Jordan Cunningham,
Eastern Washington University



Calendar: owattaphotos/Getty Images

No surprises.

The Connect Calendar and Reports tools keep you on track with the work you need to get done and your assignment scores. Life gets busy; Connect tools help you keep learning through it all.

Learning for everyone.

McGraw-Hill works directly with Accessibility Services Departments and faculty to meet the learning needs of all students. Please contact your Accessibility Services office and ask them to email accessibility@mheducation.com, or visit www.mheducation.com/about/accessibility for more information.

Top: Jenner Images/Getty Images, Left: Hero Images/Getty Images, Right: Hero Images/Getty Images



Ancillary Materials

To assist in course preparation, the following instructor ancillaries are within the Instructor Library in Connect:

- **Solutions Manual**—Includes detailed suggested answers and solutions to the end-of-chapter questions and problems, written by the authors.
- **Test Bank**—True/false and multiple-choice test questions for each chapter prepared by Leslie Rush, University of Hawaii–West Oahu. Available as Word documents and assignable within Connect.
- **PowerPoint Presentations**—PowerPoint slides for each chapter to use in classroom lecture settings, created by Courtney Baggett, Troy University.

The resources also include the International Finance Software that can be used with this book. This Excel software has four main programs:

- A currency options pricing program allows students to price put and call options on foreign exchange.
- A hedging program allows students to compare forward, money market instruments, futures, and options for hedging exchange risk.
- A currency swap program allows students to calculate the cash flows and notional values associated with swapping fixed-rate debt from one currency into another.
- A portfolio optimization program based on the Markowitz model allows for examining the benefits of international portfolio diversification.

The four programs can be used to solve certain end-of-chapter problems (marked with an Excel icon) or assignments the instructor devises. A User's Manual and sample projects are included in the Instructor Resources.

Acknowledgments

We are indebted to the many colleagues who provided insight and guidance throughout the development process. Their careful work enabled us to create a text that is current, accurate, and modern in its approach. Among all who helped in this endeavor for the Ninth Edition:

Richard Ajayi
University of Central Florida

Lawrence A. Beer
Arizona State University

Nishant Dass
Georgia Institute of Technology

John Hund
Rice University

Irina Khindanova
University of Denver

Gew-rae Kim
University of Bridgeport

Jaemin Kim
San Diego State University

Yong-Cheol Kim
University of Wisconsin, Milwaukee

Yen-Sheng Lee
Bellevue University

Charmen Loh
Rider University

Atsuyuki Naka
University of New Orleans

Richard L. Patterson
Indiana University, Bloomington

Adrian Shopp
Metropolitan State University of Denver

John Wald
University of Texas at San Antonio

H. Douglas Witte
Missouri State University

Many people assisted in the production of this textbook. At the risk of overlooking some individuals, we would like to acknowledge Brian Conzachi for the outstanding job he did proofreading the entire manuscript. Additionally, we thank Yusri Zaro for his hard work checking the accuracy of the solutions manual. Marta Gaia Bras, Ernest Jang, Rohan-Rao Ganduri, Kristen Seaver, Milind Shrikhande, Jin-Gil Jeong, Sanjiv Sabherwal, Sandy Lai, Jinsoo Lee, Hyung Suk Choi, Teng Zhang, Minh Wang, and Victor Huang provided useful inputs into the text. Professor Martin Glaum of the Giessen University (Germany) also provided valuable comments.

We also wish to thank the many professionals at McGraw-Hill Education for their time and patience with us. Charles Synovec, executive brand manager; Allison McCabe-Carroll, senior product developer; and Jill Eccher, content project manager have done a marvelous job guiding us through this edition.

Last, but not least, we would like to thank our families, Christine, James, and Elizabeth Eun; Donna Resnick; and Puje Olkhanud, Maya Chuluun, and Dolgormaa Tsegmed, for their tireless love and support, without which this book would not have become a reality.

We hope that you enjoy using *International Financial Management*, Ninth Edition. In addition, we welcome your comments for improvement. Please let us know either through McGraw-Hill Education, c/o Editorial, or at our e-mail addresses provided below.

Cheol S. Eun

cheol.eun@scheller.gatech.edu

Bruce G. Resnick

resnicbg@wfu.edu

Tuugi Chuluun

tchuluun@loyola.edu

Contents in Brief

PART ONE	Foundations of International Financial Management
	<ul style="list-style-type: none"> 1 Globalization and the Multinational Firm, 3 2 International Monetary System, 29 3 Balance of Payments, 65 4 Corporate Governance Around the World, 87
PART TWO	The Foreign Exchange Market, Exchange Rate Determination, and Currency Derivatives
	<ul style="list-style-type: none"> 5 The Market for Foreign Exchange, 119 6 International Parity Relationships and Forecasting Foreign Exchange Rates, 151 7 Futures and Options on Foreign Exchange, 185
PART THREE	Foreign Exchange Exposure and Management
	<ul style="list-style-type: none"> 8 Management of Transaction Exposure, 211 9 Management of Economic Exposure, 241 10 Management of Translation Exposure, 261
PART FOUR	World Financial Markets and Institutions
	<ul style="list-style-type: none"> 11 International Banking and Money Market, 281 12 International Bond Market, 321 13 International Equity Markets, 339 14 Interest Rate and Currency Swaps, 365 15 International Portfolio Investment, 385
PART FIVE	Financial Management of the Multinational Firm
	<ul style="list-style-type: none"> 16 Foreign Direct Investment and Cross-Border Acquisitions, 421 17 International Capital Structure and the Cost of Capital, 449 18 International Capital Budgeting, 477 19 Multinational Cash Management, 497 20 International Trade Finance, 509 21 International Tax Environment and Transfer Pricing, 521
	<p>Glossary, 543</p> <p>Index, 550</p>

Contents

<p>PART ONE</p>	<p>Foundations of International Financial Management</p>
<p>CHAPTER 1 Globalization and the Multinational Firm, 3</p>	<p>What's Special about International Finance?, 4 <i>Foreign Exchange and Political Risks, 4</i> <i>Market Imperfections, 5</i> <i>Expanded Opportunity Set, 6</i> Goals for International Financial Management, 7 Globalization of the World Economy: Major Trends and Developments, 9 <i>Emergence of Globalized Financial Markets, 9</i> <i>Emergence of the Euro as a Global Currency, 10</i> <i>Europe's Sovereign Debt Crisis of 2010, 11</i> <i>Trade Liberalization and Economic Integration, 12</i> <i>Privatization, 15</i> <i>Global Financial Crisis of 2008–2009, 16</i> <i>Brexit, 18</i> Multinational Corporations, 19 Summary, 22 MINI CASE: Nike and Sweatshop Labor, 24 APPENDIX 1A: Gain from Trade: The Theory of Comparative Advantage, 26</p>
<p>CHAPTER 2 International Monetary System, 29</p>	<p>Evolution of the International Monetary System, 29 Bimetallism: Before 1875, 30 Classical Gold Standard: 1875–1914, 30 Interwar Period: 1915–1944, 32 Bretton Woods System: 1945–1972, 33 The Flexible Exchange Rate Regime: 1973–Present, 36 The Current Exchange Rate Arrangements, 38 European Monetary System, 43 The Euro and the European Monetary Union, 45 <i>A Brief History of the Euro, 45</i> <i>What Are the Benefits of Monetary Union?, 47</i> <i>Costs of Monetary Union, 48</i> <i>Prospects of the Euro: Some Critical Questions, 49</i> INTERNATIONAL FINANCE IN PRACTICE: Mundell Wins Nobel Prize in Economics, 50 The Mexican Peso Crisis, 52 The Asian Currency Crisis, 53 <i>Origins of the Asian Currency Crisis, 54</i> <i>Lessons from the Asian Currency Crisis, 56</i> The Argentine Peso Crisis, 57 The Rise of the Chinese Renminbi, 58 Fixed versus Flexible Exchange Rate Regimes, 59 Summary, 61 MINI CASE: Grexit or Not? 63</p>
<p>CHAPTER 3 Balance of Payments, 65</p>	<p>Balance of Payments Accounting, 65 Balance of Payments Accounts, 67 <i>The Current Account, 68</i> <i>The Capital Account, 69</i> <i>The Financial Account, 70</i> <i>Statistical Discrepancy, 72</i> <i>Official Reserve Account, 72</i> The Balance of Payments Identity, 76 Balance of Payments Trends in Major Countries, 76 INTERNATIONAL FINANCE IN PRACTICE: The Dollar and the Deficit, 78 Summary, 82 MINI CASE: Mexico's Balance of Payments Problem, 84 APPENDIX 3A: The Relationship between Balance of Payments and National Income Accounting, 86</p>

CHAPTER 4 Corporate Governance Around the World, 87

Governance of the Public Corporation:
Key Issues, 88
The Agency Problem, 89
Remedies for the Agency Problem, 91
 Board of Directors, 92
 Incentive Contracts, 92
INTERNATIONAL FINANCE IN PRACTICE: When Boards
Are All in the Family, 93
 Concentrated Ownership, 93
 Accounting Transparency, 95
 Debt, 95
 Shareholder Activism, 95
 Overseas Stock Listings, 96
 Market for Corporate Control, 97

Law and Corporate Governance, 97
Consequences of Law, 100
 Ownership and Control Pattern, 101
 Private Benefits of Control, 103
 Capital Markets and Valuation, 105
Corporate Governance Reform, 105
 Objectives of Reform, 106
 Political Dynamics, 106
 The Sarbanes-Oxley Act, 107
 The Cadbury Code of Best Practice, 108
 The Dodd-Frank Act, 109
Summary, 110
MINI CASE: Parmalat: Europe's Enron, 113

PART TWO

The Foreign Exchange Market, Exchange Rate Determination, and Currency Derivatives

CHAPTER 5 The Market for Foreign Exchange, 119

Function and Structure of the FX Market, 120
INTERNATIONAL FINANCE IN PRACTICE: Electronification of
the Foreign Exchange Market, 121
 FX Market Participants, 123
 Correspondent Banking Relationships, 125
INTERNATIONAL FINANCE IN PRACTICE: Chinese Yuan's Road to
Internationalization, 126
The Spot Market, 127
 Spot Rate Quotations, 128
 Cross-Exchange Rate Quotations, 130
 The Bid-Ask Spread, 131
 Spot FX Trading, 132
 The Cross-Rate Trading Desk, 133

Triangular Arbitrage, 135
 Spot Foreign Exchange Market Microstructure, 138
The Forward Market, 139
 Forward Rate Quotations, 139
 Long and Short Forward Positions, 140
 Forward Premium, 140
 Forward Cross-Exchange Rates, 141
 Non-Deliverable Forward Contracts, 142
 Swap Transactions, 143
Exchange-Traded Currency Funds, 145
Summary, 146
MINI CASE: Shrewsbury Herbal Products Ltd., 149

CHAPTER 6 International Parity Relationships and Forecasting Foreign Exchange Rates, 151

Interest Rate Parity, 151
 Covered Interest Arbitrage, 154
 *Interest Rate Parity and Exchange Rate
Determination*, 157
 Currency Carry Trade, 158
 *Reasons for Deviations from Interest
Rate Parity*, 159
Purchasing Power Parity, 161
 PPP Deviations and the Real Exchange Rate, 163
 Evidence on Purchasing Power Parity, 163
INTERNATIONAL FINANCE IN PRACTICE: The Big Mac Index
Shows Currencies Are Very Cheap against the
Dollar, 164

Fisher Effects, 168
Forecasting Exchange Rates, 170
 Efficient Market Approach, 171
 Fundamental Approach, 172
 Technical Approach, 173
 Performance of the Forecasters, 175
Summary, 177
MINI CASE: Turkish Lira and Purchasing
Power Parity, 182
APPENDIX 6A: Purchasing Power Parity and
Exchange Rate Determination, 184

CHAPTER 7 Futures and Options on Foreign Exchange, 185

Futures Contracts: Some Preliminaries, 186
 Currency Futures Markets, 188
 Basic Currency Futures Relationships, 189
 Options Contracts: Some Preliminaries, 193
 Currency Options Markets, 193
 Currency Futures Options, 194
 Basic Option-Pricing Relationships at
 Expiration, 194

American Option-Pricing Relationships, 197
 European Option-Pricing Relationships, 199
 Binomial Option-Pricing Model, 201
 European Option-Pricing Formula, 203
 Empirical Tests of Currency Options, 205
 Summary, 206
MINI CASE: The Options Speculator, 208

PART THREE

Foreign Exchange Exposure and Management

CHAPTER 8 Management of Transaction Exposure, 211

Three Types of Exposure, 211
 Should the Firm Hedge?, 212
 Hedging Foreign Currency Receivables, 214
 Forward Market Hedge, 214
 Money Market Hedge, 217
 Options Market Hedge, 218
 Comparison of Hedging Strategies, 220
 Hedging Foreign Currency Payables, 221
 Forward Market Hedge, 221
 Money Market Hedge, 221
 Options Market Hedge, 222
 Comparison of Hedging Strategies, 222

Cross-Hedging Minor Currency Exposure, 223
 Hedging Contingent Exposure, 224
 Hedging Recurrent Exposure with Swap
 Contracts, 225
 Hedging through Invoice Currency, 226
 Hedging via Lead and Lag, 226
 Exposure Netting, 227
 What Risk Management Products Do
 Firms Use?, 227
 Summary, 229
MINI CASE: Airbus' Dollar Exposure, 233
CASE APPLICATION: Richard May's Options, 233

CHAPTER 9 Management of Economic Exposure, 241

How to Measure Economic Exposure, 243
 Measuring Asset Exposure, 243
 Hedging Asset Exposure, 245
 Operating Exposure: Definition, 246
 Illustration of Operating Exposure, 247
 Determinants of Operating Exposure, 249
 Managing Operating Exposure, 251
 Selecting Low-Cost Production Sites, 252
 Flexible Sourcing Policy, 252

