



**UNDERSTANDING
FINANCIAL
RISK
MANAGEMENT**

Second Edition

**ANGELO
CORELLI**

Understanding Financial Risk Management

Second Edition

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Understanding Financial Risk Management

Second Edition

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Finance and Accounting,
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INVESTOR IN PEOPLE

To the one and only:

Margherita

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Contents

List of Tables	xv
List of Figures	xvii
About the Author	xxi
Preface to the First Edition	xxiii
Preface to the Second Edition	xxvii
Chapter 1: Risk: An Overview	1
1.1. Introduction	2
1.1.1. Randomness and Uncertainty	2
1.1.2. Rationality and Risk Aversion	5
1.1.3. Types of Risk	10
Snapshot 1.1: Common Forms of Utility Functions	15
1.2. The Process of Risk Management	16
1.2.1. Risk in Corporations and Financial Institutions	16
1.2.2. Identification, Measurement, and Mitigation	19
1.2.3. Risk Response Strategies	22
1.3. Theory of Markets	23
1.3.1. Arbitrage	23
1.3.2. The Efficient Market Hypothesis	25
1.3.3. The Brownian Motion	29
Snapshot 1.2: Sampling of Brownian Motion Paths in Excel	33
Summary	34
References	34
Exercises	34
Appendix: Types of Market Failure	37
Chapter 2: Financial Markets and Volatility	39
2.1. Modern Portfolio Theory	40
2.1.1. The Risk/Return Trade-off	40
2.1.2. Optimal Portfolios of Risky Assets	44
2.1.3. Optimal Portfolios with Risk-free Asset	48
Snapshot 2.1: Portfolio Optimization in Excel	50
2.2. The Capital Asset Pricing Model	51
2.2.1. Model Assumptions	51
2.2.2. The Security Market Line	55
2.2.3. Beyond CAPM	59

2.3. Volatility and Correlation	62
2.3.1. Types of Volatility	63
2.3.2. Correlation versus Covariance	66
2.3.3. Maximum Likelihood Methods	69
Snapshot 2.2: The Covariance Matrix of Financial Returns	72
Summary	72
References	73
Exercises	73
Appendix: The Table of the Standard Normal Distribution	77
Chapter 3: Conditional Dependence and Time Series	79
3.1. Modeling Financial Comovements	80
3.1.1. Conditional Covariance	80
3.1.2. Conditional Correlation	81
3.2. Time Series Analysis	83
3.2.1. ARCH/GARCH Models	83
3.2.2. Autocorrelation of Financial Returns	87
3.2.3. Other Stylized Facts	91
Summary	93
References	93
Chapter 4: Statistical Analysis	95
4.1. Relevant Distributions	96
4.1.1. Pareto Distribution	96
4.1.2. Binomial Distribution	100
4.1.3. Poisson Distribution	103
Snapshot 4.1: Excel Statistical Functions	108
4.2. Probabilistic Approaches	109
4.2.1. Scenario Analysis	109
4.2.2. Decision Trees	110
4.2.3. Simulations	113
Summary	115
References	116
Exercises	116
Appendix: Itô's Lemma	120
Chapter 5: Beyond Normality and Correlation	123
5.1. Copula Functions	124
5.1.1. Basic Properties	124
5.1.2. Measures of Dependence	127
5.1.3. Application to Risk Management	130
Snapshot 5.1: Monte Carlo Simulation of Copulas	133
5.2. Extreme Value Theory	133
5.2.1. Theoretical Background	134
5.2.2. Data Application	137
5.2.3. Extreme VaR	138

