### Contents

**Part I  Option Pricing**

1  Derivatives ................................................................. 3
2  Introduction to Option Management ............................... 13
3  Basic Concepts of Probability Theory ............................ 25
4  Stochastic Processes in Discrete Time ............................ 35
5  Stochastic Integrals and Differential Equations ............... 43
6  Black-Scholes Option Pricing Model ............................... 59
7  Binomial Model for European Options ............................. 79
8  American Options ....................................................... 91
9  Exotic Options ............................................................ 101
10 Models for the Interest Rate and Interest Rate Derivatives 119

**Part II  Statistical Model of Financial Time Series**

11 Financial Time Series Models ....................................... 131
12 ARIMA Time Series Models ........................................... 143
13 Time Series with Stochastic Volatility ........................... 163

**Part III  Selected Financial Applications**

14 Value at Risk and Backtesting ......................................... 177
15 Copulae and Value at Risk .............................................. 189
16 Statistics of Extreme Risks ........................................... 197
Statistics of Financial Markets
Exercises and Solutions
Borak, S.; Härdle, W.K.; López-Cabrera, B.
2013, XXIX, 246 p. 271 illus., 241 illus. in color.,
Softcover
ISBN: 978-3-642-33928-8