Contents

Introduction xi
Tanya Beder and Cara M. Marshall

PART I Overview 1

1 The History of Financial Engineering from Inception to Today 3
Tanya Beder

2 Careers in Financial Engineering 29
Spencer Jones

3 A Profile of Programs and Curricula with a Financial Engineering Component 51
John Cornish

PART II Financial Engineering and the Evolution of Major Markets 71

4 The Fixed Income Market 73
Peruvemba Satish

5 The U.S. Mortgage Market 111
Bruce McNevin

6 The Equity Market 131
Gary L. Gastineau and John F. Marshall

7 The Foreign Exchange Market 159
Laurent L. Jacque

8 The Commodity Market 191
Helen Lu and Cara M. Marshall

COPYRIGHTED MATERIAL
http://www.pbookshop.com

9 The Credit Market 215
Frank Iacono

PART III Key Applications of Financial Engineering 241

10 Securitized Products 243
Konstantin Braun

11 Structured Products 259
Timothy A. Day

12 Thoughts on Retooling Risk Management 273
Tanya Beder and Spencer Jones

13 Financial Engineering and Macroeconomic Innovation 289
Cara Marshall and John O'Connell

14 Independent Valuation for Financially-Engineered Products 305
Cindy W. Ma and Andrew MacNamara

15 Quantitative Trading in Equities 323
Kun Gao

16 Systematic Trading in Foreign Exchange 337
Chris Attfield and Mel Mayne

PART IV Case Studies in Financial Engineering: The Good, the Bad, and the Ugly 367

17 Case Studies Introduction 369
Penny Cagan

18 Mortgage Case Studies: Countrywide and Northern Rock 373
Algorithmics Software LLC

19 Derivatives Case Studies: SocGen, Barings, and Allied Irish/Allfirst 385
Algorithmics Software LLC

20 Fixed Income Case Study, Swap Market: The Allstate Corporation 405
Algorithmics Software LLC

http://www.pbookshop.com

21 Lessons from Funds: LTCM, Florida, and Orange County 409
Algorithmics Software LLC

22 Credit Derivatives Case Studies: AIG and Merrill Lynch 421
Algorithmics Software LLC

PART V Special Topics in Financial Engineering 431

23 Performance Fees 433
Mark P. Kritzman

24 Musings About Hedging 445
Ira Kawaller

25 Operational Risk 455
Monique Miller

26 Legal Risk 465
Jordana Krohley

27 Portable Alpha 487
Tanya Beder and Giovanni Beliossi

28 The No-Arbitrage Condition in Financial Engineering: Its Use and Misuse 497
Andrew Aziz

29 Influencing Financial Innovation: The Management of Systemic Risks and the Role of the Public Sector 521
Todd Groome, John Kiff, and Paul Mills

PART VI Appendices 547

A IT Tools for Financial Asset Management and Engineering 549

B About the Companion Website 569

About the Editors 575

Index 577

http://www.pbookshop.com

http://www.pbookshop.com