5.3. Beyond VaR	140
5.3.1. Model Back Testing	140
5.3.2. Expected Shortfall	143
5.3.3. Conditional VaR	145
Summary	147
References	148
Exercises	149
Appendix: VaR for Portfolios of Derivatives	150
Chapter 6: Conditional Risk Analysis	153
6.1. Beyond VaR	154
6.1.1. Expected Shortfall	154
6.1.2. Conditional VaR	156
6.2. Multivariate Return Distributions	158
6.2.1. GARCH(p, q) Modeling	159
Summary	161
References	161
Chapter 7: High-frequency Data	163
7.1. High-frequency Trading	163
7.1.1. Data Filtering	163
7.1.2. Basic Stylized Facts	166
7.2. Intraday Risk Analysis	167
7.2.1. Heterogeneous Volatility	167
Summary	169
References	170
Chapter 8: Financial Derivatives	171
8.1. Options and Futures	172
8.1.1. Types of Traders in the Market	172
8.1.2. Option Structure and Payout	175
8.1.3. Forwards and Futures	177
Snapshot 8.1: Volatility Strategy with Strangles	182
8.2. Interest Rate Derivatives	183
8.2.1. Interest Rate Swaps	183
8.2.2. Caps and Floors	185
8.2.3. Swaptions	188
Summary	192
References	192
Exercises	193
Appendix: The Market Price of Risk	194
Chapter 9: Option Pricing and Risk Modeling	197
9.1. Option Pricing Models	198
9.1.1. Binomial Trees	198
9.1.2. BSM Model	202

9.2. Portfolio Hedging	207
9.2.1. Delta Hedging	207
9.2.2. Gamma and Vega Hedging	210
9.2.3. The Cost of Hedging	212
Summary	214
References	215
Exercises	215
Chapter 10: Market Risk	217
10.1. Market Risk Metrics	218
10.1.1. Overview of Market Risk	218
10.1.2. Quantile Metrics and Value-at-Risk	220
10.1.3. VaR Rationale and Definition	224
Snapshot 10.1: The Choice of Parameters for VaR	227
10.2. VaR Calculation Methods	228
10.2.1. Historical Simulation Approach	228
10.2.2. Parametric Method	229
10.2.3. Monte Carlo Simulation	231
Snapshot 10.2: Euler's Theorem on Homogeneous Functions	234
Summary	234
References	235
Exercises	236
Appendix: Factor Mapping for VaR	238
Chapter 11: Inside Value at Risk	241
11.1. VaR Features	241
11.1.1. Decomposition	242
11.1.2. Limitations	245
11.1.3. Analytic Approximations	247
11.2. VaR Testing	249
11.2.1. Model Back Testing	249
11.2.2. Stress Testing	251
Summary	253
References	253
Appendix: Factor Mapping for VaR	255
Chapter 12: Interest Rate Risk	257
12.1. The Dynamics of Interest Rates	258
12.1.1. Bond Prices and Yields	258
12.1.2. Fixed Income Futures	263
12.1.3. Yield Shifts and Immunization	267
Snapshot 12.1: Compounding Frequencies for Interest Rates	272
12.2. Short Rate Models	272
12.2.1. The Term Structure of Interest Rates	272
12.2.2. Single-factor Models	276
12.2.3. Multi-factor Models	280

12.3. IRR Management	282
12.3.1. Sources and Identification	282
12.3.2. Measurement Techniques	284
12.3.3. Duration and Convexity Hedging	286
Summary	290
References	291
Exercises	292
Appendix: Principal Component Analysis of the Term Structure	295
Chapter 13: Credit Risk	297
13.1. Basic Concepts	298
13.1.1. Default Probabilities	298
13.1.2. Loss Given Default	302
13.1.3. Credit Ratings	305
13.2. Structural Models	308
13.2.1. The KMV-Merton Approach	308
13.2.2. First Passage Models	313
13.2.3. CreditMetrics™	315
13.3. Reduced-form Models	317
13.3.1. The Jarrow-Turnbull Model	317
13.3.2. The Duffie-Singleton Model	320
13.3.3. CreditRisk+™	321
Summary	324
References	325
Exercises	326
Appendix: Markov Process for Transition Matrices	328
Chapter 14: Liquidity Risk	331
14.1. Market Prices	332
14.1.1. Market Microstructure	332
14.1.2. Price Formation	336
14.1.3. Funding versus Market Liquidity	338
Snapshot 14.1: Liquidity Black Holes	343
14.2. Models of Liquidity	344
14.2.1. Theoretical Models	344
14.2.2. Traceable Models	348
14.2.3. The Diamond-Dybvig Model	352
14.3. Liquidity Risk and Regulation	355
14.3.1. Liquidity Coverage Ratio	355
14.3.2. Net Stable Funding Ratio	358
14.3.3. Monitoring Tools	359
Summary	362
References	363
Exercises	364
Appendix: Liquidity CAPM	366