Diversification of the Market, 253
R&D Efforts and Product Differentiation, 253
Financial Hedging, 254
CASE APPLICATION: Exchange Risk Management
 at Merck, 254
 Summary, 256
MINI CASE: Economic Exposure of Albion
 Computers PLC, 258

CHAPTER 10 Management of Translation Exposure, 261

Translation Methods, 261
 Current/Noncurrent Method, 261
 Monetary/Nonmonetary Method, 262
 Temporal Method, 262
 Current Rate Method, 262
 Financial Accounting Standards Board
 Statement 8, 263
 Financial Accounting Standards Board
 Statement 52, 263
 *The Mechanics of the FASB 52 Translation
 Process*, 266
 Highly Inflationary Economies, 267
 International Accounting Standards, 267

CASE APPLICATION: Consolidation of Accounts
 According to FASB 52: The Centralia
 Corporation, 268
 Management of Translation Exposure, 271
 Translation Exposure versus Transaction Exposure, 271
 Hedging Translation Exposure, 272
 Balance Sheet Hedge, 272
 Derivatives Hedge, 273
 Translation Exposure versus Operating Exposure, 274
 Empirical Analysis of the Change from
 FASB 8 to FASB 52, 274
 Summary, 275
MINI CASE: Sundance Sporting Goods Inc., 277

PART FOUR**World Financial Markets and Institutions****CHAPTER 11****International
Banking and Money
Market, 281**

International Banking Services, 281
The World's Largest Banks, 282
 Reasons for International Banking, 283
 Types of International Banking Offices, 283
Correspondent Bank, 284
Representative Offices, 284
Foreign Branches, 284
Subsidiary and Affiliate Banks, 285
Edge Act Banks, 285
Offshore Banking Centers, 285
International Banking Facilities, 286
 Capital Adequacy Standards, 286
 International Money Market, 289
Eurocurrency Market, 289
ICE LIBOR, 291
Eurocredits, 292
Forward Rate Agreements, 293

INTERNATIONAL FINANCE IN PRACTICE: The Rotten Heart of Finance, 294

Euronotes, 296
Eurocommercial Paper, 296
Eurodollar Interest Rate Futures Contracts, 296

International Debt Crisis, 298

History, 298
Debt-for-Equity Swaps, 299
The Solution: Brady Bonds, 301

The Asian Crisis, 301

Global Financial Crisis, 302

The Credit Crunch, 302
Impact of the Financial Crisis, 306
Economic Stimulus, 308
The Aftermath, 309

Summary, 311

MINI CASE: Detroit Motors' Latin American Expansion, 316

APPENDIX 11A: Eurocurrency Creation, 318

CHAPTER 12**International Bond
Market, 321**

The World's Bond Markets: A Statistical Perspective, 321
 Foreign Bonds and Eurobonds, 321
Bearer Bonds and Registered Bonds, 322
National Security Regulations, 322
INTERNATIONAL FINANCE IN PRACTICE: Saudi Arabia Debuts on the International Bond Market, 323
Security Regulations That Ease Bond Issuance, 324
Global Bonds, 324
 Types of Instruments, 325
Straight Fixed-Rate Issues, 325
Euro-Medium-Term Notes, 325
Floating-Rate Notes, 325

Equity-Related Bonds, 326

Dual-Currency Bonds, 326

Currency Distribution, Nationality, and Type of Issuer, 327

International Bond Market Credit Ratings, 327

Eurobond Market Structure and Practices, 331

Primary Market, 331
Secondary Market, 332
Clearing Procedures, 333

International Bond Market Indexes, 333

Summary, 336

MINI CASE: Sara Lee Corporation's Eurobonds, 338

CHAPTER 13**International Equity
Markets, 339**

The World's Equity Markets: A Statistical Perspective, 339
Market Capitalization, 339
Market Liquidity, 342
Market Concentration, 342
 Market Structure, Trading Practices, and Costs, 342
Market Consolidations and Mergers, 346
 Trading in International Equities, 347
Cross-Listing of Shares, 347
Yankee Stock Offerings, 350
American Depositary Receipts, 350
Global Registered Shares, 353

Empirical Findings on Cross-Listing and ADRs, 355

International Equity Market Benchmarks, 356

iShares MSCI, 357

Factors Affecting International Equity Returns, 357

INTERNATIONAL FINANCE IN PRACTICE: Alibaba Sets IPO Record with NYSE Debut, 359

Macroeconomic Factors, 359
Exchange Rates, 360
Industrial Structure, 360

Summary, 361

MINI CASE: San Pico's New Stock Exchange, 363

CHAPTER 14

Interest Rate and Currency Swaps, 365

Types of Swaps, 365

INTERNATIONAL FINANCE IN PRACTICE: The World Bank's First Currency Swap, 366

Size of the Swap Market, 366

The Swap Bank, 367

Swap Market Quotations, 367

INTERNATIONAL FINANCE IN PRACTICE: Double-Crossed 368

Interest Rate Swaps, 369

Basic Interest Rate Swap, 369

Pricing the Basic Interest Rate Swap, 371

Currency Swaps, 372

Basic Currency Swap, 372

Equivalency of Currency Swap Debt Service Obligations, 374

Pricing the Basic Currency Swap, 375

A Basic Currency Swap Reconsidered, 375

Variations of Basic Interest Rate and Currency Swaps, 377

Risks of Interest Rate and Currency Swaps, 378

Is the Swap Market Efficient?, 378

Summary, 379

MINI CASE: The Centralia Corporation's Currency Swap, 384

CHAPTER 15

International Portfolio Investment, 385

International Correlation Structure and Risk Diversification, 386

Optimal International Portfolio Selection, 390

Effects of Changes in the Exchange Rate, 394

International Bond Investment, 397

International Diversification at Home, 399

International Diversification through International Mutual Funds, 399

International Diversification through Country Funds, 399

International Diversification through Exchange-Traded Funds, 401

International Diversification through ADRs, 401

International Diversification through Hedge Funds, 402

International Diversification with Industry, Style, and Factor Portfolios, 403

Why Home Bias in Portfolio Holdings? 405

Summary, 407

MINI CASE: Solving for the Optimal International Portfolio, 412

APPENDIX 15A: International Investment with Exchange Risk Hedging, 414

APPENDIX 15B: Solving for the Optimal Portfolio, 416

PART FIVE

Financial Management of the Multinational Firm

CHAPTER 16

Foreign Direct Investment and Cross-Border Acquisitions, 421

Global Trends in FDI, 422

Why Do Firms Invest Overseas?, 425

Trade Barriers, 425

Imperfect Labor Market, 425

Intangible Assets, 426

Vertical Integration, 427

INTERNATIONAL FINANCE IN PRACTICE: Linear Sequence in Manufacturing: Singer & Company, 428

Product Life Cycle, 428

Shareholder Diversification Services, 429

Cross-Border Mergers and Acquisitions, 430

Political Risk and FDI, 435

Summary, 442

MINI CASE: Enron versus Bombay Politicians, 444

CHAPTER 17

International Capital Structure and the Cost of Capital, 449

Cost of Capital, 449

Cost of Capital in Segmented versus Integrated Markets, 452

Does the Cost of Capital Differ among Countries?, 453

CASE APPLICATION: Novo Industri, 455

Cross-Border Listings of Stocks, 457

Capital Asset Pricing under Cross-Listings, 462

The Effect of Foreign Equity Ownership Restrictions, 464

Pricing-to-Market Phenomenon, 464

CASE APPLICATION: Nestlé, 465

Asset Pricing under Foreign Ownership Restrictions, 466

The Financial Structure of Subsidiaries, 469

Summary, 470

APPLICATION 17A: Pricing of Nontradable Assets: Numerical Simulations, 475

CHAPTER 18

International Capital Budgeting, 477

Review of Domestic Capital Budgeting, 478
 The Adjusted Present Value Model, 479
 Capital Budgeting from the Parent Firm's Perspective, 481
 Generality of the APV Model, 483
 Estimating the Future Expected Exchange Rate, 484
CASE APPLICATION: The Centralia Corporation, 484
 Risk Adjustment in the Capital Budgeting Analysis, 488

Sensitivity Analysis, 489
 Purchasing Power Parity Assumption, 489
 Real Options, 489
 Summary, 491
MINI CASE 1: Dorchester, Ltd., 493
MINI CASE 2: Strik-it-Rich Gold Mining Company, 494

CHAPTER 19

Multinational Cash Management, 497

The Management of International Cash Balances, 497
CASE APPLICATION: Teltrex's Cash Management System, 497
 Bilateral Netting of Internal and External Net Cash Flows, 502
 Reduction in Precautionary Cash Balances, 503

Cash Management Systems in Practice, 505
 Summary, 506
MINI CASE 1: Efficient Funds Flow at Eastern Trading Company, 507
MINI CASE 2: Eastern Trading Company's New MBA, 507

CHAPTER 20

International Trade Finance, 509

A Typical Foreign Trade Transaction, 509
 Forfaiting, 512
 Government Assistance in Exporting, 512
INTERNATIONAL FINANCE IN PRACTICE: Export-Import Bank in Limbo, 513
 The Export-Import Bank and Affiliated Organizations, 513

Countertrade, 514
 Forms of Countertrade, 515
INTERNATIONAL FINANCE IN PRACTICE: Guns and Sugar; The Defence Industry, 516
 Some Generalizations about Countertrade, 517
 Summary, 518
MINI CASE: American Machine Tools Inc., 519

CHAPTER 21

International Tax Environment and Transfer Pricing, 521

The Objectives of Taxation, 521
 Tax Neutrality, 521
 Tax Equity, 522
 Types of Taxation, 522
 Income Tax, 522
 Withholding Tax, 524
 Value-Added Tax, 524
 National Tax Environments, 526
 Worldwide Taxation, 526
 Territorial Taxation, 526
 Foreign Tax Credits, 527
 Organizational Structures, 527
 Branch and Subsidiary Income, 527
 Tax Havens, 528
 Controlled Foreign Corporation, 528

INTERNATIONAL FINANCE IN PRACTICE: On or Off? It's a Matter of Degree, 530
 Transfer Pricing and Related Issues, 530
CASE APPLICATION: Intel Products Transfer Pricing Strategy, 531
INTERNATIONAL FINANCE IN PRACTICE: Transfer Pricing: An Important International Tax Issue, 533
 Miscellaneous Factors, 536
INTERNATIONAL FINANCE IN PRACTICE: Wake Up and Smell the Coffee, 537
 Advance Pricing Agreement, 537
 Blocked Funds, 538
 Summary, 539
MINI CASE 1: Sigma Corp.'s Location Decision, 541
MINI CASE 2: Eastern Trading Company's Optimal Transfer Pricing Strategy, 542

Glossary, 543

Index, 550

PART ONE

- 1 Globalization and the Multinational Firm**
- 2 International Monetary System**
- 3 Balance of Payments**
- 4 Corporate Governance Around the World**

Foundations of International Financial Management

PART ONE lays the macroeconomic and institutional foundation for all the topics to follow. A thorough understanding of this material is essential for understanding the advanced topics covered in the remaining sections.

CHAPTER 1 provides an introduction to *International Financial Management*. The chapter discusses why it is important to study international finance and distinguishes international finance from domestic finance.

CHAPTER 2 introduces the various types of international monetary systems under which the world economy can function and has functioned at various times. The chapter traces the historical development of the world's international monetary systems from the early 1800s to the present. Additionally, a detailed discussion of the European Monetary Union is presented.

CHAPTER 3 presents balance of payment concepts and accounting. The chapter shows that even a country must keep its “economic house in order” or else it will experience current account deficits that will undermine the value of its currency.

CHAPTER 4 provides an overview of corporate governance around the world. Corporate governance structure varies greatly across countries, reflecting diverse cultural, economic, political, and legal environments.

1

Globalization and the Multinational Firm

What's Special about International Finance?

- Foreign Exchange and Political Risks
- Market Imperfections
- Expanded Opportunity Set

Goals for International Financial Management**Globalization of the World Economy: Major Trends and Developments**

- Emergence of Globalized Financial Markets
- Emergence of the Euro as a Global Currency
- Europe's Sovereign Debt Crisis of 2010
- Trade Liberalization and Economic Integration
- Privatization
- Global Financial Crisis of 2008–2009
- Brexit

Multinational Corporations**Summary****Key Words****Questions****Internet Exercises****MINI CASE:** Nike and Sweatshop Labor**References & Suggested Readings****APPENDIX 1A:** Gain from Trade: The Theory of Comparative Advantage

AS THE TITLE *International Financial Management* indicates, in this book we are concerned with financial management in an international setting. Financial management is mainly concerned with how to *optimally* make various corporate financial decisions, such as those pertaining to investment, financing, dividend policy, and working capital management, with a view to achieving a set of given corporate objectives. In Anglo-American countries as well as in many advanced countries with well-developed capital markets, maximizing shareholder wealth is generally considered the most important corporate objective.

Why do we need to study “international” financial management? The answer to this question is straightforward: We are now living in a highly **globalized and integrated world economy**. American consumers, for example, routinely purchase oil imported from Saudi Arabia and Nigeria, TV sets from Korea, automobiles from Germany and Japan, garments from China, shoes from Indonesia, handbags from Italy, and wine from France. Foreigners, in turn, purchase American-made aircraft, software, movies, jeans, smartphones, and other products. Continued liberalization of international trade is likely to further internationalize consumption patterns around the world.

Like consumption, production of goods and services has become highly globalized. To a large extent, this has happened as a result of multinational corporations' (MNCs) relentless efforts to source inputs and locate production anywhere in the world where costs are lower and profits are higher. For example, personal computers sold in the world market might have been

assembled in Malaysia with Taiwanese-made monitors, Korean-made keyboards, U.S.-made chips, and preinstalled software packages that were jointly developed by U.S. and Indian engineers. It has often become difficult to clearly associate a product with a single country of origin.

