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International Corporate Finance

Value Creation with Currency Derivatives in Global Capital Markets

\+ website

Second Edition

LAURENT L. JACQUE

WILEY

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For my grand children
Philippe, Adeline and Maya
my pride and my joy

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Preface

As globalization is redefining the field of corporate finance, international finance is increasingly permeating most financial transactions, which in yesteryears were deemed to be strictly domestic transactions. In fact, it is very difficult to understand what is happening in capital markets without a firm grasp of currency markets, the investment strategies of sovereign wealth funds, carry trades, foreign exchange derivative products, and so forth. Similarly, project finance cannot be understood without a firm grasp of valuation concepts in a cross-border context. Indeed, international finance is now part and parcel of the basic literacy of any financial executive whether she or he is an investment banker, a treasurer, a CFO, a portfolio manager, or a loan officer. There is no hiding from international finance.

And yet the field of international finance textbooks is not terribly crowded, with the three or four leading titles showing signs of multiple-editions fatigue. What is needed is a book offering a fresh perspective on international finance that transcends the boundaries of *ethnocentric* thinking and an overly U.S.-centric approach—a book that brings the fascinating and rapidly unfolding story of emerging capital markets and their daring multinationals in the mainstream of international finance. *International Corporate Finance* is purporting to be such a book.

WHAT MAKES THIS BOOK UNIQUE

There are several features that will set *International Corporate Finance* apart from rival books:

1. Most chapters are developed around a real-life but simplified mini-case to anchor theoretical concepts to managerial situations. This allows the reader to grasp the practical relevance of the topic addressed before being introduced to the necessary theoretical frameworks.
2. Each chapter provides real-life illustrations. The purpose is to make international finance as alive as possible. Typically, this is done as feature inserts called "International Corporate Finance in Practice," written in a lighter style meant to wake up the reader by being reasonably provocative.
3. Most chapters provide simple decision rules and pragmatic "how-to" answers to key managerial issues—at least one in each chapter. Many texts often provide a narrative solution to managerial questions raised but fail to provide simple yet rigorous closure to the reader.

4. Several chapters, such as Islamic Banking and Finance, Asian Finance and Banking, Cross-Border Mergers and Acquisitions, and Project Finance, are completely new material that no other textbook currently covers. This book systematically incorporates the story of the BRIC countries (Brazil, Russia, India, and China) and their daring multinationals, thereby balancing out an overly U.S.-centric and Wall Street–anchored approach to international corporate finance.
5. Most chapters include separate case studies (also found on the website) that are real-life decision-making situations. Although much shorter than typical Harvard Business School case studies (the industry standard), they capture multifaceted financial management in an engaging manner and typically result in 30 to 45 minutes of lively class discussion.
6. When appropriate, historical perspective and landmark transactions are presented to put concepts in context. In-depth coverage of the subprime crisis (2008) and the euro crisis (2010–) is developed in the context of ill-functioning financial markets.
7. While primarily focused on international corporate finance, the book is structured in such a way that it could also be used for a course on global capital markets, as Parts One, Two, and Three provide comprehensive coverage of capital markets.

AUDIENCE FOR THIS BOOK

International Corporate Finance targets not only the business school market—primarily MBAs, undergraduate seniors, and executive MBAs—but also schools of international affairs and public administration. The first edition has also been widely used in executive training programs at banks, multinationals, and increasingly government and regulatory agencies.

The book is intended for students taking an elective in international corporate finance that may be part of a finance major (but not necessarily). Although prior exposure to economics and corporate finance would be helpful, the book is self-contained and has no prerequisites.

International Corporate Finance should also appeal to a growing international/export market beyond the domestic university/college market. More generally, there is an explosion in the number of MBA programs offered in emerging market countries such as China, India, Brazil, Russia, and Mexico, where international finance is at the center in the curriculum simply because of the global orientation of these economies. For this rapidly growing market, it is imperative to approach international financial management from an emerging market perspective as well as a U.S. or European perspective. Specific chapters on Asian and Islamic finance and banking as well as BRIC countries, along with illustrations and problems/exercises, should be strong elements of differentiation vis-à-vis existing texts.