Chapter 15: Enterprise Risk	369
15.1. The Fundamentals	370
15.1.1. Identification and Assessment	370
15.1.2. The ERM Framework	373
15.1.3. The COSO ERM	374
15.2. Building and Enhancing	377
15.2.1. Improving the Process View	377
15.2.2. Technological Capabilities	380
15.3. Practical Implementation	382
15.3.1. The Role of the Management	382
15.3.2. Implementation and Models	385
Summary	386
References	386
Chapter 16: Other Risks	387
16.1. Operational Risk	388
16.1.1. Identification and Assessment	388
16.1.2. Treatment and Control	391
16.1.3. Basel II Approach	393
16.2. Currency Risk	397
16.2.1. Types of Currency Risk	397
16.2.2. Foreign Exchange Derivatives	399
16.2.3. Risk Hedging in FX Markets	404
16.3. Volatility Risk	405
16.3.1. Implied Volatility	406
16.3.2. Callable Bonds	407
16.3.3. Variance Swaps	410
Snapshot 16.1: Gamma Swaps	413
Summary	414
References	415
Exercises	415
Appendix: Risk-adjusted Return on Capital	417
Chapter 17: Financial Crisis and Securitization	419
17.1. Crisis and Regulation	420
17.1.1. The Lack in Regulatory Framework	420
17.1.2. The Crisis in Europe	424
17.1.3. The Impact on the Financial Industry	428
17.2. Credit Derivatives	430
17.2.1. Asset Swaps	430
17.2.2. Credit Default Swaps	435
17.2.3. CDS Spreads with Counterparty Credit Risk	438
Snapshot 17.1: The Newton–Raphson Method	441

17.3. Securitization	442
17.3.1. Structure and Participants	442
17.3.2. Collateralized Debt Obligations	444
17.3.3. Advantages and Disadvantages	448
Summary	450
References	451
Exercises	452
Appendix: A Model of SPVs	453
Chapter 18: Hedging Techniques	455
18.1. Market Risk Hedging	456
18.1.1. Delta Hedging	456
18.1.2. Gamma and Vega Hedging	458
18.1.3. The Cost of Hedging	460
18.2. Credit Risk Hedging	463
18.2.1. Modeling Exposure	463
18.2.2. Credit Value Adjustment	467
18.2.3. Monte Carlo Methods	472
18.3. Advanced IRR Hedging	475
18.3.1. M-Absolute and M-Squared Models	475
18.3.2. Duration Vectors	477
18.3.3. Hedging with Fixed Income Derivatives	480
Snapshot 18.1: Convexity Adjustment for Interest Rate Derivatives	483
Summary	484
References	485
Exercises	486
Chapter 19: Advanced Topics	489
19.1. VaR Advances	490
19.1.1. Modified Delta VaR	490
19.1.2. Historical Simulation Revisited	493
19.1.3. Modified Monte-Carlo and Scenario Analysis	495
19.2. Alternative Risk Transfer	496
19.2.1. The ART Market	496
19.2.2. Primary Contracts	498
19.2.3. Insurance Derivatives	501
19.3. High-frequency Trading	504
19.3.1. Data Filtering	504
19.3.2. Basic Stylized Facts	506
19.3.3. Heterogeneous Volatility	508
Summary	510
References	511
Exercises	512
Appendix: Power Laws for Intraday Data	513