Recently, financial markets have also become highly integrated. This development allows investors to diversify their investment portfolios internationally. In 2018, for instance, U.S. investors collectively invested \$210 billion in foreign securities, such as stocks and bonds, whereas foreigners invested \$340 billion in U.S. securities.¹ In particular, Asian and Middle Eastern investors are investing heavily in U.S. and other foreign financial markets in efforts to recycle their large trade surpluses. In addition, many major corporations of the world, such as IBM, Toyota, and British Petroleum, have their shares cross-listed on foreign stock exchanges, thereby rendering their shares internationally tradable and gaining access to foreign capital as well. Consequently, Toyota's venture, say, in China can be financed partly by American investors who purchase Toyota shares traded on the New York Stock Exchange.

¹This information is from the U.S. Bureau of Economic Analysis.

Undoubtedly, we are now living in a world where all the major economic functions—consumption, production, and investment—are highly globalized. It is thus essential for financial managers to fully understand vital international dimensions of financial management. This *global shift* is in marked contrast to a few decades ago, when international aspects of finance were largely ignored.

What's Special about International Finance?

Although we may be convinced of the importance of studying international finance, we still have to ask ourselves, what's special about international finance? Put another way, how is international finance different from purely domestic finance (if such a thing exists)? Three major dimensions set international finance apart from domestic finance. They are:

1. Foreign exchange and political risks.
2. Market imperfections.
3. Expanded opportunity set.

As we will see, these major dimensions of international finance largely stem from the fact that sovereign nations have the right and power to issue currencies, formulate their own economic policies, impose taxes, and regulate movements of people, goods, and capital across their borders. Before we move on, let us briefly describe each of the key dimensions of international financial management.

Foreign Exchange and Political Risks

Suppose Mexico is a major export market for your company and the Mexican peso depreciates drastically against the U.S. dollar, as it did in December 1994. This means that your company's products can be priced out of the Mexican market, as the peso price of American imports will rise following the peso's fall. If such countries as Indonesia, Thailand, and Korea are major export markets, your company would have faced the same difficult situation in the wake of the Asian currency crisis of 1997. In integrated financial markets, individuals or households may also be seriously exposed to uncertain exchange rates. For example, since the EU accession, many Hungarians have borrowed in terms of the euro or Swiss franc to purchase houses. They were initially attracted by the easy availability and low interest rates for foreign currency mortgage loans. However, as the Hungarian currency, forint, was falling against the euro and Swiss franc during the recent global financial crisis, the burden of mortgage payments in terms of forint has increased sharply, forcing many borrowers to default. The preceding examples suggest that when firms and individuals are engaged in cross-border transactions, they are potentially exposed to **foreign exchange risk** that they would not normally encounter in purely domestic transactions.

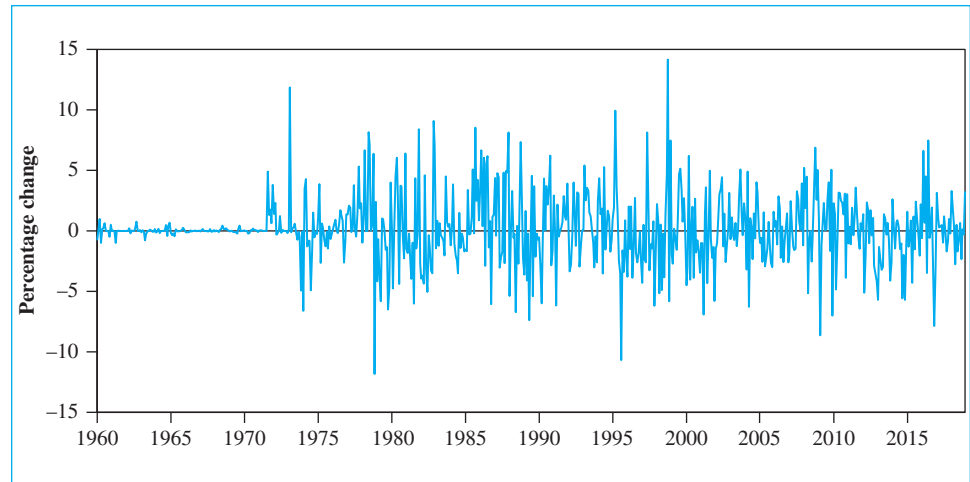
Currently, the exchange rates among such major currencies as the U.S. dollar, Japanese yen, British pound, and euro fluctuate continuously in an unpredictable manner. This has been the case since the early 1970s, when fixed exchange rates were abandoned. As can be seen from Exhibit 1.1, exchange rate volatility has exploded since 1973. Exchange rate uncertainty will have a pervasive influence on all the major economic functions, including consumption, production, and investment.

Another risk that firms and individuals may encounter in an international setting is political risk. **Political risk** ranges from unexpected changes in tax rules to outright expropriation of assets held by foreigners. Political risk arises from the fact that a sovereign country can change the "rules of the game" and the affected parties may not have effective recourse. In 1992, for example, the Enron Development Corporation, a subsidiary of a Houston-based energy company, signed a contract to build India's largest power plant. After Enron had spent nearly \$300 million, the project was canceled in 1995 by nationalist politicians in the Maharashtra state who argued India

<https://www.cia.gov/library/publications/the-world-factbook>
Website of *The World Factbook* published by the CIA provides background information, such as geography, government, and economy, of countries around the world.

EXHIBIT 1.1

Monthly Percentage Change in Japanese Yen–U.S. Dollar Exchange Rate



Source: Bank for International Settlements, *US dollar exchange rates*.

didn't need the power plant. For another example, in April 2012 the Argentine government nationalized a majority stake in YPF, the country's largest oil company, worth approximately \$10 billion, held by the Spanish parent company, Repsol, accusing the latter for underproducing oil in Argentina. Broadly, the seizure of YPF is a part of the campaign to bring strategic industries under government control. Both the Enron and Repsol episodes illustrate the difficulty of enforcing contracts in foreign countries.²

Multinational firms and investors should be particularly aware of political risk when they invest in those countries without a tradition of the rule of law. The meltdown of Yukos, the largest Russian oil company, provides a compelling example. Following the arrest of Mikhail Khodorkovsky, the majority owner and a critic of the government, on fraud and tax evasion charges, the Russian authorities forced Yukos into bankruptcy. The authorities sued the company for more than \$20 billion in back taxes and auctioned off its assets to cover the alleged tax arrears. This government action against Yukos, widely viewed as politically motivated, inflicted serious damage on international shareholders of Yukos, whose investment values were wiped out. It is important to understand that the property rights of shareholders and investors are not universally respected.

Market Imperfections

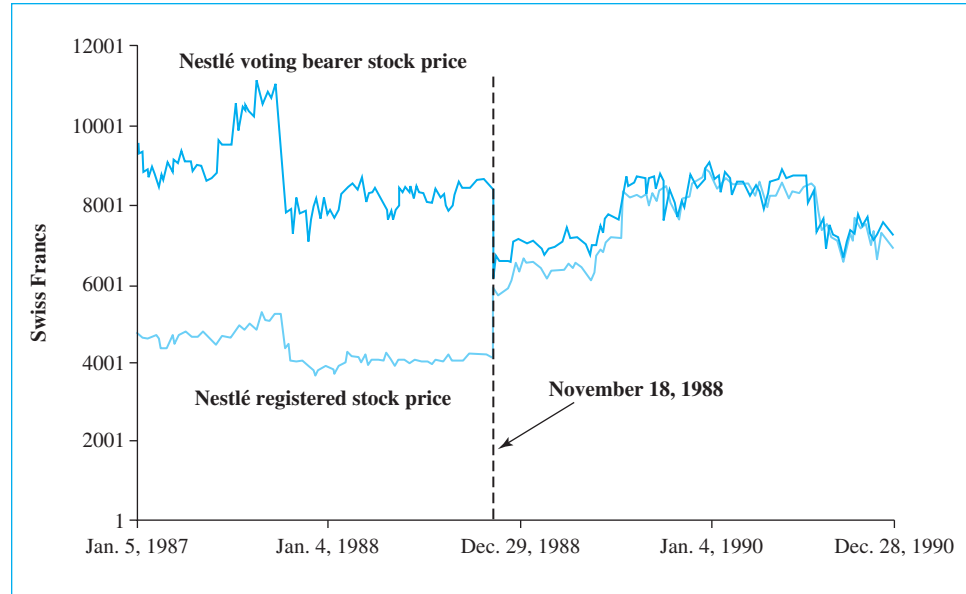
Although the world economy is much more integrated today than was the case 10 or 20 years ago, a variety of barriers still hamper free movements of people, goods, services, and capital across national boundaries. These barriers include legal restrictions, excessive transaction and transportation costs, information asymmetry, and discriminatory taxation. The world markets are thus highly imperfect. As we will discuss later in this book, **market imperfections**, which represent various frictions and impediments preventing markets from functioning perfectly, play an important role in motivating MNCs to locate production overseas. Honda, a Japanese automobile company, for instance, decided to establish production facilities in Ohio, mainly to circumvent trade barriers introduced by the U.S. government.

Imperfections in the world financial markets tend to restrict the extent to which investors can diversify their portfolios. An interesting example is provided by the Nestlé Corporation, a well-known Swiss MNC. Nestlé used to issue two different classes of common stock, bearer shares and registered shares, and foreigners were

²Since then, Enron has renegotiated the deal with the Maharashtra state while the Spanish government retaliated by restricting imports from Argentina.

EXHIBIT 1.2

Daily Prices of Nestlé's Bearer and Registered Shares



Source: Loderer, Claudio, and Andreas Jacobs. 1995. "The Nestlé Crash." *Journal of Financial Economics*, 37, no. 3: pp. 315–39, Elsevier Science S.A.

allowed to hold only bearer shares. As Exhibit 1.2 shows, bearer shares used to trade for about twice the price of registered shares, which were exclusively reserved for Swiss residents.³ This kind of price disparity is a uniquely international phenomenon that is attributable to market imperfections.

On November 18, 1988, however, Nestlé lifted restrictions imposed on foreigners, allowing them to hold registered as well as bearer shares. After this announcement, the price spread between the two types of Nestlé shares narrowed drastically. As Exhibit 1.2 shows, the price of bearer shares declined sharply, whereas that of registered shares rose sharply. This implies that there was a major transfer of wealth from foreign shareholders to domestic shareholders. Foreigners holding Nestlé bearer shares were exposed to political risk in a country that is widely viewed as a haven from such risk. The Nestlé episode illustrates both the importance of considering market imperfections in international finance and the peril of political risk.

Expanded Opportunity Set

When firms venture into the arena of global markets, they can benefit from an **expanded opportunity set**. As previously mentioned, firms can locate production in any country or region of the world to maximize their performance and raise funds in any capital market where the cost of capital is the lowest. In addition, firms can gain from greater economies of scale when their tangible and intangible assets are deployed on a global basis. A real-world example showing the gains from a global approach to financial management is provided by the following excerpt from *The Wall Street Journal* (April 9, 1996):

Another factor binding bond markets ever closer is large companies' flexibility to issue bonds around the world at will, thanks to the global swap market. At the vanguard are companies such as General Electric of the U.S. Mark VanderGriend, who runs the financing desk at Banque Paribas, says it took "about 15 minutes" to put together a four billion franc (\$791.6 million) deal for GE. By raising the money in francs and swapping into

³It is noted that bearer and registered shares of Nestlé had the same claims on dividends. Chapter 17 provides a detailed discussion of the Nestlé case.

dollars instantly, GE will save five hundredths of a percentage point—or about \$400,000 annually on the nine-year deal. “They have such a huge requirement for capital that they are constantly looking for arbitrages,” adds Mr. VanderGriend. “And they don’t care much how they get there.”

Individual investors can also benefit greatly if they invest internationally rather than domestically. Suppose you have a given amount of money to invest in stocks. You may invest the entire amount in U.S. (domestic) stocks. Alternatively, you may allocate the funds across domestic and foreign stocks. If you diversify internationally, the resulting international portfolio may have a lower risk or a higher return (or both) than a purely domestic portfolio. This can happen mainly because stock returns tend to covary less across countries than within a given country. Once you are aware of overseas investment opportunities and are willing to diversify internationally, you face a much expanded opportunity set and you can benefit from it. It just doesn’t make sense to play in only one corner of the sandbox. Thus, an important “normative” theme we will study throughout this book is: how to maximize the benefits from the global opportunity set, while judiciously controlling currency and political risks and managing various market imperfections.

Goals for International Financial Management

The foregoing discussion implies that understanding and managing foreign exchange and political risks and coping with market imperfections have become important parts of the financial manager’s job. *International Financial Management* is designed to provide today’s financial managers with an understanding of the fundamental concepts and the tools necessary to be effective global managers. Throughout, the text emphasizes how to deal with exchange risk and market imperfections, using the various instruments and tools that are available, while at the same time maximizing the benefits from an expanded global opportunity set.

Effective financial management, however, is more than the application of the newest business techniques or operating more efficiently. There must be an underlying goal. *International Financial Management* is written from the perspective that the fundamental goal of sound financial management is shareholder wealth maximization. **Shareholder wealth maximization** means that the firm makes all business decisions and investments with an eye toward making the owners of the firm—the shareholders—better off financially, or more wealthy, than they were before.

