International Financial Management

Tenth Edition

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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 Professor Emeritus of Finance and the Thomas R. Williams Chair (Ret.) 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, Seoul National University, 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 were 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 received a D.B.A. in finance from Indiana University, an M.B.A. from the University of Colorado and a B.B.A.

from the University of Wisconsin-Oshkosh. Prior to joining Wake Forest, he taught at Indiana University for 10 years, the University of Minnesota for five years, and California State University, Chico for two years. He has served as a visiting professor at Bond University in 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. and undergraduate courses in the areas of investments, portfolio management, and international financial management. His research interests include market efficiency studies 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. Most recently, he has focused on studying the information content contained in Eurocurrency interest rates and yield spread comparisons of domestic and international bonds. His research articles have been published in most of the major academic journals in finance. Other researchers and textbook authors have widely cited his research. He served for many years as an associate editor for the *Emerging Markets Review, Journal of Multinational Financial Management, the Journal of Economics and Business,* and the *Journal of Financial Research.*

Tuugi Chuluun,

Loyola University Maryland

Tuugi Chuluun is a Travelers Scholar and an Associate Professor of Finance at Sellinger School of Business and Management at Loyola University Maryland. She holds a Ph.D. in Finance from the Georgia Institute of Technology, a master's in Financial Economics, and a bachelor's degree in Economics from Ohio University.

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*. Dr. Chuluun has taught undergraduate and graduate courses in 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 ELMBA 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 society's board since 2013. She was also the co-chair of the "Alpha and Gender Diversity Baltimore Conference 2018," which fostered 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 the Ninth Edition, Tuugi Chuluun from Loyola University Maryland, joined us as a co-author and continues 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,* Tenth 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

International Financial Management, Tenth Edition, like the previous nine editions, is written based on two tenets: emphasis on the basics and emphasis on a managerial perspective.

Emphasis on the Basics

We believe that any subject is better learned if one is first 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, Korean, and Indonesian. In addition, local co-authors have assisted in preparing Canadian, Malaysian, and Indian adaptations.

Tenth Edition Organization

International Financial Management, Tenth Edition, has been completely updated. Data tables and statistics are the most current available when the text went to press. We added discussions of emerging topics and issues of global significance, such as climate risk, coronavirus pandemic, cryptocurrencies, and transition from LIBOR to Alternative Risk-Free Rates. Additionally, the chapters incorporate several new mini cases and International Finance in Practice boxes that contain real-world illustrations of chapter topics and concepts. The bullet points below highlight specific changes in the Tenth Edition.

Chapter 1:

- Included political risk as an additional "unique" dimension of international finance.
- Added a discussion of the origin and consequences of political risk using the recent geopolitical events, such as Brexit, Chinese policy pivots, and the Russo-Ukrainian war.
- Added two extra trends and developments, climate change and COVID-19 pandemic, including the physical and financial risks climate change poses to the world and how countries can mitigate and adapt to the effects of climate change via international cooperation, for example, Paris Climate Agreement. Also included the economic and financial consequences of the COVID-19 pandemic, such as supply chain disruption, higher inflation, rapid digitization of finance and commerce, and rising inequalities.
- Updated Exhibits 1.1, 1.4, and 1.7, and added a new Exhibit 1.6 COVID-19 Shock and Macroeconomic Responses.
- Revised Mini Case: Nike and Sweatshop Labor.
- Added more References.

Chapter 2:

- Added new discussion of the role of cryptocurrencies and El Salvador's experiment of Bitcoin as its legal tender.
- Added discussion of the prospect of European "fiscal integration" to complement monetary integration. Also, a discussion of Central Bank Digital Currency (CBDC), a hot topic among central bankers around the world.
- Updated Exhibits 2.2, 2.3, 2.4, 2.7, 2.8, and 2.13.

Chapter 3:

- Created a new International Finance in Practice box titled "Squid Game and the Rise of Global Services Trade." This replaces the previous International Finance in Practice box titled "The Dollar and the Deficit."
- Revised Exhibit 3.1 with the latest U.S. balance of payments data and updated the corresponding discussions throughout the chapter.

- Modified and reorganized the discussion of the financial account for improved clarity.
- Revised Exhibit 3.4 which depicts the composition of total official reserves, and Exhibit 3.5 which presents the currency composition of the world's foreign exchange reserves.
- Updated Exhibits 3.6 and 3.7 which depict the current and financial account balances of the major economies, and Exhibit 3.8 presenting the top U.S. trading partners.
- Added two new EOC problems (Problems 1 and 2) for students to analyze the U.S. current and financial account balances from a previous year.
- Added a new mini case to analyze the trends in China's balance of payments to replace the mini case on Mexico's balance of payments problem.
- A new video explaining a balance of payments problem was added.