THE CHALLENGE THIS TOPIC PRESENTS

International finance is one of the most topical and lively business topics making the front page of any business daily, but, perhaps because of the unique role played by financial derivatives, it is also a highly complex, arcane, technical, and mystifying subject for the average business student. Herein lies the challenge for the instructor and the student: how to capitalize on the star power and captivating nature of international finance without sacrificing the rigor of the explanation. Textbooks all too often err on the side of academic correctness and read like treatises written for other knowledgeable academics rather than fresh-faced students. My approach is to start (most) chapters with real-life decision—situations to hook the reader who presumably wants to know what possible answers struggling managers could implement—and then derive theory, rather than starting from a theoretical construct at the risk of losing the reader before turning to applications. For example, the chapter on trade financing starts with:

> *Tata Motors of India's export manager, Raju Aneja, has just signed an export order for 1,000 Nanos – its new revolutionary minicar – with Atlas Distributors, a Vespa scooter dealership based in Casablanca, Morocco. The export sale is denominated in euros (€) and calls for payment of €20 million on delivery, scheduled for approximately three months from time of shipment. Tata Motors has never had any commercial dealings with Atlas but was envisioning a long-term relationship with the Moroccan firm. However, it was concerned about the importer's solvency. The Moroccan dirham was pegged to the euro and partially convertible. How should Tata Motors finance its export trade? Raju knew that this would be the first of many similar deals that Tata Motors was hoping to forge with other emerging market countries where the Nano was expected to meet with much commercial success.*

Similarly, the chapter on debt financing starts with:

> *JetBlue Airlines was seeking to raise $250 million in a seven-year note to upgrade its aging fleet. Ms. Rousse – JetBlue's newly appointed CFO – was reviewing the different funding options offered by its investment bankers, which included a domestic dollar-denominated zero-coupon bond priced at 61 percent, a dollar-denominated Eurobond with a 7.25 percent annual coupon, and a samurai bond denominated in yen with a semiannual coupon of 4.00 percent. Last, a floating-rate note denominated in euros paying euro-LIBOR + 165 basis points was also being considered. Ms. Rousse was perplexed by the array of currency denominations and the significant differences in nominal interest rates, both of which complicated direct comparisons among the different funding options.*

Both chapters progressively build a more rigorous framework as they progress. In the same vein, a rich array of exercises and problems accompany each chapter; they are more than mechanical numerical applications of what is discussed in the chapter itself. Last but not least, most chapters offer a separate short case study for fruitful discussion.

WHAT IS IN THE BOOK?

This book is divided into six parts:

Part 1: The International Monetary Environment

Part 2: The Foreign Exchange Market and Currency Derivatives

Part 3: International Financing

Part 4: Managing Foreign Exchange Risk

Part 5: Cross-Border Valuation and Foreign Investment Analysis

Part 6: Managing the Multinational Financial System

Part 1: The International Monetary Environment. Part 1 examines the monetary environment within which international financing decisions are made. How exchange rates are determined and the unique role played by central banks' intervention in setting currency values is the focus of Chapter 2, whereas Chapter 3 presents a brief history of the international monetary system. The architecture of the world economy is outlined in Chapter 4 through the lens of national balance of payments accounting, which records the key flows linking national economies.

Part 2: The Foreign Exchange Market and Currency Derivatives. After introducing the foreign exchange market and its inner workings (Chapter 5), Part 2 discusses the valuation of the mother of all currency derivatives—the forward contract—in the context of the theory of interest rate parity (Chapter 6). The international parity framework with *Purchasing Power Parity* and the Fisher Parity is completed in Chapter 7. Currency futures and options are detailed in Chapter 8, which shows how they can be harnessed for the purpose of risk management.

Part 3: International Financing. If globalization of financial markets has gone a long way toward eradicating differences in national cost of capital, they have not been entirely erased. This is why global financial markets are often characterized as mildly segmented rather than fully integrated (Chapter 9). Part 3 outlines funding as a global procurement decision from both equity markets (Chapter 10) and debt markets (Chapter 11). Risk(s) arising from investing in or financing via fixed-income securities can be managed with *currency, interest rate, and credit default swaps* (Chapter 12). The idiosyncrasies of *International Trade Financing* are presented in Chapter 13.

The uniqueness of financing strategies and capital markets in two regions of the world that loom especially large on the global economy—namely East Asia and the Middle East—is addressed in separate chapters found on the book website. Chapter 25 profiles the idiosyncrasies of Asian finance and banking in the context of Japan, South Korea, and China, whereas Chapter 26 explores the mysteries of Islamic finance.