Whereas shareholder wealth maximization is generally accepted as the ultimate goal of financial management in “Anglo-Saxon” countries, such as Australia, Canada, the United Kingdom, and especially the United States, it is not as widely embraced a goal in other parts of the world. In countries like France and Germany, for example, shareholders are generally viewed as one of the “stakeholders” of the firm, others being employees, customers, suppliers, banks, and so forth. European managers tend to consider the promotion of the firm’s stakeholders’ overall welfare as the most important corporate goal. In Japan, on the other hand, many companies form a small number of interlocking business groups called *keiretsu*, such as Mitsubishi, Mitsui, and Sumitomo, which arose from consolidation of family-owned business empires. Although *keiretsu* have weakened in recent years, Japanese managers still tend to regard the prosperity and growth of their *keiretsu* as the critical goal; for instance, they tend to strive to maximize market share, rather than shareholder wealth.

It is pointed out, however, that as capital markets are becoming more liberalized and internationally integrated in recent decades, even managers in France, Germany, Japan, and other non-Anglo-Saxon countries are beginning to pay serious attention to shareholder wealth maximization. In Germany, for example, companies are now allowed to repurchase stocks, if necessary, for the benefit of shareholders. In accepting

an unprecedented \$203 billion takeover offer by Vodafone AirTouch in 2000, a leading British wireless phone company, Klaus Esser, CEO of Mannesmann of Germany, cited shareholder interests: “The shareholders clearly think that this company, Mannesmann, a great company, would be better together with Vodafone AirTouch. . . . The final decision belongs to shareholders.”⁴

Obviously, the firm could pursue other goals. This does not mean, however, that the goal of shareholder wealth maximization is merely an alternative, or that the firm should enter into a debate as to its appropriate fundamental goal. Quite the contrary. If the firm seeks to maximize shareholder wealth, it will most likely simultaneously be accomplishing other legitimate goals that are perceived as worthwhile. Shareholder wealth maximization is a long-run goal. A firm cannot stay in business to maximize shareholder wealth if it treats employees poorly, produces shoddy merchandise, wastes raw materials and natural resources, operates inefficiently, or fails to satisfy customers. Only a well-managed business firm that profitably produces what is demanded in an efficient manner can expect to stay in business in the long run and thereby provide employment opportunities.

While managers are hired to run the company for the interests of shareholders, there is no guarantee that they will actually do so. As shown by a series of corporate scandals at companies like Enron, WorldCom, Parmalat, and Global Crossing, managers may pursue their own private interests at the expense of shareholders when they are not closely monitored. This so-called agency problem is a major weakness of the public corporation. Extensive corporate malfeasance and accounting manipulations at these companies eventually drove them into financial distress and bankruptcy, devastating shareholders and employees alike. Lamentably, some senior managers and corporate insiders enriched themselves enormously in the process. Clearly, the boards of directors, the ultimate guardians of the interests of shareholders, failed to perform their duties at these companies. In the wake of these corporate calamities that have undermined the credibility of the free market system, the society has painfully learned the importance of **corporate governance**, that is, the financial and legal framework for regulating the relationship between a company’s management and its shareholders. Needless to say, the corporate governance problem is not confined to the United States. In fact, it can be a much more serious problem in many other parts of the world, especially emerging and transition economies, such as Indonesia, Korea, China, Italy, and Russia, where legal protection of shareholders is weak or virtually nonexistent.

As we will discuss in Chapter 4 in detail, corporate governance structure varies greatly across countries, reflecting different cultural, legal, economic, and political environments in different countries. In many countries where shareholders do not have strong legal rights, corporate ownership tends to be concentrated. The concentrated ownership of the firm, in turn, may give rise to the conflicts of interest between dominant shareholders (often the founding family) and small outside shareholders. The collapse of Parmalat, a family-controlled Italian company, in 2003 after decades of accounting frauds, provides an example of corporate governance risk. The company allegedly hid debts, “invented” assets, and diverted funds to bail out failing ventures of the family members. Because only the Tanzi (founding) family and close associates knew how the company was run, it was possible to hide the questionable practices for decades. Outside shareholders who collectively control a 49 percent stake did not know how Parmalat was operating. Franco Ferrarotti, professor of sociology at the University of Rome, was quoted as saying, “The government is weak, there is no sense of state, public services are bad and social services are weak. The family is so strong because it is the only institution that doesn’t let you down.”⁵

⁴*The New York Times*, February 4, 2000, p. C9.

⁵*USA Today*, February 4, 2004, p. 2B.

Shareholders are the owners of the business; it is their capital that is at risk. It is only equitable that they receive a fair return on their investment. Private capital may not have been forthcoming for the business firm if it had intended to accomplish any other objective. As we will discuss shortly, the massive privatization that has been taking place in developing and formerly socialist countries, which will eventually enhance the standard of living of these countries' citizens, depends on private investment. It is thus vitally important to strengthen corporate governance so that shareholders receive fair returns on their investments. In what follows, we are going to discuss in detail: (i) the globalization of the world economy and (ii) the growing role of MNCs in the world economy.

Globalization of the World Economy: Major Trends and Developments

The term “globalization” became a popular buzzword for describing business practices in the last few decades, and it appears as if it will continue to be a key word for describing business management throughout the current century. In this section, we review several key trends and developments of the world economy: (i) the emergence of globalized financial markets, (ii) the emergence of the euro as a global currency, (iii) Europe's sovereign debt crisis of 2010, (iv) continued trade liberalization and economic integration, (v) large-scale privatization of state-owned enterprises, (vi) the global financial crisis of 2008–2009, and (vii) Brexit.

Emergence of Globalized Financial Markets

The 1980s and 90s saw a rapid integration of international capital and financial markets. The impetus for globalized financial markets initially came from the governments of major countries that had begun to deregulate their foreign exchange and capital markets. For example, in 1980 Japan deregulated its foreign exchange market, and in 1985 the Tokyo Stock Exchange admitted as members a limited number of foreign brokerage firms. Additionally, the London Stock Exchange (LSE) began admitting foreign firms as full members in February 1986.

Perhaps the most celebrated deregulation, however, occurred in London on October 27, 1986, and is known as the “Big Bang.” On that date, as on “May Day” in 1975 in the United States, the London Stock Exchange eliminated fixed brokerage commissions. Additionally, the regulation separating the order-taking function from the market-making function was eliminated. In Europe, financial institutions are allowed to perform both investment-banking and commercial-banking functions. Hence, the London affiliates of foreign commercial banks were eligible for membership on the LSE. These changes were designed to give London the most open and competitive capital markets in the world. It has worked, and today the competition in London is especially fierce among the world's major financial centers. The United States repealed the Glass-Steagall Act, which restricted commercial banks from investment banking activities (such as underwriting corporate securities), further promoting competition among financial institutions. Even developing countries such as Chile, Mexico, and Korea began to liberalize by allowing foreigners to directly invest in their financial markets.

Deregulated financial markets and heightened competition in financial services provided a natural environment for financial innovations that resulted in the introduction of various instruments. Examples of these innovative instruments include currency futures and options, multicurrency bonds, international mutual funds, country funds, exchange-traded funds (ETFs), and foreign stock index futures and options. Corporations also played an active role in integrating the world financial markets by listing their shares across borders. Such well-known non-U.S. companies as BHP Billiton, Petrobras, China Mobile, Novartis, Wipro, Honda Motor, BP, Korea Telecom, and UBS are directly listed and traded on the New York Stock Exchange. At the same

www.imf.org

Offers an overview of globalization and financial development.

time, U.S. firms such as IBM and GE are listed on the Frankfurt, London, and Paris stock exchanges. Such cross-border listings of stocks allow investors to buy and sell foreign shares as if they were domestic shares, facilitating international investments.⁶

Last but not least, advances in computer and telecommunications technology contributed in no small measure to the emergence of global financial markets. These technological advancements, especially Internet-based information technologies, gave investors around the world immediate access to the most recent news and information affecting their investments, sharply reducing information costs. Also, computerized order-processing and settlement procedures have reduced the costs of international transactions. Based on the U.S. Department of Commerce computer price deflator, the relative cost index of computing power declined from a level of 100 in 1960 to 15.6 in 1970, 2.9 in 1980, and only 0.5 by 1999. As a result of these technological developments and the liberalization of financial markets, cross-border financial transactions have exploded in recent years.

Emergence of the Euro as a Global Currency

The advent of the euro at the start of 1999 represents a momentous event in the history of the world financial system that has profound ramifications for the world economy. Currently, more than 300 million Europeans in 19 countries (Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain) are using the common currency on a daily basis. No single currency has circulated so widely in Europe since the days of the Roman Empire. Considering that many new members of the EU, including the Czech Republic, Hungary, and Poland, may adopt the euro eventually, the **transactions domain** of the euro may become larger than that of the U.S. dollar in the future.

Once a country adopts the common currency, it obviously cannot have its own monetary policy. The common monetary policy for the euro zone is now formulated by the **European Central Bank (ECB)** that is located in Frankfurt and closely modeled after the Bundesbank, the German central bank. ECB is legally mandated to achieve price stability for the euro zone. Considering the sheer size of the euro zone in terms of population, economic output, and world trade share, the euro has a potential for becoming another global currency rivaling the U.S. dollar for dominance in international trade and finance. Reflecting the significance of the euro's introduction, Professor Robert Mundell, who is often referred to as the intellectual father of the euro, stated: "The creation of the euro area will eventually, but inevitably, lead to competition with the dollar area, both from the standpoint of excellence in monetary policy, and in the enlistment of other currencies."⁷ If the euro maintains its credibility, the world faces the prospect of a bipolar international monetary system.

Since its inception in 1999, the euro has already brought about revolutionary changes in European finance. For instance, by redenominating corporate and government bonds and stocks from many different currencies into the common currency, the euro has precipitated the emergence of continentwide capital markets in Europe that are comparable to U.S. markets in depth and liquidity. Companies all over the world can benefit from this development as they can raise capital more easily on favorable terms in Europe. In addition, the recent surge in European merger and acquisition (M&A) activities, cross-border alliances among financial exchanges, and lessening dependence on the banking sectors for capital raising are all manifestations of the profound effects of the euro.

⁶Various studies indicate that the liberalization of capital markets tends to lower the cost of capital. See, for example, Peter Henry, "Stock Market Liberalization, Economic Reform, and Emerging Market Equity Prices," *Journal of Finance* (2000), pp. 529–64.

⁷Source: Robert Mundell, 2000, "Currency Area, Volatility and Intervention," *Journal of Policy Modeling* 22 (3), pp. 281–99.

Since the end of World War I, the U.S. dollar has played the role of the dominant global currency, displacing the British pound. As a result, foreign exchange rates of currencies are often quoted against the dollar, and the lion's share of currency trading involves the dollar on either the buy or sell side. Similarly, international trade in primary commodities, such as petroleum, coffee, wheat, and gold, is conducted using the U.S. dollar as the invoice currency. Reflecting the dominant position of the dollar in the world economy, central banks of the world hold a major portion of their external reserves in dollars. The ascendance of the dollar reflects several key factors such as the dominant size of the U.S. economy, mature and open capital markets, price stability, and the political and military power of the United States. It is noted that the dominant global currency status of the dollar confers upon the United States many special privileges, such as the ability to run trade deficits without having to hold much in foreign exchange reserves, that is, "deficits without tears," and to conduct a large portion of international transactions in dollars, without bearing exchange risks. However, once economic agents start to use the euro in earnest as an invoice and reserve currency, the dollar may have to share the aforementioned privileges with the euro.

Europe's Sovereign Debt Crisis of 2010

The euro's emergence as a global currency, however, was dealt a serious setback in the midst of Europe's sovereign debt crisis. The crisis started in December 2009 when the new Greek government revealed that its budget deficit for the year would be 12.7 percent of GDP, not the 3.7 percent previously forecast. The previous government had falsified the national account data. Unbeknownst to the outside world, Greece was in a serious violation of Europe's stability pact, which limits the annual budget deficit of a euro-zone country to a maximum of 3 percent of GDP. This news surprised financial markets and prompted investors, who became worried about sovereign default, to sell off Greek government bonds. The Greek predicament is attributable to excessive borrowing and spending, with wages and prices rising faster than productivity. With the adoption of the euro, Greece can no longer use the traditional means of restoring competitiveness, that is, depreciation of the national currency.

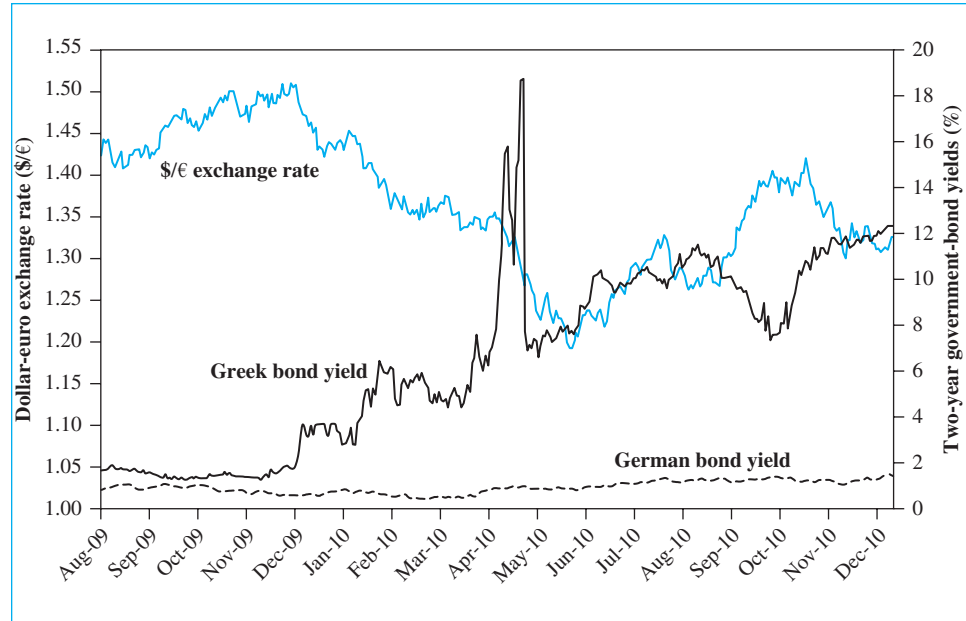
The panic spread to other weak European economies, especially Ireland, Portugal, and Spain. In the spring of 2010, both Standard & Poor's and Moody's, credit rating agencies, downgraded the government bonds of the affected countries, making borrowing and refinancing more costly. In particular, the Greek government bond was downgraded to "junk," ineligible for institutional investment. The unfolding "Greek drama" is illustrated in Exhibit 1.3, which plots the two-year government bond yields for Greece and Germany, as well as the dollar-euro exchange rate. As can be seen from the exhibit, Greece paid a minimal or practically nonexistent premium above the German interest rate until December 2009. This was possible owing to Greece's membership in the euro club. However, the Greek interest rate began to rise sharply thereafter, reaching 18.3 percent on May 7, 2010, before it fell following the announcement of the bailout package on May 9. Also, the specter of chaotic sovereign defaults led to a sharp fall of the euro's exchange value in currency markets.