Chapter 4. Corporate Governance around the World

- Added a new section discussing the current issue of shareholder versus stakeholder capitalism.
- Added a new Mini Case: The Petrobras Scandal.
- Included a discussion of how foreign activist shareholders can enhance corporate governance using Toshiba's recent experience.
- Created more EOC questions.

Chapter 5:

- Updated Exhibit 5.1 and Exhibits 5.3–5.13 with the latest data on the foreign exchange market and modified the corresponding discussions throughout the chapter.
- Updated the International Finance in Practice boxes titled "Electronification of the FX Market" and "Chinese Yuan's Road to Internationalization" to reflect the recent developments.
- Revised Examples 5.2–5.4 on computing cross exchange-rates and triangular arbitrage profits using the most recent data provided in the revised exhibits.
- Revised Examples 5.5–5.7 describing forward premium/discount and speculative forward positions.
- Added EOC Problem 1 for students to practice working with direct and indirect exchange rate quotes, and Problem 14 for students to practice conducting forward market speculation.
- Modified EOC Problem 12 on triangular arbitrage and turned it into a multi-step problem that is easier to assign in Connect.
- Incorporated a discussion of empirical research on informal currency zones.
- Added a discussion about the reported decline in the correspondent banking relationships.
- Included empirical research findings on the size of bid-ask spreads.
- Added videos on how exchange rates are quoted and cross-rates are computed and videos showing detailed examples of triangular arbitrage problems.

Chapter 6:

- Updated Exhibit 6.3 on carry trade, Exhibit 6.6 on real effective exchange rates, Exhibit 6.7 on world prices, and Exhibit 6.8 on GDPs measured at PPP exchange rate.
- Updated the International Finance in Practice box on Big Mac Index.
- Included a discussion on carry trade, including how households can effectively become carry traders when they take out mortgages denominated in foreign currencies.
- Modified EOC Problem 2.
- Added videos explaining interest rate parity and covered interest arbitrage using detailed examples.

Chapter 7:

- Updated market data throughout the chapter.
- Added a discussion on empirical testing of currency options.
- Created four new EOC problems.
- Added videos describing the daily resettlement of futures contracts and the characteristics of the different positions on call and put options.

Chapter 8:

- Extensively revised Exhibit 8.12 and discussed in detail how companies use various financial and operational hedging methods in real world when they face transaction exposure.
- Created more EOC problems and Mini Case.
- Added a significant number of References.

Chapter 9:

- Added a new International Finance in Practice titled, "The case study: How BMW dealt with exchange rate risk."
- Updated References.

Chapter 10:

- Reorganized the chapter, added a section on FASB ASC830, and revised and consolidated the discussions of FASB 8, FASB 52, and FASB ASC830 under a new section called "U.S. GAAP."
- Revised the section on International Accounting Standards and incorporated a discussion about the accounting standards in China.
- Highlighted the difference between the concept of measuring foreign currency transactions and the concept of translating foreign currency financial statements.
- Modified the currency symbols throughout the chapter for greater clarity and consistency.

Chapter 11:

- Updated Exhibit 11.1 listing the world's largest banks.
- Revised the discussion on capital adequacy standards and the Basel III accord
- Included a discussion on the termination of LIBOR as the major reference rate for Eurocurrency deposits.

- Introduced the new series of reference rates, known collectively as Alternative Risk-Free Rates, which went into effect for the various Eurocurrencies.
- Introduced the Secured Overnight Financing Rate (SOFR) selected as the replacement for USD LIBOR as the benchmark rate for Eurodollar deposits and FRAs.
- CME Group SOFR futures contracts have been introduced as a vehicle for hedging short-term USD interest rate risk in Eurodollar positions.
- Updated all associated Eurocurrency exhibits.
- Extensively revised and shortened the discussion on the Global Financial Crisis to reflect the passage of time and its less significant bearing on the current global macroeconomic environment.
- Relocated the In More Depth discussion on MBSs, SIVs, CDOs, and CDSs to an appendix.
- Updated End-of-Chapter Internet Exercise 1 to highlight using SOFR in pricing Eurodollar loans.

Chapter 12:

- Reorganized sections of the chapter, including a subsection on the currency distribution, nationality, and type of issuers, to improve the content flow.
- Updated Exhibits 12.1–12.4 and 12.9–12.11 to provide a detailed overview of the world's bond markets using the most recent data and modified the corresponding discussions throughout the chapter.
- Revised the reference rates used in floating-rate notes to reflect the switch from LIBOR to other benchmark rates such as SOFR.
- Created a new mini case called "Alpha Gen Technologies: Panda or Dim Sum Bonds?" for students to compare Chinese-yuan denominated panda and dim sum bonds. This replaces the previous mini case called "Sara Lee Corporation's Eurobonds."
- Added videos explaining the EOC problems.