Part 4: Managing Foreign Exchange Risk. The exchange rate variable permeates all key financial management decisions and injects a considerable degree of variability in a firm's overall risk profile. Part 4 starts by asking whether hedging part or all of a firm's exposure to currency risk is indeed value creating for the firm's owners and therefore warranted (Chapter 14). To the extent that exchange rate forecasting (Chapter 15) is a treacherous activity in the context of clean floating exchange rates, we take a "total risk" view of risk management. Exporters and importers as well as multinational corporations and globally reaching financial institutions generally hedge both transaction and translation exposures by using forwards, futures, options, or swaps. Measuring and managing transaction, translation, and economic exposures are discussed in Chapters 16, 17, and 18, respectively.

Part 5: Cross-Border Valuation and Foreign Investment Analysis. After contrasting alternative modes of foreign market entry and associated political risks (Chapter 19). Part 5 develops a valuation framework for cross-border investments that uniquely incorporates the different variables such as foreign exchange risk, country risk, asymmetric tax treatment, and different inflation rates. Chapter 20 contrasts different metrics such as net present value of asset-based cash flows or equity-based cash flows versus adjusted present value metrics, and reviews the necessary adjustments to be made to the cost of capital used as the discount rate in international valuation. The framework is applied to cross-border mergers and acquisitions in Chapter 21 and large-scale infrastructural project finance in Chapter 22. Taking the perspective of asset managers manning the desks of mutual funds, pension funds, hedge funds, or sovereign wealth funds, global investing in stocks and bonds is addressed in Chapter 23, which gauges the limit of geographical diversification in the context of ever-increasingly integrated capital markets.

Part 6: Managing the Multinational Financial System. Chapter 24 shows how financial decisions should leverage the multinational enterprise system by deftly exploiting arbitrage opportunities arising from capital markets segmentation and heterogenous national tax systems. Finally, central to the successful implementation of a global strategy, multinational corporations need financial planning, budgeting, and control systems that incorporate the unique operating circumstances of each and every foreign subsidiary while ensuring that strategic goals are duly achieved (see Chapter 25 on the book **website**).

What Is New in the Second Edition of *International Corporate Finance*

The second edition will continue to emphasize even more prominently the importance of emerging markets as the so-called BRICs are looming increasingly larger on the world economy, global trade, and financial markets. More chapters (as compared to the first edition) are developed around a real-life but simplified mini-case to anchor theoretical concepts to managerial situations. This allows students to grasp the practical relevance of the topic addressed.

- All data provided in table and graphs were updated to reflect most recent information.
- Catchy, short case studies are now included in most chapters.

Revisions of Specific Chapters

- Chapter 2 includes a new discussion of the International Finance trilemma and how it shapes the choice of currency regimes; it features a case illustration of how Switzerland resisted its currency appreciation by defending an official peg against the euro and accumulating mammoth reserves.
- Chapter 3 gives a thorough update of the Euro crisis and how "internal" devaluation is allowing the euro-zone to limp along. IMF's largest ever bail out to Argentina (2018).

- Chapter 4 explains how Brexit impacts the UK balance of payments and its financial services industry.
- Chapter 7 (formerly the appendix to Chapter 2) is a new chapter on International Parity conditions. Purchasing Power Parity, the Fisher Parity, and forwards as unbiased predictors of future spot exchange rates are integrated with interest rate parity. How inflation and interest rates drive the relationships between spot, forward, and future spot exchange rates.
- Chapter 8 was split between futures and options versus swaps which are now expanded in a new Chapter 12. New material is introduced on exotic KIKO options and how they torpedoed Korean exporters. A new appendix on currency option pricing includes numerical illustrations of how to price put and call currency options with the Garman-Kohlhagen model.
- Chapter 9 revises the discussion of disintermediation with the introduction of capital adequacy ratios as mandated by the Basel Accord 2.5 to explain the cost of financial intermediation. It explains the role played by credit rating agencies in facilitating disintermediation and the emerging role played by the commercial paper market. Finally, it illustrates how the emergence of money market funds fuels disintermediation in China.
- Chapter 10 explores how governments – mostly of East Asian countries and more recently Saudi Arabia – intervenes in their domestic stock market to prop up market indices, thereby undermining market efficiency.
- Chapter 11 has two additional sections: 1) on sovereign debt with a case illustration of Argentine Century bond to mature in 2117 (yes in 100 years!) and 2) on structured notes.
- Chapter 12 is a new chapter on swaps including currency, interest rate, and credit default swaps, with a case illustration of the Proctor & Gamble interest rate swap debacle and the JP Morgan London Whale mammoth gambit on credit default swaps going sour.
- Chapter 16 introduces exotic options and their use in hedging currency risk in international trade and financing.
- Chapter 19 illustrates political risk in the form of expropriation with the recent example of Venezuela. It introduces economic sanctions and their extra-territorial reach on firms as a form of punishing political risk; it uses the example of Peugeot Citroën exiting Iran for a second time because of reenacted U.S. sanctions.
- Chapter 20 includes a new section on how to develop an optimal worldwide capital structure to minimize the firm cost of equity capital.
- Chapter 21 gives an update on the global reach of anti-trust and M&A review process and how it impacts M&A cross-border valuation. It includes a case illustration of how China was able to acquire Las Bambas copper mine by blocking a proposed merger between Glencore and Xstrata.
- Chapter 23 expands discussion of hedge funds and private equity firms as global investors. It features a case study of how holdouts "vulture" hedge funds were able to force Argentina to repay full value of distressed debt through litigation.
- Chapter 24 provides an update on cross-border, intra-corporate transfer pricing and the current feud between the European Union, Ireland, and MNCs about tax avoidance.