The sovereign debt crisis in Greece, which accounts for only about 2.5 percent of euro-zone GDP, quickly escalated to a Europe-wide debt crisis, threatening the nascent recovery of the world economy from the severe global financial crisis of 2008–2009. Facing the spreading crisis, the European Union (EU) countries, led by France and Germany, jointly with the International Monetary Fund (IMF), put together a massive €750 billion package to bail out Greece and other weak economies. It is noted that Europe's lack of political union and fragmented decision-making structure made it slow and contentious for EU countries to reach agreement on the bailout plan, making the rescue more expensive than it may otherwise have been.

Europe's sovereign-debt crisis of 2010 revealed a profound weakness of the euro as the common currency: Euro-zone countries have achieved monetary integration by adopting the euro, but without fiscal integration. While euro-zone countries share the

EXHIBIT 1.3

The Greek Drama



Source: Bloomberg.

common monetary policy, fiscal policies governing taxation, spending, and borrowing firmly remain under the control of national governments. Hence, a lack of fiscal discipline in a euro-zone country can always become a Europe-wide crisis, threatening the value and credibility of the common currency. The long-term viability of the euro and its potential as a global currency thus critically depend on how this disparity between monetary and fiscal integration will be addressed. Regarding this challenge, Jean-Claude Trichet, former president of the European Central Bank (ECB), recently called for making a “quantum leap” in the euro zone’s economic governance and urged Europe to form a “fiscal confederation.” It remains to be seen whether Europe will be able to meet these challenges.

Trade Liberalization and Economic Integration

International trade, which has been the traditional link between national economies, has continued to expand. As Exhibit 1.4 shows, the ratio of goods exports to GDP for the world has increased from 7.0 percent in 1950 to 22.1 percent in 2017. This implies that, over the same time period, international trade increased nearly three times as fast as world GDP. For some countries, international trade grew much faster; for Germany, the ratio rose from 6.2 percent to 39.4 percent, while for Korea it grew from 1.0 percent to 37.5 percent over the same time period. Latin American countries such as Argentina, Brazil, and Mexico used to have relatively low export-to-GDP ratios. In 1973, for example, the export-to-GDP ratio was 2.1 percent for Argentina, 2.6 percent for Brazil, and 2.2 percent for Mexico. This reflects the inward-looking, protectionist economic policies these countries pursued in the past. Even these once-protectionist countries are now increasingly pursuing free-market and open-economy policies because of the gains from international trade. In 2017, the export-to-GDP ratio was 9.2 percent for Argentina, 10.6 percent for Brazil, and 35.6 percent for Mexico.

The principal argument for international trade is based on the **theory of comparative advantage**, which was advanced by David Ricardo in his seminal book, *Principles of Political Economy* (1817). According to Ricardo, it is mutually beneficial for countries if they specialize in the production of those goods they can produce most efficiently and trade those goods among them. Suppose England produces textiles most efficiently, whereas France produces wine most efficiently. It then makes sense if England specializes

EXHIBIT 1.4

**Long-Term Openness
in Perspective** (goods
exports/GDP, in percent)

Country	1870	1913	1929	1950	1973	2017
United States	2.5	3.7	3.6	3.0	5.0	8.0
Canada	12.0	12.2	15.8	13.0	19.9	25.5
Australia	7.4	12.8	11.2	9.1	11.2	17.4
United Kingdom	12.0	17.7	13.3	11.4	14.0	17.0
Germany	9.5	15.6	12.8	6.2	23.8	39.4
France	4.9	8.2	8.6	7.7	15.4	20.7
Spain	3.8	8.1	5.0	1.6	5.0	24.4
Japan	0.2	2.4	3.5	2.3	7.9	14.3
Korea, Rep.	0.0	1.0	4.5	1.0	8.2	37.5
Thailand	2.1	6.7	6.6	7.0	4.5	52.0
Argentina	9.4	6.8	6.1	2.4	2.1	9.2
Brazil	11.8	9.5	7.1	4.0	2.6	10.6
Mexico	3.7	10.8	14.8	3.5	2.2	35.6
World	5.0	8.7	9.0	7.0	11.2	22.1

Sources: Various issues of *World Financial Market*, JPMorgan; *World Development Indicators*, The World Bank; *International Trade Statistics* and *International Financial Statistics*, IMF.

in the production of textiles and France in the production of wine, and the two countries then trade their products. By doing so, the two countries can increase their combined production of textiles and wine, which, in turn, allows both countries to consume more of both goods. This argument remains valid even if one country can produce both goods more efficiently than the other country.⁸ Ricardo's theory has a clear policy implication: *Liberalization of international trade will enhance the welfare of the world's citizens.* In other words, international trade is not a "zero-sum" game in which one country benefits at the expense of another country—the view held by the "mercantilists." Rather, international trade could be an "increasing-sum" game at which all players become winners.

Although the theory of comparative advantage is not completely immune to valid criticism, it nevertheless provides a powerful intellectual rationale for promoting free trade among nations. Over the years, international trade has been liberalized at both the global and regional levels. At the global level, the **General Agreement on Tariffs and Trade (GATT)**, which is a multilateral agreement among member countries, has played a key role in dismantling barriers to international trade. Since it was founded in 1947, GATT has been successful in gradually eliminating and reducing tariffs, subsidies, quotas, and other barriers to trade. Under the auspices of GATT, the Uruguay Round launched in 1986 aimed to (i) reduce import tariffs worldwide by an average of 38 percent, (ii) increase the proportion of duty-free products from 20 percent to 44 percent for industrialized countries, and (iii) extend the rules of world trade to cover agriculture, services such as banking and insurance, and intellectual property rights. It also created a permanent **World Trade Organization (WTO)** to replace GATT. The WTO has more power to enforce the rules of international trade. China joined the WTO in 2001. China's WTO membership further legitimized the idea of free trade. The latest round of talks, the Doha Round commenced at Doha, Qatar, in 2001, is still continuing. Its objective is to lower trade barriers around the world, promoting free trade between developed and developing countries. However, negotiations have stalled over a divide between the developed countries led by the United States, European Union, and Japan and the developing countries led by Brazil, China, and India. The main disagreements are over opening up agricultural and industrial markets of various countries and how to reduce rich countries' agricultural subsidies.

www.wto.org

The World Trade Organization website covers news and data about international trade development.

⁸Readers are referred to Appendix 1A for a detailed discussion of the theory of comparative advantage.

Inspired by Deng Xiaoping's pragmatic policies, that is, "to get rich is glorious," China began to implement market-oriented economic reforms in the late 1970s. Since then, the Chinese economy has grown rapidly, often at an astounding rate of 10 percent per annum, and in the process has lifted tens of millions of local citizens from poverty. China's impressive economic growth has been driven by burgeoning international trade and foreign direct investment. China's demand for natural resources, capital goods, and technologies, in turn, has boosted exports to China from the rest of the world. India has also joined China in recent years in opening its economy and attracting foreign investment. India has implemented its own market-oriented reforms since the early 1990s, gradually dismantling the "license-raj" or quota system in all economic spheres and encouraging private entrepreneurship. As is well known, India has emerged as the most important center for outsourcing information technology (IT) services, back-office support, and research and development (R&D) functions. The huge supplies of labor, highly skilled and disciplined, in China and India are bound to alter the structure of the world economy in a major way. China already is the second largest economy in the world, second only to the United States. India, on the other hand, is the third largest economy ahead of Japan in terms of purchasing power. The importance of China and India is likely to grow further, profoundly altering the pattern of international production, trade, and investment.

On the regional level, formal arrangements among countries have been instituted to promote economic integration. The **European Union (EU)** is a prime example. The European Union is the direct descendant of the European Community (formerly the European Economic Community), which was established to foster economic integration among the countries of Western Europe. Today the EU includes 28 member states that have eliminated barriers to the free flow of goods, capital, and people. The member states of the EU hope this move will strengthen its economic position relative to the United States, China, and Japan. In January 1999, 11 member countries of the EU successfully adopted a single common currency, the euro, which may potentially rival the U.S. dollar as a dominant currency for international trade and investment. Greece joined the euro club in January 2001. Subsequently, 7 more EU member countries—Cyprus, Estonia, Latvia, Lithuania, Malta, Slovenia, and Slovakia—adopted the euro. The launch of the euro has spurred a rush by European companies into seeking pan-European and global alliances. M&A deals in Europe have become comparable to the figure for U.S. deals in recent years.

Whereas the economic and monetary union planned by the EU is one of the most advanced forms of economic integration, a free trade area is the most basic. In 1994, Canada, the United States, and Mexico entered into the **North American Free Trade Agreement (NAFTA)**. Canada and Mexico are among the United States' largest trading partners. In a free trade area, most impediments to trade, such as tariffs and import quotas, are eliminated among members. The terms of NAFTA call for phasing out tariffs over a 15-year period. Many observers believe that NAFTA will foster increased trade among its members, resulting in an increase in the number of jobs and the standard of living in all member countries. It is interesting to note from Exhibit 1.4 that for Mexico, the ratio of export to GDP has increased dramatically from 2.2 percent in 1973 to 35.6 percent in 2017. This dramatic increase in Mexico's propensity to trade should be attributed to NAFTA.⁹

www.lib.berkeley.edu/doemoff/govinfo/intl/gov_eu.html

The University of California at Berkeley library provides a web guide to resources related to the European Union.

⁹President Trump criticized NAFTA for contributing to U.S. trade deficits and opened renegotiation of the free trade agreement. In November 2018, the three member countries of NAFTA signed a new accord, called the U.S.-Mexico-Canada-Agreement (USMCA). The new accord calls for protection of environment and labor rights, modernizing protections of digital trade, restricting currency manipulation by governments, and raising the percentage of a car that needs to be manufactured in North America for tariff-free treatment.

Despite the prevailing talks on trade wars, two new free trade agreements were signed recently. In March 2018, a free trade area was created among 11 Pacific Rim countries—Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. These countries signed the Trans-Pacific Partnership (TPP) to slash tariffs and facilitate trade among the member countries. TPP adopted free and fair trade rules for 11 countries covering about 500 million people. The United States, however, withdrew from the pact citing Trump's America first philosophy. At about the same time the TPP was signed, 49 African countries signed the African Continental Free Trade Agreement (AfCFTA). AfCFTA, covering 1.2 billion people and a combined GDP of \$2.50 trillion, aims to stimulate intra-African trade and investment by reducing tariffs, protecting intellectual property rights, and lowering the barriers to migration. When AfCFTA becomes fully operational, it can play a critical role in promoting the growth and integration of African economies.

Privatization

The economic integration and globalization that began in the 1980s picked up speed in the 1990s via privatization. Through **privatization**, a country divests itself of the ownership and operation of a business venture by turning it over to the free market system. Privatization did not begin with the fall of the Berlin Wall; nevertheless, its pace has quickly accelerated since the collapse of communism in the Eastern Bloc countries. It is ironic that the very political and economic system that only a short while ago extolled the virtues of state ownership should so dramatically be shifting toward capitalism by shedding state-operated businesses. President Calvin Coolidge once said that the business of America is business. One might now say that business is the business of the world.

Privatization can be viewed in many ways. In one sense it is a denationalization process. When a national government divests itself of a state-run business, it gives up part of its national identity. Moreover, if the new owners are foreign, the country may simultaneously be importing a cultural influence that did not previously exist. Privatization is frequently viewed as a means to an end. One benefit of privatization for many less-developed countries is that the sale of state-owned businesses brings to the national treasury hard-currency foreign reserves. The sale proceeds are often used to pay down sovereign debt that has weighed heavily on the economy. Additionally, privatization is often seen as a cure for bureaucratic inefficiency and waste; some economists estimate that privatization improves efficiency and reduces operating costs by as much as 20 percent.

There is no one single way to privatize state-owned operations. The objectives of the country seem to be the prevailing guide. For the Czech Republic, speed was the overriding factor. To accomplish privatization en masse, the Czech government essentially gave away its businesses to the Czech people. For a nominal fee, vouchers were sold that allowed Czech citizens to bid on businesses as they went on the auction block. From 1991 to 1995, more than 1,700 companies were turned over to private hands. Moreover, three-quarters of the Czech citizens became stockholders in these newly privatized firms.

In Russia, there has been an “irreversible” shift to private ownership, according to the World Bank. More than 80 percent of the country's nonfarm workers are now employed in the private sector. Eleven million apartment units have been privatized, as have half of the country's 240,000 other business firms. Additionally, via a Czech-style voucher system, 40 million Russians now own stock in more than 15,000 medium- to large-size corporations that became privatized through mass auctions of state-owned enterprises.