Chapter 13:

- Updated Exhibits 13.1–13.4 and 13.8 to provide a detailed overview of the world's stock markets using the most recent data and modified the corresponding discussions throughout the chapter.
- Added a discussion describing the trends in the cross-listings of Chinese firms since the 1990s, including the stricter rules imposed recently on Chinese firms listing abroad.
- Modified Exhibit 13.6 for greater clarity.
- Revised the discussion of market consolidations and mergers among stock exchanges worldwide.
- Modified the discussion on ADRs to improve clarity.
- Revised Examples 13.1–13.3 using the latest stock prices of several cross-listed firms.
- Expanded and revised the discussion of the factors that influence international equity returns, such as macroeconomic factors, exchange rates, industry factors, and market factors, by summarizing findings from extensive empirical research.
- Added a new subsection on market factors.

Chapter 14:

- Updated Exhibits 14.1 and 14.2 with the most recent data.
- Incorporated the transition from LIBOR to alternative risk-free rates such as SOFR in the discussions and explanations of swaps.
- End-of-chapter problems now use the new reference rates such as SOFR.
- Added videos that are guided examples of interest rate and currency swaps.

Chapter 15:

- Updated Exhibits 15.1, 15.2, 15.4, and 15.5 to present characteristics of and correlations among major equity markets using the most recent data and modified corresponding discussions throughout the chapter.
- Updated Exhibits 15.6–15.8 to present the composition of optimal international equity portfolios and gains from international diversification.
- Reorganized and updated the content on home bias.
- Added a new EOC problem.
- Added new videos illustrating how to compute the rate of return on foreign investment with and without hedging.

Chapter 16:

- Created a new exhibit, Exhibit 16.1, depicting the trends in the FDI outflows of developed and developing regions.
- Updated Exhibits 16.1–16.5, 16.7, 16.9, and 16.12 and discussed the most recent data and trends in global FDI, including cross-border M&As, and political risk.
- Added a discussion of empirical findings on expropriations.

Chapter 17:

- Updated Exhibits 17.8 and 17.9.
- Provided a more detailed explanation of the International Asset Pricing Model.

Chapter 18:

- Clarified the wording in Example 18.2.
- Added a new mini case on evaluating a capital expenditure proposal in a wholly owned foreign subsidiary—the case addresses methods for calculating and discounting foreign cash flows in calculating the NPV of the project.

Chapter 19:

- Clarified the wording in Mini Case 1 on multilateral netting among interaffiliate cash flows.

Chapter 20:

- Created a new section to define and summarize the global trade finance market at the beginning of the chapter, including a discussion of the impact of the COVID-19 pandemic on global trade finance.
- Included a new section surveying the export credit agencies worldwide.
- Created a new exhibit, Exhibit 20.2, presenting the top 25 countries by export credit volume.
- Updated the International Finance in Practice box titled “Export-Import Bank in Limbo” to incorporate the most recent developments.

Chapter 21:

- Updated Exhibit 21.1 displaying corporate tax rates around the world.
- Updated Exhibit 21.2 displaying U.S. treaty withholding tax rates with selected countries.
- Updated Exhibit 21.4 showing foreign tax credit offsets for subsidiary operations using current tax rates.
- Eliminated less current International Finance in Practice boxes.
- Added a new International Finance In Practice box providing perspective on the use of tax havens by MNCs to divert income from higher tax jurisdictions via transfer pricing.
- Added a new section discussing the 2021 global deal formally endorsed in Rome by 136 of 139 participating G-20 countries in conjunction with the OECD to establish a minimum corporate tax rate of 15 percent.
- Updated the two end-of-chapter Internet exercises.

Key Features

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

EXAMPLE | 11.1: Rollover Pricing of a Eurocredit

Teltrex International can borrow $3,000,000 at a lending margin of .75 percent per annum on a three-month rollover basis from Barclays in London. Suppose that three-month CME Term SOFR is currently .53 percent and the three-month Bank Credit premium is 26 basis points. Further suppose that over the second interval three-month CME Term SOFR falls to .42 percent. How much will Teltrex pay in interest to Barclays over the six-month period for the Eurodollar loan?

Solution: $3,000,000 × (.0053 + .0026 + .0075)/4 + $3,000,000 × (.0042 + .0026 + .0075)/4 = $11,550 + $10,725

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 Settlements[a] 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 2021, about 57 percent of all foreign exchange transactions and 65 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 volume was even higher in October 2021 such as 72 percent and 71 percent for trading in British pound–euro and U.S. dollar–Hong Kong dollar, 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 trade volume executed electronically)

In More Depth

Binomial Option-Pricing Model

The option pricing relationships we have discussed to this point have been lower boundaries on the call and put premiums, instead of exact equality expressions for the premiums. The binomial option-pricing model provides an exact pricing formula for a European call or put.[5] We will examine only a simple one-step case of the binomial model to better understand the nature of option pricing. In this case, the binomial model assumes that at the end of the option period, the underlying foreign exchange has either appreciated one step upward or depreciated one step downward from its initial value.