Chapter 20: The Future of Financial Risk Management	515
20.1. The Role of Corporate Governance	516
20.1.1. Management Failures	516
20.1.2. Remuneration and Incentive Systems	519
20.1.3. Post-crisis Perspectives	522
20.2. The Banking Sector	522
20.2.1. Bank Risk and Business Models	522
20.2.2. Risk Management Systems	524
20.2.3. Areas of Future Improvements	528
20.3. Challenges for Research	531
20.3.1. Interbank Risk	531
20.3.2. Energy Derivatives	532
20.3.3. Sovereign Risk Dynamics	535
20.4. Digitalization and Risk Management	537
20.4.1. The Impact of Fintech	538
20.4.2. Big Data and Risk	538
Summary	539
References	540
Exercises	540
Index	543

List of Tables

Table 1.1	Risk Likelihood.	21
Table 1.2	Risk Impact.	21
Table 1.3	Risk Priority.	21
EXtable 2.1		50
EXtable 2.2		50
EXtable 2.3		51
EXtable 2.4		68
EXtable 2.5		68
EXtable 2.6		74
EXtable 2.7		75
EXtable 2.8		75
EXtable 2.9		76
EXtable 2.10		76
EXtable 2.11		77
EXtable 2.12		78
EXtable 4.1		108
EXtable 4.2		108
EXtable 4.3		109
EXtable 4.4		110
EXtable 4.5		118
EXtable 4.6		119
Table 8.1	Replication of a Forward Contract by Using the Underlying Asset.	179
EXtable 8.1		193

Table 12.1	Effective Annual Rate Calculation for Different Compounding Frequencies.	259
Table 12.2	Compounding Frequencies.	259
EXTable 12.1		265
EXTable 12.2		265
EXTable 12.3		266
EXTable 12.4		292
EXTable 12.5		292
EXTable 12.6		293
EXTable 12.7		293
Table 13.1	Credit Conversion Factors for PFE Calculation.	302
EXTable 13.1		303
Table 13.2	Credit Ratings Assigned by the Major Credit Agencies.	306
Table 13.3	Credit Ratings on Sovereign Countries.	307
Table 13.4	Altman's z-Score Factors and Weights.	307
EXTable 13.2		308
Table 13.5	A Typical Example of a Credit Ratings Transition Matrix.	316
EXTable 13.3		326
EXTable 13.4		326
EXTable 13.5		327
Table 14.1	Runoff Rates for the Major Asset Categories.	357
Table 14.2	RSF Factors for the Major Category Components.	360
EXTable 14.1		364
EXTable 14.2		365
EXTable 14.3		365
Table 16.1	Operational Income Factors and Indicators for the Different Business Lines in the Bank.	394
Table 18.1	Volatility Spread Approximations.	469
Table 18.2	Add-on Percentages of the Underlying Amount for Different Types of Contract.	470
EXTable 18.1		486
EXTable 18.2		487

List of Figures

Fig. 1.1	Graph Concave Utility Function.	9
Fig. 1.2	Diversification.	11
Fig. 1.3	Risk Process.	17
Fig. 1.4	Information Subsets.	28
Fig. 2.1	Normal Distribution 1.	41
Fig. 2.2	Normal Distribution 2.	41
Fig. 2.3	Normal Distribution 3.	42
Fig. 2.4	Efficient Frontier for Portfolio of Risky Assets.	45
Fig. 2.5	CML.	49
Fig. 2.6	Leverage.	50
Fig. 2.7	SML.	58
Fig. 2.8	SML Alpha.	59
Fig. 3.1	Autocorrelation.	88
Fig. 3.2	ACF.	89
Fig. 4.1	Pareto Distribution.	98
Fig. 4.2	Binomial Distribution.	102
Fig. 4.3	Poisson Distribution.	106
Fig. 4.4	Tree Nodes.	111
Fig. 4.5	Tree Example 1.	112
Fig. 4.6	Tree Example 2.	113
Fig. 5.1	Copula Gauss Student.	126
Fig. 5.2	Copula Clayton Frank.	127
Fig. 5.3	Copula Gumbel.	127
Fig. 5.4	Frechet Weibull Distribution.	136
Fig. 5.5	Gumbel Distribution.	136