In China, privatization has proceeded by way of listing state-owned enterprises (SOEs) on the organized exchanges, thereby making SOEs eligible for private ownership. In the early 1980s, China launched two stock exchanges—the Shanghai Stock

Exchange and the Shenzhen Stock Exchange—as a part of concerted efforts toward market-oriented reform. Since their inception, the Chinese stock markets have grown at a phenomenal pace, becoming some of the largest stock markets in Asia in terms of capitalization. As of 2018, approximately 3,600 companies are listed on China's stock exchanges. China's stock markets now play a vital role in privatization of SOEs, raising new capital for business investments and ventures, and propagating corporate ownership among citizens. Foreigners may also participate in the ownership of Chinese firms mainly by investing in the so-called B-shares listed on the Shanghai or Shenzhen stock exchanges or in those shares that are directly listed on the Hong Kong Stock Exchange (H-shares), New York Stock Exchange, or other international exchanges. It is noted that A-shares of Chinese firms are mostly reserved for domestic investors. While individual and institutional investors are now actively investing in Chinese shares, the Chinese government still retains the majority stakes in most public firms.

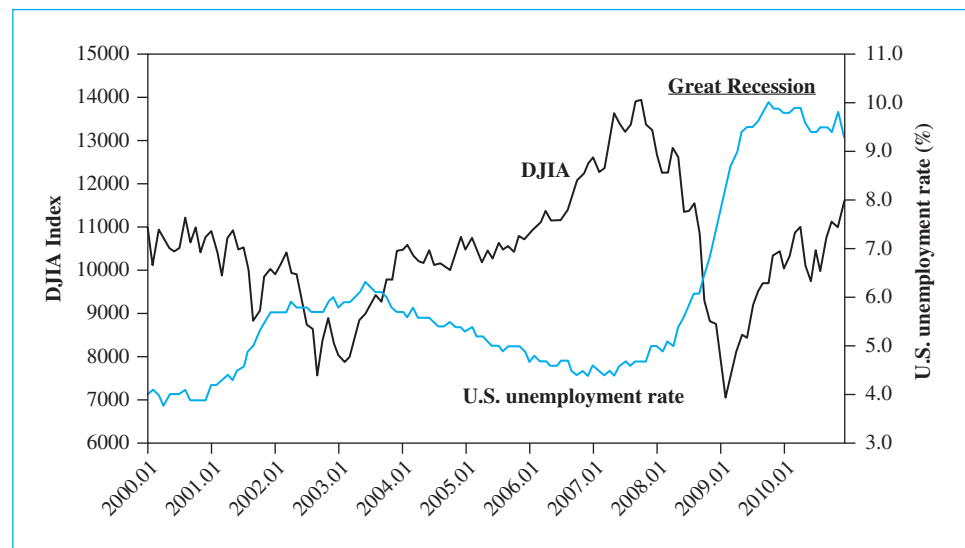
For some countries, privatization has meant globalization. For example, to achieve fiscal stability, New Zealand had to open its once-socialist economy to foreign capital. Australian investors now control its commercial banks, and U.S. firms purchased the national telephone company and timber operations. While workers' rights have changed under foreign ownership and a capitalist economy, New Zealand now ranks high among the most competitive market environments. Fiscal stability has also been realized. In 1994, New Zealand's economy grew at a rate of 6 percent and inflation was under control. As can be seen from the experiences of New Zealand, privatization has spurred a tremendous increase in cross-border investment.

Global Financial Crisis of 2008–2009

The subprime mortgage crisis in the United States that began in the summer of 2007 led to a severe credit crunch, making borrowing and refinancing difficult for households, firms, and banks. The credit crunch, in turn, escalated to a full-blown global financial crisis in 2008–2009. The defining moment of the crisis came on September 14, 2008, when Lehman Brothers, a major U.S. investment bank with a global presence, went bankrupt. The abrupt failure of an iconic U.S. bank touched off a major crisis of confidence in financial markets and institutions around the world. Stock prices fell precipitously. Output fell and unemployment rose sharply. As shown in Exhibit 1.5, the Dow Jones Industrial Average (DJIA), a popular U.S. stock market index, fell rapidly from a peak of 14,164 reached on October 9, 2007, to a trough of 7,062 on February 27, 2009, a 50 percent decline, while the U.S. unemployment rate

EXHIBIT 1.5

U.S. Unemployment Rate and Dow Jones Industrial Average (DJIA)



Source: Bloomberg.

began to rise from 4.4 percent in May 2007 to reach 10.1 percent in October 2009. At the same time, international trade has been shrinking rapidly. The crisis engulfed not only the advanced economies, such as the United States, Japan, and the European Union, but also many emerging economies, including Brazil, China, and Russia, albeit less severely. The world was sliding into the “Great Recession,” the most serious, synchronized economic downturn since the Great Depression.

Subprime mortgages are a financial instrument designed to facilitate home ownership for low and modest income households. Most subprime mortgages are adjustable-rate mortgages and are refinanced relatively frequently. Mortgage banks raise funds for making subprime loans mainly by securitization. Once subprime mortgage loans are originated, they are pooled and packaged into a variety of mortgage-backed securities and sold to various institutional investors in the United States and abroad. Subprime mortgages worked as designed while house prices were rising during 1996–2005. But as U.S. interest rates began to rise in early 2004 due to the tightening monetary policy of the Federal Reserve, house prices stopped rising and began to decline in 2006. Subsequently, subprime borrowers started to default, spreading risk among investors and eroding the bank capital base in the United States and abroad.

What caused the global financial crisis? While it still may be early to provide a definitive answer for this important question, it is possible to identify several factors that are likely to have contributed to the crisis. First, households and financial institutions borrowed too much and took too much risk. This excessive borrowing and risk taking is, in turn, attributable to the ample supply of liquidity and credit that is due to (i) the “easy money” policy of the Federal Reserve Bank, a legacy of its former chairman, Alan Greenspan, and also (ii) the massive inflow of foreign money associated with the recycling of trade surpluses of Asian countries, including China, Japan, and Korea, and the oil-exporting countries in the Middle East. Second, the crisis was amplified manyfold and transmitted globally by securitization. Securitization allows loan originators to avoid bearing the default risk, which leads to a compromised lending standard and increased moral hazard. Also, financial engineers designed opaque and complex mortgage-based securities that could be used for excessive risk-taking. These securities were traded infrequently and were often difficult to value. Third, the “invisible hands” of free markets apparently failed to self-regulate its excesses, contributing to the banking crisis. At the same time, “light touch” regulations by government agencies, such as the Securities and Exchange Commission (SEC) and the Federal Reserve, led to a failure to detect the rising risk in the financial system and to take regulatory actions in a timely fashion to prevent the crisis. This laissez-faire regulatory stance reflects the broad deregulation of the U.S. economy that has taken place since the 1980s. The repeal of the Glass-Steagall Act in 1999 is the *prima facie* example of the deregulatory trend in the United States. The Act, which was adopted in the wake of the Great Depression, built a firewall between commercial and investment banking activities. Its repeal may have encouraged banks to take risks excessively. Fourth, international financial markets are highly interconnected and integrated nowadays. Defaults of subprime mortgages in the United States came to threaten the solvency of the teachers’ retirement program in Norway as the latter invested in U.S. mortgage-backed securities. The U.S. government was compelled to rescue AIG, a U.S. insurance company, with a \$180 billion package, the most costly bailout of a single firm in history, as it feared that if AIG were allowed to fail, it might start a chain reaction of bankruptcies of AIG’s international counterparties that included Goldman Sachs, Deutsche Bank, Barclays, Union Bank of Switzerland (UBS), Société Générale, and Merrill Lynch. So AIG was found to be not only too big, but also too interconnected to fail. In the contemporary world economy, a local financial shock originating in a market can quickly be transmitted to other markets through contagion and other channels. No market or institution is an island in an integrated world.

Facing the severe credit crunch and economic downturn, the U.S. government took forceful actions to save the banking system and stimulate the economy. As a matter of fact, the government acted as the lender of last resort as well as the spender of last resort to keep the economy floating. Specifically, the Bush administration implemented Troubled Asset Relief Program (TARP), which was enacted in October 2008. Seven hundred billion dollars of the TARP fund were injected into the financial system to buy nonperforming assets and mortgage-related securities from banks and also to directly strengthen banks' capital reserves. The Obama administration, in turn, implemented an \$850 billion economic stimulus program to boost economic activities and create jobs. Many governments around the world, notably the U.K., France, Germany, China, and Korea, implemented similar stimulating measures. In addition, to prevent future financial crises and costly bailouts, the U.S. government adopted much tighter rules of finance in July 2010. Among other things, the new rules prohibit banks from making risky investments with their own money, which may endanger the core capital of banks. In addition, a new independent Consumer Financial Protection Bureau was set up to protect consumers from predatory lending. Also, a new Financial Stability Oversight Council of regulators chaired by the Treasury secretary would be responsible for carefully monitoring the **systemic risk** affecting the entire financial market.

Lastly, it is noteworthy that during the course of the global financial crisis of 2008–2009, the G-20, composed of both leading developed countries, such as Germany, Japan, and the United States, and major developing countries, such as Brazil, China, India, Korea, and South Africa, has emerged as the premier forum for discussing international economic issues and coordinating financial regulations and macroeconomic policies. We will revisit and discuss these and other related issues in greater detail in Chapter 11.

Brexit

Recently, the process of global and regional economic integration was dealt a major setback when the majority of Britons voted to leave the EU, the event known as **Brexit**. The former U.K. Prime Minister David Cameron originally promised the referendum in 2013 under political pressure from the Eurosceptic politicians of his own Conservative Party and the rising popularity of the U.K. Independence Party that was threatening the Conservative electoral base. The unexpected outcome of the British referendum, held on June 23, 2016, concerning the EU membership can mark the inflection point of the globalization process that has been taking place for the last 60 years or so. Brexit is likely to weaken the United Kingdom and the European Union, both economically and politically. Also, London's position as the dominant center of European finance may deteriorate if the U.K. loses unrestricted access to Europe's single market. In fact, one cannot completely discount the possibility that Brexit may trigger slow disintegration of the United Kingdom as a political entity.¹⁰ It may even threaten the integrity of the European Union in the long run if other member countries are tempted to consider their own exits.

It is ironic that Britain, the country that championed free trade and liberal capitalism, became the first country that voted to voluntarily leave the EU, the most ambitious globalization project. How could it happen? The answer for the question also seems a bit ironic: Brexit may happen in a way because globalization succeeded. As European integration was deepening, London emerged as the capital of European finance, tremendously benefiting London. But the rest of the country did not share much of the fruit of this success. It is instructive that although 60 percent of Londoners voted for remaining in the EU, only 45 percent of voters in the rest of England voted the same way. Basically, the majority of voters outside of London felt alienated from the globalized economy and were worried about competition for jobs from the immigrants.

¹⁰Given the relatively favorable sentiment for the EU in Scotland, Brexit may reignite the Scottish independence movement, which can lead to the reentry of Scotland to the EU if people so decide.

Following the victory of “Leavers” at the referendum, the U.K. Prime Minister Theresa May, who succeeded Cameron, began negotiation of the terms of Brexit with the EU. The key agreements with the EU reached after more than two years of protracted negotiation include: (i) a customs union between the United Kingdom and the EU until an alternative long-term relationship can be established; (ii) an end to free movement of people; and (iii) no hard border between Northern Ireland, a part of the (U.K.) and the Republic of Ireland. The first agreement implies that the U.K. cannot negotiate free trade agreements with other countries or regions in the near future, sharply restricting the sovereignty of the U.K. The second agreement would help the U.K. regain control of its borders and protect its national identity, but at the expense of exclusion of the country from the EU’s single market. The third agreement, on the other hand, may induce Northern Ireland to tilt toward the Republic of Ireland, a member of the EU, raising political instability in Northern Ireland. When May’s Brexit deal was brought to Parliament for vote in January 2019, it was decisively rejected, reflecting a severe division of opinions among members of Parliament. Subsequently, the deal was rejected twice more in March 2019. All alternative deals were also voted down. This logjam in Parliament reflects the difficulty of fully regaining the political sovereignty without sacrificing gains from economic integration. The Brexit deadline, which originally was set on March 29, had to be extended to October 31, 2019.

Brexit, which stems from the resentment of the majority against the urban elites who are seen as disproportionately benefiting from globalization and the fear of losing the British national identity, is really not an isolated phenomenon. In recent years, the similar populist nationalism has been gaining circulation and power in other countries as well, such as Hungary, Poland, Italy, Brazil, and the United States. The election of Donald Trump as the president of the United States and the “America first” policies of his administration can be attributable essentially to the same political forces. The so-called trade war between the United States and its major trading partners, especially China, that followed the inauguration of President Trump has cast shadows on the global economic growth and threatens the gains from global economic integration. Clearly, nation-states still provide a powerful cultural and political framework within which people define their identities.

Brexit thus revealed some of the serious difficulties associated with free trade and global integration that espouse free movements of goods, services, capital, and people across countries. Although international trade contributes a great deal to economic growth, lifting tens of millions of people from poverty around the world, it also produces clear winners and losers. As a result, unless losers are compensated by transfer payment and retraining for good jobs, free trade is likely to encounter political resistance. It is thus important for countries to promote and pursue “shared growth” to continue to benefit from free trade and economic integration and fend off protectionism. If protectionism wins over free trade as happened in the 1930s, everyone may end up losing. Free movement of people associated with global integration may also generate significant economic gains but, at the same time, can be perceived as diluting the national identity of the host countries, raising difficult questions. Countries and economic communities thus should carefully take into consideration this trade-off in formulating their immigration policies.

Multinational Corporations

In addition to international trade, foreign direct investment by MNCs is a major force driving globalization of the world economy. According to a UN report, there are about 60,000 MNCs in the world with over 500,000 foreign affiliates.¹¹ Since the 1990s,

¹¹The source for this information is the United Nations’ *World Investment Report*, various issues.

foreign direct investment by MNCs grew at the annual rate of about 10 percent. In comparison, international trade grew at the rate of 3.5 percent during the same period.