We want to use the binomial model to value the PHLX 112 Sep EUR European call from Exhibit 7.6. We see from the exhibit that the option premium is quoted at 3.78 cents. The current spot price of the EUR in American terms is $S_0 = 113.14$ cents. Our estimate of the option's volatility (annualized standard deviation of the change in the spot rate) is $\sigma = 6.18$ percent, which was obtained from the Investing.com website, www.investing.com. The last day of trading in the call option is in 179 days on September 20, 2019, or in $T = 179/365 = .4904$ years. The one-step binomial model assumes that at the end of the option period the EUR will have appreciated to $S_{uT} = S_0 \cdot u$ or depreciated to $S_{dT} = S_0 \cdot d$, where $u = e^{\sigma \cdot \sqrt{T}}$ and $d = 1/u$. The spot rate at T will be either $118.14 = 113.14(1.0442)$ or $108.35 = 113.14(.9576)$ where $u = e^{.0618 \cdot \sqrt{.4904}} = 1.0442$ and $d = 1/u = .9576$. At the exercise price of $E = 112$, the option will only be exercised at time T if the EUR appreciates; its exercise value would be

[4]The 6-month dollar LIBOR rate was used as the reference rate here. Starting in 2022, LIBOR is no longer used to price new loans in the United States, and the secured overnight financing rate (SOFR) is replacing LIBOR as the benchmark interest rate for dollar-denominated securities. This transition is expected to be completed by 2023.

[5]The binomial option-pricing model was independently derived by Sharpe (1978); Rendleman and Bartter (1979); and Cox, Ross, and Rubinstein (1979).

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.

CFA® PROBLEMS

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

Mintel Products Transfer Pricing Strategy

Low versus High Markup Policy

Mintel Products Inc. manufactures goods for sale in the United States and overseas. Finished goods are transferred from the parent firm to its wholly owned sales affiliate for overseas retail sale. Mintel's financial manager, Hilary Van Kirk, has decided that the firm's transfer pricing strategy should be reevaluated as part of a routine review of the operations of the sales affiliate. Van Kirk has decided to explore both a low and a high markup policy. The analysis is to be done in U.S. dollars. She notes that both the parent firm and the sales affiliate have a 40 percent income tax rate, that the variable production cost of one unit is \$1,500, and that the unit retail sales price charged by the sales affiliate to the final customer is \$3,000. As a first step in her analysis, Van Kirk prepares Exhibit 21.5. The upper portion of the exhibit presents the analysis of a low markup policy, where the transfer price is set at \$2,000. The lower portion of the exhibit analyzes the effect of a high markup policy, where the transfer price is \$2,400 per unit.

Van Kirk notices from Exhibit 21.5 that the low markup policy results in larger pretax income, income taxes, and net income per unit in the selling country. On the other hand, the high markup policy has the opposite effect, that is, higher taxable income, income taxes, and net profit per unit in the manufacturing country. She also notes that because the income tax rates are the same in both countries, the consolidated results are identical regardless of whether the MNC follows a low or high transfer pricing scheme.

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.

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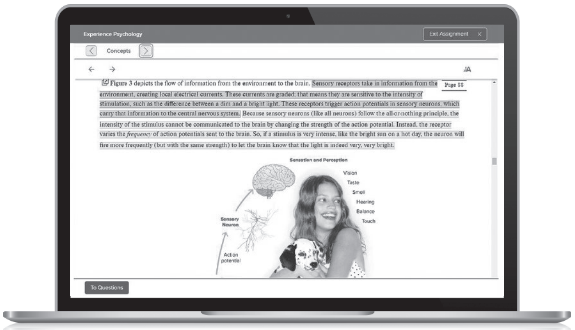

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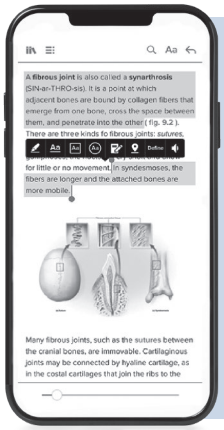

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Ancillary Materials

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 the authors.
- **Videos**—Mini lectures and guided examples covering various quantitative concepts, created by the authors. Assignable within Connect and linked to the related end-of-chapter problems and questions.

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.

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We hope that you enjoy using *International Financial Management,* Tenth 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.

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