Fig. 8.1	Long Call.	176
Fig. 8.2	Short Call.	176
Fig. 8.3	Long Put.	177
Fig. 8.4	Short Put.	177
Fig. 8.5	Forward.	178
Fig. 8.6	Strangles.	182
Fig. 9.1	Binomial Tree.	198
Fig. 9.2	Price Tree.	200
Fig. 10.1	Normal Distribution VaR.	221
Fig. 10.2	VaR.	223
Fig. 12.1	Yield Shift 1.	267
Fig. 12.2	Yield Shift 2.	267
Fig. 12.3	Yield Shift 3.	268
Fig. 12.4	The Yield Curve, As Resulting from Most Common Models of the Interest Rates, and Observed Empirically, Can Take Different Forms.	273
Fig. 13.1	The KMV Modeling of Expected Default.	312
Fig. 13.2	CreditMetrics™.	315
Fig. 13.3	CreditMetrics™ Thresholds.	317
Fig. 14.1	Liquidity.	340
Fig. 16.1	Structure of Internal Controls.	392
Fig. 16.2	Loss Frequency and Severity.	394
Fig. 16.3	Callable Duration.	409
Fig. 16.4	Convexity.	410
Fig. 17.1	Asset Swap.	431
Fig. 17.2	Market Asset Swap.	432
Fig. 17.3	CDS.	435
Fig. 17.4	Securitization.	443
Fig. 17.5	Tranches.	445
Fig. 17.6	CDO.	446
Fig. 17.7	ABS CDO.	446

Fig. 19.1	Captives.	499
Fig. 19.2	Multi-risk.	500
Fig. 19.3	Cat Swap Before.	502
Fig. 19.4	Cat Swap After.	503
Fig. 19.5	Stylized Facts.	507
Fig. 20.1	Board of Directors.	517
Fig. 20.2	Remuneration.	520
Fig. 20.3	Banking.	525
Fig. 20.4	Diagram of a Crude Oil Swap.	534

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About the Author

Angelo Corelli is Associate Professor of Finance at the American University in Dubai. His field of expertise is financial risk management with a focus on credit risk. Angelo's research topics span from quantitative risk management to term structure analysis and valuation/risk of financial derivatives. The main focus of his teaching lies on corporate finance, with a special emphasis on corporate valuation mechanisms.

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Preface to the First Edition

A Modern Approach

Understanding Financial Risk Management offers an innovative approach to financial risk management. With a broad view of theory and the industry, it aims at being a friendly, but serious, starting point for those who encounter risk management for the first time, as well as for more advanced users.

The focus is no longer on the mere measurement, but on the whole package. Risk is also opportunity, and when managing it, one should reach the right balance between opportunity and loss. That is why we propose a new approach that starts from the basic knowledge of classic theory and methodologies and moves to the latest findings in measurement and hedging.

Many books are more exhaustive in covering some of the topics that are treated in this book, but most of them do not offer the wholesome coverage on the horizon of financial risk management as the present book does.

There is no doubt that a deeper analysis of many concepts is possible, but no book in the actual market is able to collect all risks and the managing of them in one single essay. This book is definitely an all-included piece or work that guides the reader from the beginning to the end without ever losing focus on what is more important for good risk-management knowledge.

An Innovative Pedagogy

The foundations of the book rely on three main blocks: theory, analytics, and computational. They all merge in a way that makes it easy for students to understand the exact meaning of the concepts and their representation and applicability in real world contexts. Examples are given throughout the chapters in order to clarify the most intricate aspects; where needed, there are appendices at the end of chapters that give more mathematical insights about specific topics.