A **multinational corporation (MNC)** is a business firm incorporated in one country that has production and sales operations in many other countries. The term suggests a firm obtaining raw materials from one national market and financial capital from another, producing goods with labor and capital equipment in a third country, and selling the finished product in yet other national markets. Indeed, some MNCs have operations in dozens of different countries. MNCs obtain financing from major money centers around the world in many different currencies to finance their operations. Global operations force the treasurer's office to establish international banking relationships, place short-term funds in several currency denominations, and effectively manage foreign exchange risk.

Exhibit 1.6 lists the top 40 of the largest MNCs ranked by the size of foreign assets in 2017. The list was compiled by the United Nations Conference on Trade and Development (UNCTAD). Many of the firms on the list are well-known MNCs with household names because of their presence in consumer product markets. For example, General Electric (GE), Ford Motor, British Petroleum (BP), Toyota, BMW, Apple, Johnson & Johnson, Nestlé, Pfizer, and Siemens are names recognized by most people. By country of origin, U.S. MNCs, with 9 out of the total of 40, constitute the largest group. Japan has 6 MNCs in the top 40. The U.K and Germany each have 5 MNCs, followed by Italy with 3 MNCs in the top 40. It is interesting to note that some Swiss firms are extremely multinational. Nestlé, for instance, derives about 98 percent of its sales from overseas markets, and employs about 312,870 workers, 97 percent of its total employment, outside Switzerland. Obviously, MNCs make a significant contribution to the creation of job opportunities around the world.

MNCs may gain from their global presence in a variety of ways. First of all, MNCs can benefit from the economy of scale by (i) spreading R&D expenditures and advertising costs over their global sales, (ii) pooling global purchasing power over suppliers, (iii) utilizing their technological and managerial know-how globally with minimum additional costs, and so forth. Furthermore, MNCs can use their global presence to take advantage of underpriced labor services available in certain developing countries, and gain access to special R&D capabilities residing in advanced foreign countries. MNCs can indeed leverage their global presence to boost their profit margins and create shareholder value.

In recent years, companies are increasingly using offshore outsourcing as a way of saving costs and boosting productivity. For example, when Microsoft entered the video game market, it decided to **outsource** production of the Xbox gaming console to Flextronics, a Singapore-based contract manufacturer. Flextronics, in turn, decided to manufacture all Xbox consoles in China. This outsourcing decision allows Microsoft, a company mainly known for its strength in software, to benefit from the manufacturing and logistics capabilities of Flextronics and low labor costs in China. Like Microsoft, many companies around the world are using outsourcing to enhance their competitive positions in the marketplace.

www.unctad.org/wir

This UNCTAD website provides a broad coverage of cross-border investment activities by multinational corporations.

EXHIBIT 1.6
World's Top 40 Nonfinancial MNCs, Ranked by Foreign Assets, 2017

Ranking by Foreign Assets	Corporation	Country	Industry	Assets (in \$ Billions)		Sales (in \$ Billions)		Employment (in Thousands)	
				Foreign	Total	Foreign	Total	Foreign	Total
1	Royal Dutch Shell plc	United Kingdom	Mining, quarrying and petroleum	344.21	407.10	204.57	305.18	62.00	86.00
2	Toyota Motor Corporation	Japan	Motor vehicles	302.79	472.63	181.36	265.01	236.48	369.12
3	Total SA	France	Petroleum refining and related industries	234.99	242.58	109.16	140.12	66.73	98.28
4	BP plc	United Kingdom	Petroleum refining and related industries	220.38	276.62	152.53	228.79	43.72	74.70
5	Volkswagen Group	Germany	Motor vehicles	219.92	506.35	210.09	260.07	357.56	642.29
6	Softbank Corp	Japan	Telecommunications	214.86	292.93	42.15	82.61	50.17	68.40
7	Exxon Mobil Corporation	United States	Petroleum refining and related industries	203.63	348.69	155.08	237.16	40.64	69.60
8	British American Tobacco PLC	United Kingdom	Tobacco	189.21	190.64	25.84	26.12	78.84	91.40
9	General Electric Co	United States	Industrial and commercial machinery	186.59	377.95	75.80	122.09	207.00	313.00
10	Chevron Corporation	United States	Petroleum refining and related industries	183.64	253.81	77.10	134.78	26.70	51.90
11	Anheuser-Busch InBev NV	Belgium	Food & beverages	165.18	205.17	38.43	47.05	156.54	200.00
12	Vodafone Group Plc	United Kingdom	Telecommunications	160.14	179.41	45.88	54.45	98.32	111.56
13	Daimler AG	Germany	Motor vehicles	159.16	306.55	158.28	185.27	117.23	289.32
14	Apple Computer Inc	United States	Computer equipment	146.05	375.32	144.90	229.23	47.86	123.00
15	Honda Motor Co Ltd	Japan	Motor vehicles	141.29	181.78	121.25	138.56	147.22	211.92
16	Siemens AG	Germany	Industrial and commercial machinery	133.84	160.70	69.70	91.63	259.00	377.00
17	BMW AG	Germany	Motor vehicles	130.27	232.05	95.97	111.25	39.63	129.93
18	Enel SpA	Italy	Electricity, gas and water	127.03	186.67	38.79	81.92	31.79	62.90
19	DowDuPont Inc	United States	Rubber and miscellaneous plastic products	126.94	192.16	22.36	62.48	64.73	98.00
20	Nissan Motor Co Ltd	Japan	Motor vehicles	126.35	176.12	91.19	107.80	77.81	137.25
21	CK Hutchison Holdings Limited	Hong Kong, China	Retail trade	125.80	140.80	25.04	31.89	279.00	300.00
22	Johnson & Johnson	United States	Pharmaceuticals	118.75	157.30	36.59	76.45	101.16	134.00
23	Glencore PLC	Switzerland	Mining, quarrying and petroleum	116.71	135.64	126.70	195.71	109.20	145.98
24	Deutsche Telekom AG	Germany	Telecommunications	112.73	169.51	56.81	84.50	115.45	217.35
25	Eni SpA	Italy	Petroleum refining and related industries	111.72	137.84	43.43	75.44	12.63	33.54
26	Telefonica SA	Spain	Telecommunications	110.75	138.00	44.37	58.63	95.43	122.72
27	Iberdrola SA	Spain	Electricity, gas and water	110.59	132.75	32.24	35.25	23.96	34.26
28	Microsoft Corporation	United States	Computer and data processing	108.33	250.31	44.70	89.95	51.00	124.00
29	Nestlé SA	Switzerland	Food & beverages	106.79	133.63	89.91	91.19	312.87	323.00
30	Medtronic plc	Ireland	Instruments and related products	95.90	99.82	22.97	29.71	87.43	91.00
31	Hon Hai Precision Industries	Taiwan Province of China	Electronic components	95.81	114.82	151.75	154.65	728.43	873.00
32	Rio Tinto PLC	United Kingdom	Mining, quarrying and petroleum	95.67	95.76	37.70	38.13	46.50	46.81
33	Fiat Chrysler Automobiles	Italy	Motor vehicles	89.81	115.49	115.20	125.07	149.59	235.92
34	Mitsui & Co Ltd	Japan	Wholesale trade	87.94	106.22	24.43	44.13	2.68	42.30
35	Allergan PLC	Ireland	Pharmaceuticals	86.71	118.34	3.32	15.94	13.04	17.80
36	Pfizer Inc	United States	Pharmaceuticals	85.42	171.80	26.52	52.55	44.85	90.20
37	Ford Motor Company	United States	Motor vehicles	85.41	257.81	62.93	156.78	94.00	202.00
38	Altice NV	Netherlands	Telecommunications	83.71	86.88	24.27	26.49	45.45	47.17
39	Samsung Electronics Co., Ltd.	Korea, Republic of	Communications equipment	83.37	282.81	183.96	211.86	215.54	308.75
40	Nippon Telegraph & Telephone Corporation	Japan	Telecommunications	82.19	203.64	17.14	106.43	111.00	282.55

Source: World Investment Report 2018, UNCTAD.

SUMMARY

This chapter provided an introduction to *International Financial Management*.

1. It is essential to study “international” financial management because we are now living in a highly globalized and integrated world economy. Owing to the (a) continuous liberalization of international trade and investment, and (b) rapid advances in telecommunications and transportation technologies, the world economy will become even more integrated.
2. Three major dimensions distinguish international finance from domestic finance. They are (a) foreign exchange and political risks, (b) market imperfections, and (c) an expanded opportunity set.
3. Financial managers of MNCs should learn how to manage foreign exchange and political risks using proper tools and instruments, deal with (and take advantage of) market imperfections, and benefit from the expanded investment and financing opportunities. By doing so, financial managers can contribute to shareholder wealth maximization, which is the ultimate goal of international financial management.
4. The theory of comparative advantage states that economic well-being is enhanced if countries produce those goods for which they have comparative advantages and then trade those goods. The theory of comparative advantage provides a powerful rationale for free trade. Currently, international trade is becoming liberalized at both the global and the regional levels. At the global level, WTO plays a key role in promoting free trade. At the regional level, the European Union and NAFTA play a vital role in dismantling trade barriers within regions.
5. The subprime mortgage crisis in the United States that began in the summer of 2007 led to a severe credit crunch. The credit crunch, in turn, escalated to a major global financial crisis in 2008–2009. The global financial crisis may be attributable to several factors, including (a) excessive borrowing and risk taking by both households and banks, (b) failure of government regulators to detect the rising risk in the financial system and take timely preventive actions, and (c) the interconnected and integrated nature of financial markets. In addition, the world economy was buffeted by Europe’s sovereign-debt crisis. The crisis started in Greece in December 2009 when it was disclosed that the country’s budget deficit would be far worse than previously forecasted. The panic spread among weak European economies. The interest rates in these countries rose sharply and, at the same time, the euro depreciated sharply in currency markets, hurting its credibility as a major global currency.
6. A major economic trend of the recent decades is the rapid pace with which former state-owned businesses are being privatized. With the fall of communism, many Eastern Bloc countries began stripping themselves of inefficient business operations formerly run by the state. Privatization has placed a new demand on international capital markets to finance the purchase of the former state enterprises, and it has also brought about a demand for new managers with international business skills.
7. Free trade and global integration of economies have greatly contributed to economic growth worldwide, lifting millions of citizens from poverty. In recent years, however, growing discontent with globalization—for example, increasing economic inequalities between winners and losers and the increasing insecurity people feel about their national identity—gave rise to the populist nationalism in many countries, including Poland, Hungary, Brazil, Italy, the United Kingdom, and the United States. Brexit may be the most dramatic expression of such discontents about globalization. To protect the gains from globalization, it would be necessary for countries to promote shared growth for the greatest number of people.

8. In modern times, it is not a country per se but rather a controller of capital and know-how that gives the country in which it is domiciled a comparative advantage over another country. These controllers of capital and technology are multinational corporations (MNCs). Today, it is not uncommon for an MNC to produce merchandise in one country, on capital equipment financed by funds raised in a number of different currencies, through issuing securities to investors in many countries and then selling the finished product to customers all over the world.

KEY WORDS

Brexit, 18	globalized and integrated world economy, 3	shareholder wealth maximization, 7
corporate governance, 8	market imperfections, 5	systemic risk, 18
European Central Bank (ECB), 10	multinational corporation (MNC), 20	theory of comparative advantage, 12
European Union (EU), 14	North American Free Trade Agreement (NAFTA), 14	transactions domain, 10
expanded opportunity set, 6	outsourcing, 20	World Trade Organization (WTO), 13
foreign exchange risk, 4	political risk, 4	
General Agreement on Tariffs and Trade (GATT), 13	privatization, 15	

QUESTIONS

1. Why is it important to study international financial management?
2. How is international financial management different from domestic financial management?
3. Discuss the major trends that have prevailed in international business during the last two decades.
4. How is a country's economic well-being enhanced through free international trade in goods and services?
5. What considerations might limit the extent to which the theory of comparative advantage is realistic?
6. What are multinational corporations (MNCs) and what economic roles do they play?
7. Ross Perot, a former presidential candidate of the Reform Party, which was a third political party in the United States, had strongly objected to the creation of the North American Free Trade Agreement (NAFTA), which nonetheless was inaugurated in 1994. Perot feared the loss of American jobs to Mexico, where it is much cheaper to hire workers. What are the merits and demerits of Perot's position on NAFTA? Considering the recent economic developments in North America, how would you assess Perot's position on NAFTA?
8. In 1995, a working group of French chief executive officers was set up by the Confederation of French Industry (CNPF) and the French Association of Private Companies (AFEP) to study the French corporate governance structure. The group reported the following, among other things: "The board of directors should not simply aim at maximizing share values as in the U.K. and the U.S. Rather, its goal should be to serve the company, whose interests should be clearly distinguished from those of its shareholders, employees, creditors, suppliers, and clients but still equated with their general common interest, which is to safeguard the prosperity and continuity of the company." Evaluate the above recommendation of the working group.¹²

¹²This question draws on the article by François Degeorge, "French Boardrooms Wake Up Slowly to the Need for Reform," in the Complete MBA Companion in Global Business, *Financial Times*, 1999, pp. 156–60.

9. Emphasizing the importance of voluntary compliance, as opposed to enforcement, in the aftermath of such corporate scandals as those involving Enron and WorldCom, U.S. President George W. Bush stated that while tougher laws might help, “ultimately, the ethics of American business depends on the conscience of America’s business leaders.” Describe your view on this statement.
10. Suppose you are interested in investing in shares of Samsung Electronics of Korea, which is a world leader in mobile phones, TVs, and home appliances. But before you make an investment decision, you would like to learn about the company. Visit the website of Yahoo (finance.yahoo.com) and collect information about Samsung Electronics, including the recent stock price history and analysts’ views of the company. Discuss what you learn about the company. Also discuss how the instantaneous access to information via Internet would affect the nature and workings of financial markets.