WEBSITE AND ONLINE RESOURCES

For **readers** this book comes with a companion website where Chapters 25, 26 and 27 as well as appendix 23.A1 can be found at: www.wiley.com/go/intlcorpfinance2e (see back of book for details).

Professors can readily download at www.wiley.com/go/intlcorpfinance2e the following materials:

- **Instructor's Manual.** The Online Instructor's Manual offers detailed solutions for end-of-chapter discussion questions and problems. Elaborate solutions are also presented for each case with guidelines for facilitating a successful class discussion.
- **Multiple Choice Questions** to help students/readers to gauge their understanding of each chapter materials
- **PowerPoint Presentation.** Professionally prepared slides provide detailed lecture outlines including selected graphs from the text of each chapters.
- In addition, there are resources specifically for professors' use, and those are available at *John Wiley & Sons' Higher Education website*.

I would be grateful for *readers'* and *instructors'* constructive comments and suggestions for improvements and revisions. Please write directly to me at laurent.jacque@tufts.edu.

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LLJ

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Laurent L. Jacque is the Walter B. Wriston Professor of International Finance and Banking at the Fletcher School of Law and Diplomacy (Tufts University) and Academic Director of its International Business Studies Program. He previously served as Fletcher's Academic Dean and as such was responsible for the design and the establishment of the new Master of International Business degree and the Center for Emerging Market Enterprises. Since 1990 he has also held a secondary appointment at the HEC School of Management (France). Earlier, he served on the faculty of the Wharton School for 11 years with a joint appointment in the finance and management departments and taught at the Carlson School of Management (University of Minnesota). He also held visiting appointments at Instituto de Empresa (Spain), Indian School of Business (Hyderabad, India), Kiel Institute of World Economics (Germany), Pacific Asian Management Institute (University of Hawai), Institut Supérieur de Gestion (Tunisia), and Chulalongkorn University (Thailand) as the Sophonpanich Research Professor.

He is the author of an additional three books, *Global Derivative Debacles: From Theory to Malpractice* (World Scientific, 2015, 2nd edition), translated into French, Spanish, Russian, Chinese, and Korean; *Management and Control of Foreign Exchange Risk* (Kluwer Academic Publishers, 1996); and *Management of Foreign Exchange Risk: Theory and Praxis* (Lexington Books, 1978), as well as more than twenty-five articles on risk management and international corporate finance, which have appeared in leading academic and professional journals, including *Management Science, Journal of Risk and Insurance, Journal of Applied Corporate Finance, Journal of International Business Studies*, *Insurance: Mathematics and Economics*, *Journal of Operations Research Society*, *Columbia Journal of World Business*, and other publications He served as an advisor and consultant to Wharton Econometrics Forecasting Associates, and as a member of Water Technologies Inc.'s board of directors. Since 2010 he has been a senior advisor to the director of the Bharti Institute of Public Policy at the Indian School of Business (Mohali, India) and a member of its advisory board.

A recipient of several teaching awards, Laurent Jacque also won the James L. Paddock award for teaching excellence at the Fletcher School and the Europe-wide HEC-CEMS award in 2008. He is a consultant to a number of firms and active in executive education around the world. Laurent Jacque is a graduate of HEC (Paris) and received his MA, MBA, and PhD from the Wharton School (University of Pennsylvania).