Learning comes from the correct combination of the three pillar elements, none of which should be excluded. The trinity stands as the foundation of the whole project.

Preferably, students have a solid background in financial mathematics, statistics, and basic econometrics. Indeed, students facing financial topics for the first time may benefit from using the book as a medium-level introduction to some aspects of financial theory and practice.

In this sense, practitioners represent a possible share of the users of the book. In recent years, due to the global financial crisis, the demand for links between academics and private industry has increased substantially. For this reason, practitioners nowadays

like to explore the work done in academic research, and this book provides useful information for managers who want to increase their knowledge about risk management and understand what may have been the lacking in their own systems.

A Selected Audience

The book is meant for third- or fourth-year undergraduate students of business finance, quantitative finance, and financial mathematics. Most of the universities that the book would target offer the kind of training in mathematics and statistics that would be prerequisites for the successful completion of a course using *Understanding Financial Risk Management*. Potential users include students of universities, technical schools, and business schools offering courses in financial risk management.

This book offers a unique approach and represents a clear improvement on existing textbooks in the field of finance. Most textbooks on financial risk management focus on measurement or on some specific kind of risk. There is no challenge or criticism in them, and there is no drive for understanding risk management in the critical sense. That is exactly what this book will offer.

Quantitative approaches now incorporate a more critical view and contribute to a vision that does not blindly rely on numbers, but takes into account the variety of (sometimes unpredictable) situations that characterize financial markets.

Certainly, it is not an easy book, but it is a book that never abandons the reader. Even in the most complicated parts, the student is guided through the processes and given the tools he needs; nothing is cryptic.

A Reliable Partner for Instructors

Understanding Risk Management is tailored mostly for in-class lectures, and it has the best effect if combined with good quality lecture slides from the instructor. Secondly, given its overall flexibility (a result of its simple structure), it can also be used for online learning. However, the medium-high level of difficulty of the book suggests the need for a closer relation with the instructor and the possibility of in-person explanations.

The structure of *Understanding Financial Risk Management* lends itself to a typical Swedish course of approximately six ECTS. The 10 chapters, of at most 60 pages each, can fit a course design of about 14–16 lectures of 1.5 hours effective teaching. That would also fit an overall international standard of a course with two lectures per week spanned over a two-month teaching term. The overall contents in the book can fill approximately 40–60 hours of teaching.

Richness in Content

This book is the ultimate tool for understanding the many aspects of financial risk management, and it comes with a solid theoretical set.

This first edition has been edited to help educators around the world, suiting users dealing with financial risk for the first time, as well as more advanced users looking for an innovative approach.

As a textbook, the richness in content, exercises, and applications makes the book the perfect partner for the students of all areas in the world, all shaped in a book featuring:

- (a) 14 chapters,
- (b) 70 major and 126 detailed learning outcomes,
- (c) numerous tasks (questions and exercises),
- (d) snapshots and appendices wherever relevant, and
- (e) numerous selected references.

Every chapter follows the same structure, where the full text is complemented by snapshots relating to cutting-edge research and up-to-date news. At the end of each chapter, there is an exercise section with targeted tasks.

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Preface to the Second Edition

The second edition of *Understanding Financial Risk Management* aims to improve the first edition by introducing a more structured approach to the sources of risk in the organization, and the methods used to manage it.

From identification to assessment and management, all types of financial risks a company faces daily are analyzed, together with the tools and techniques that can be used to limit their impact and manage their connected risk events.

Built on the solid pedagogical approach used in the first edition, the second edition improves it by extending the narrative to modern and innovative topics like enterprise risk.

The result is a 20-chapter textbook that takes the student into a full-immersion experience. After an introductory part where distributional issues, statistical tools, and other foundation topics are analyzed, the chapters start digging deep into all types of financial risk that are normally presented to the organization on a daily basis.

An improved coverage of major risks, together with ample narrative on how to use financial derivatives to hedge risk, offer a complete view on past, current, and future trends in financial risk management.

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