INTERNET EXERCISES



1. Visit the corporate websites of Nestlé, one of the most multinational companies in the world, and study the scope of geographical diversification of its sales and revenues. Also, gather and evaluate the company’s financial information from the related websites. You may use such Internet search engines as Google and Yahoo.

MINI CASE

Nike and Sweatshop Labor

Nike, a company headquartered in Beaverton, Oregon, is a major force in the sports footwear and fashion industry, with annual sales exceeding \$30 billion, more than half of which now come from outside the United States. The company was co-founded in 1964 by Phil Knight, a CPA at Price Waterhouse, and Bill Bowerman, college track coach, each investing \$500 to start. The company, initially called Blue Ribbon Sports, changed its name to Nike in 1971 and adopted the “Swoosh” logo—recognizable around the world—originally designed by a college student for \$35. Nike became highly successful in designing and marketing mass-appealing products such as the Air Jordan, the best-selling athletic shoe of all time.

Nike has no production facilities in the United States. Rather, the company manufactures athletic shoes and garments in such Asian countries as India, Indonesia, and Vietnam using subcontractors, and sells the products in the U.S. and international markets. In each of those Asian countries where Nike has production facilities, the rates of unemployment and under-employment are relatively high. The wage rate is very low in those countries by U.S. standards—the hourly wage rate in the manufacturing sector is less than \$2 in those countries, compared with about \$39 in the United States. In addition, workers in those countries often operate in poor and unhealthy environments and their rights are not particularly well protected. Understandably, host countries are eager to attract foreign investments like Nike’s to develop their economies and raise the living standards of their citizens. Recently, however, Nike came under worldwide criticism for its practice of hiring workers for such a low rate of pay—“next to nothing” in the words of critics—and overlooking poor working conditions in host countries.

Initially, Nike denied the sweatshop charges and lashed out at critics. But later, the company began monitoring the labor practices at its overseas factories and grading the factories in order to improve labor standards. Nike also agreed to random factory inspections by disinterested parties.

Discussion Points

1. Do you think the criticism of Nike is fair, considering that the host countries are in dire needs of creating jobs?
2. What do you think Nike's executives might have done differently to prevent the sensitive charges of sweatshop labor in overseas factories?
3. Do firms need to consider the so-called corporate social responsibilities in making investment decisions?

REFERENCES & SUGGESTED READINGS

Basic Finance References

Bodie, Zvi, Alex Kane, and Alan J. Marcus. *Investments*, 11th ed. New York: Irwin/McGraw-Hill, 2018.
Ross, Stephen A., Randolph W. Westerfield, and Jeffrey F. Jaffee. *Corporate Finance*, 10th ed. New York: Irwin/McGraw-Hill, 2015.

International Accounting References

Choi, Frederick D.S. *International Accounting*, 7th ed. Pearson Education, 2010.
Meuller, Gerhard G., Helen Gernon, and Gary Meek. *Accounting: An International Perspective*, 5th ed. Burr Ridge, Ill.: Richard D. Irwin, 2000.

International Economics References

Baker, Stephen A. *An Introduction to International Economics*. San Diego: Harcourt Brace Jovanovich, 1990.
Husted, Steven, and Michael Melvin. *International Economics*, 9th ed. Pearson, 2012.
Krugman, Paul R., Marc Melitz, and Maurice Obstfeld. *International Economics: Theory and Policy*, 10th ed. Reading, Mass.: Addison-Wesley, 2012.
Rivera-Batiz, Francisco L., and Luis Rivera-Batiz. *International Finance and Open Economy Macroeconomics*, 2nd ed. Upper Saddle River, N.J.: Prentice Hall, 1994.

1A

Gain from Trade: The Theory of Comparative Advantage

The theory of comparative advantage was originally advanced by the 19th-century economist David Ricardo as an explanation for why nations trade with one another. The theory claims that economic well-being is enhanced if each country's citizens produce that which they have a comparative advantage in producing relative to the citizens of other countries, and then trade products. Underlying the theory are the assumptions of free trade between nations and that the factors of production (land, labor, technology, and capital) are relatively immobile. Consider the example described in Exhibit A.1 as a vehicle for explaining the theory.

Exhibit A.1 assumes two countries, A and B, which each produce only food and textiles, do not trade with one another. Country A and B each have 60,000,000 units of input. Each country presently allocates 40,000,000 units to the production of food and 20,000,000 units to the production of textiles. Examination of the exhibit shows that Country A can produce five pounds of food with one unit of production or three yards of textiles. Country B has an absolute advantage over Country A in the production of both food and textiles. Country B can produce 15 pounds of food or four yards of textiles with one unit of production. When all units of production are employed, Country A can produce 200,000,000 pounds of food and 60,000,000 yards of textiles. Country B can produce 600,000,000 pounds of food and 80,000,000 yards of textiles. Total output is 800,000,000 pounds of food and 140,000,000 yards of textiles. Without trade, each nation's citizens can consume only what they produce.

While it is clear from the examination of Exhibit A.1 that Country B has an absolute advantage in the production of food and textiles, it is not so clear that Country A (B) has a relative advantage over Country B (A) in producing textiles (food). Note that in using units of production, Country A can “trade off” one unit of

EXHIBIT A.1**Input/Output
without Trade**

	Country		Total
	A	B	
I. Units of input (000,000)			
Food	40	40	
Textiles	20	20	
II. Output per unit of input (lbs. or yards)			
Food	5	15	
Textiles	3	4	
III. Total output (lbs. or yards) (000,000)			
Food	200	600	800
Textiles	60	80	140
IV. Consumption (lbs. or yards) (000,000)			
Food	200	600	800
Textiles	60	80	140

EXHIBIT A.2**Input/Output
with Free Trade**

	Country		Total
	A	B	
I. Units of input (000,000)			
Food	20	50	
Textiles	40	10	
II. Output per unit of input (lbs. or yards)			
Food	5	15	
Textiles	3	4	
III. Total output (lbs. or yards) (000,000)			
Food	100	750	850
Textiles	120	40	160
IV. Consumption (lbs. or yards) (000,000)			
Food	225	625	850
Textiles	70	90	160

production needed to produce five pounds of food for three yards of textiles. Thus, a yard of textiles has an *opportunity cost* of $5/3 = 1.67$ pounds of food, or a pound of food has an opportunity cost of $3/5 = .60$ yards of textiles. Analogously, Country B has an opportunity cost of $15/4 = 3.75$ pounds of food per yard of textiles, or $4/15 = .27$ yards of textiles per pound of food. When viewed in terms of opportunity costs it is clear that Country A is relatively more efficient in producing textiles and Country B is relatively more efficient in producing food. That is, Country A's (B's) opportunity cost for producing textiles (food) is less than Country B's (A's). A *relative efficiency* that shows up via a lower opportunity cost is referred to as a comparative advantage.

Exhibit A.2 shows that when there are no restrictions or impediments to free trade, such as import quotas, import tariffs, or costly transportation, the economic well-being of the citizens of both countries is enhanced through trade. Exhibit A.2 shows that Country A has shifted 20,000,000 units from the production of food to the production of textiles where it has a comparative advantage and that Country B has shifted 10,000,000 units from the production of textiles to the production of food where it has a comparative advantage. Total output is now 850,000,000 pounds of food and 160,000,000 yards of textiles. Suppose that Country A and Country B agree on a price of 2.50 pounds of food for one yard of textiles, and that Country A sells Country B 50,000,000 yards of textiles for 125,000,000 pounds of food. With free trade, Exhibit A.2 makes it clear that the citizens of each country have increased their consumption of food by 25,000,000 pounds and textiles by 10,000,000 yards.

PROBLEMS

1. Country C can produce seven pounds of food or four yards of textiles per unit of input. Compute the opportunity cost of producing food instead of textiles. Similarly, compute the opportunity cost of producing textiles instead of food.
2. Consider the no-trade input/output situation presented in the following table for countries X and Y. Assuming that free trade is allowed, develop a scenario that will benefit the citizens of both countries.

**Input/Output
without Trade**

	Country		Total
	X	Y	
I. Units of input (000,000)			
Food	70	60	
Textiles	40	30	
II. Output per unit of input (lbs. or yards)			
Food	17	5	
Textiles	5	2	
III. Total output (lbs. or yards) (000,000)			
Food	1,190	300	1,490
Textiles	200	60	260
IV. Consumption (lbs. or yards) (000,000)			
Food	1,190	300	1,490
Textiles	200	60	260

2

International Monetary System

Evolution of the International Monetary System**Bimetallism: Before 1875****Classical Gold Standard: 1875–1914****Interwar Period: 1915–1944****Bretton Woods System: 1945–1972****The Flexible Exchange Rate Regime: 1973–Present****The Current Exchange Rate Arrangements****European Monetary System****The Euro and the European Monetary Union**

A Brief History of the Euro

What Are the Benefits of Monetary Union?

Costs of Monetary Union

Prospects of the Euro: Some Critical Questions

The Mexican Peso Crisis**The Asian Currency Crisis**

Origins of the Asian Currency Crisis

Lessons from the Asian Currency Crisis

The Argentine Peso Crisis**The Rise of the Chinese Renminbi****Fixed versus Flexible Exchange Rate Regimes****Summary****Key Words****Questions****Internet Exercises****MINI CASE: Grexit or Not?****References & Suggested Readings**

THIS CHAPTER EXAMINES the **international monetary system**, which defines the overall financial environment in which multinational corporations and international investors operate. As mentioned in Chapter 1, the exchange rates among major currencies, such as the U.S. dollar, British pound, Swiss franc, and Japanese yen, have been fluctuating since the fixed exchange rate regime was abandoned in 1973. Consequently, corporations nowadays are operating in an environment in which exchange rate changes may adversely affect their competitive positions in the marketplace. This situation, in turn, makes it necessary for many firms to carefully measure and manage their exchange risk exposure. Similarly, international investors face the problem of fluctuating exchange rates affecting their portfolio returns. As we will discuss shortly, however, many European countries have adopted a common currency called the **euro**, rendering intra-European trade and investment much less susceptible to exchange risk. The complex international monetary arrangements imply that for adroit financial decision making, it is essential for managers to understand, in detail, the arrangements and workings of the international monetary system.

The international monetary system can be defined as the *institutional framework within which international payments are made, movements of capital are accommodated, and exchange rates among currencies are determined*. It is a complex whole of agreements, rules, institutions, mechanisms, and policies regarding exchange rates, international payments, and the flow of capital. The international monetary system has evolved over time and will continue to do so in the future as the fundamental business and political conditions underlying the world economy continue to shift. In this chapter, we will review the history of the international monetary system and contemplate its future prospects. In addition, we will compare and contrast the alternative exchange rate systems, that is, fixed versus flexible exchange rates.

For astute financial management, it is important to understand the dynamic nature of international monetary environments.

Evolution of the International Monetary System

The international monetary system went through several distinct stages of evolution. These stages are summarized as follows:

1. Bimetallism: Before 1875.
2. Classical gold standard: 1875–1914.

3. Interwar period: 1915–1944.
4. Bretton Woods system: 1945–1972.
5. Flexible exchange rate regime: Since 1973.

We now examine each of the five stages in some detail.

Bimetallism: Before 1875

Prior to the 1870s, many countries had **bimetallism**, that is, a double standard in that free coinage was maintained for both gold and silver. In Great Britain, for example, bimetallism was maintained until 1816 (after the conclusion of the Napoleonic Wars) when Parliament passed a law maintaining free coinage of gold only, abolishing the free coinage of silver. In the United States, bimetallism was adopted by the Coinage Act of 1792 and remained a legal standard until 1873, when Congress dropped the silver dollar from the list of coins to be minted. France, on the other hand, introduced and maintained its bimetallism from the French Revolution to 1878. Some other countries such as China, India, Germany, and Holland were on the silver standard.

The international monetary system before the 1870s can be characterized as “bimetallism” in the sense that both gold and silver were used as international means of payment and that the exchange rates among currencies were determined by either their gold or silver contents.¹ Around 1870, for example, the exchange rate between the British pound, which was fully on a gold standard, and the French franc, which was officially on a bimetallic standard, was determined by the gold content of the two currencies. On the other hand, the exchange rate between the franc and the German mark, which was on a silver standard, was determined by the silver content of the currencies. The exchange rate between the pound and the mark was determined by their exchange rates against the franc. It is also worth noting that, due to various wars and political upheavals, some major countries such as the United States, Russia, and Austria-Hungary had irredeemable currencies at one time or another during the period 1848–1879. One might say that the international monetary system was less than fully *systematic* up until the 1870s.

Countries that were on the bimetallic standard often experienced the well-known phenomenon referred to as **Gresham’s law**. Since the exchange ratio between the two metals was fixed officially, only the abundant metal was used as money, driving more scarce metal out of circulation. This is Gresham’s law, according to which “bad” (abundant) money drives out “good” (scarce) money. For example, when gold from newly discovered mines in California and Australia poured into the market in the 1850s, the value of gold became depressed, causing overvaluation of gold under the French official ratio, which equated a gold franc to a silver franc 15½ times as heavy. As a result, the franc effectively became a gold currency.

Classical Gold Standard: 1875–1914

Mankind’s fondness for gold as a storage of wealth and means of exchange dates back to antiquity and was shared widely by diverse civilizations. Christopher Columbus once said, “Gold constitutes treasure, and he who possesses it has all he needs in this world.” The first full-fledged **gold standard**, however, was not established until 1821 in Great Britain, when notes from the Bank of England were made fully redeemable for gold. As previously mentioned, France was effectively on the gold standard beginning in the 1850s and formally adopted the standard in 1878. The newly emergent German empire, which was to receive a sizable war indemnity from France, converted

¹This does not imply that each individual country was on a bimetallic standard. In fact, many countries were on either a gold standard or a silver standard until the 1870s.