



UNDERSTANDING FINANCIAL RISK MANAGEMENT

ANGELO CORELLI

Understanding Financial Risk Management

Angelo Corelli

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Understanding Financial Risk Management

Financial risk management is a topic of primary importance in financial markets and, more generally, in life. Risk can be seen as an opportunity if related to the concept of compensative return. It is therefore important to learn how to measure and control risk, in order to get exposure to as much risk as is necessary to achieve some level of compensation, without further useless exposure.

This book analyses the various types of financial risk a financial institution faces in everyday operations. Each type of risk is dealt with using a rigorous mix of analytical and theoretical approaches, describing all the major models available in the literature, with an innovative look at the topic.

This book covers the following aspects of risk and provides introductory overviews of the most relevant statistical and mathematical tools:

- market risk
- interest rate risk
- credit risk
- liquidity risk
- operational risk
- currency risk
- volatility risk.

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.

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Giuseppe,
Rina,
e Mauro**

Figures

1.1	Utility function	9
1.2	Diversification	11
1.3	Risk process	17
1.4	Information subsets	27
2.1	Normal distribution	40
2.2	Normal distributions with different volatility	40
2.3	Normal distributions with different mean	41
2.4	Efficient frontier	44
2.5	Capital Market Line	48
2.6	Financial leverage	48
2.7	Security Market Line	58
2.8	Alphas on the SML	59
3.1	Pareto distribution	81
3.2	Binomial distribution	85
3.3	Poisson distribution	88
3.4	Decision tree nodes	94
3.5	Decision tree example 1	95
3.6	Decision tree example 2	96
3.7	Autocorrelation of financial returns	103
3.8	Autocorrelation function	104
4.1	Long call option	120
4.2	Short call option	120
4.3	Long put option	121
4.4	Short put option	121
4.5	Forward contract	122
4.6	Strangle	126
4.7	Binomial tree for option pricing	127
4.8	Option price on binomial tree	129
5.1	Value at Risk distribution	158
5.2	Value at Risk quantiles	160
6.1	Parallel yield shift	193
6.2	Yield slope change	193
6.3	Yield curvature change	194

6.4	Yield curve types	199
7.1	KMV model	236
7.2	CreditMetrics™ diagram	239
7.3	CreditMetrics™ transition thresholds	239
8.1	Liquidity properties of a market	261
9.1	Structure of operational risk controls	293
9.2	Loss frequency and loss severity distributions	294
9.3	Duration of a callable bond	309
9.4	Convexity adjustment	310
10.1	Asset swap	329
10.2	Market asset swap	330
10.3	Credit default swap	333
10.4	Securitization	340
10.5	Securitized tranches	342
10.6	Collateralized default obligation	343
10.7	Asset-backed securities CDOs	343
12.1	Gauss and Student's t copulas	386
12.2	Clayton and Frank copulas	387
12.3	Gumbel copula	387
12.4	Frèchet and Weibull distributions	396
12.5	Gumbel distribution	397
13.1	Captives	422
13.2	Multi-risk products	423
13.3	Pre-event catastrophe swap	425
13.4	Post-event catastrophe swap	425
13.5	Stylized facts of high frequency data	429
14.1	Board of a financial institution	439
14.2	Remuneration scheme	441
14.3	Banking activity	446
14.4	Oil swap	455

Tables

1.1	Likelihood of risky events	20
1.2	Impact of risky events	20
1.3	Risk combinations	20
3.1	Lagged variable	102
4.1	Replication of a forward contract	123
6.1	Effective annual rate	186
7.1	Credit conversion factors	226
7.2	Credit ratings	230
7.3	Sovereign credit ratings	230
7.4	Altman's z-score	231
7.5	Transition matrix	240
8.1	Run-off rates	278
8.2	RSF factors	280
9.1	Operational income	296
11.1	Volatility spreads	366
11.2	Add-on percentages	366

Preface

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 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 Financial 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. Second, 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 ten 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 where relevant.
- 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.

After that, there is a list of the references that serve as a convenient bibliography and appendices, where relevant.

Contents

<i>List of figures</i>	xiii
<i>List of tables</i>	xv
<i>Preface</i>	xvi
1 Risk: an overview	1
1.1 Introduction	2
1.2 The process of risk management	15
1.3 Theory of markets	22
Summary	32
Bibliography	33
Exercises	34
Appendix: Types of market failure	35
2 Financial markets and volatility	38
2.1 Modern portfolio theory	39
2.2 The Capital Asset Pricing Model	50
2.3 Volatility and correlation	62
Summary	72
Bibliography	72
Exercises	73
Appendix: The table of the standard normal distribution	76
3 Statistical analysis	78
3.1 Relevant distributions	79
3.2 Probabilistic approaches	92
3.3 Time series analysis	98
Summary	108
Bibliography	108
Exercises	109
Appendix: Itô's Lemma	112

4	Financial derivatives	115
4.1	Options and futures	116
4.2	Pricing of derivatives	126
4.3	Interest rate derivatives	139
	Summary	147
	Bibliography	148
	Exercises	149
	Appendix: The market price of risk	151
5	Market risk	154
5.1	Market risk metrics	155
5.2	VaR calculation methods	164
5.3	Inside VaR	171
	Summary	178
	Bibliography	179
	Exercises	179
	Appendix: Factor mapping for VaR	181
6	Interest rate risk	183
6.1	The dynamics of interest rates	184
6.2	Short-rate models	198
6.3	IRR management	208
	Summary	215
	Bibliography	216
	Exercises	216
	Appendix: Principal component analysis of the term structure	219
7	Credit risk	221
7.1	Basic concepts	222
7.2	Structural models	231
7.3	Reduced-form models	240
	Summary	247
	Bibliography	247
	Exercises	248
	Appendix: The Markov process for transition matrices	250
8	Liquidity risk	252
8.1	Market prices	253
8.2	Models of liquidity	264
8.3	Liquidity risk and regulation	275
	Summary	282
	Bibliography	283
	Exercises	284
	Appendix: Liquidity CAPM	285

9 Other risks	288
9.1 Operational risk 289	
9.2 Currency risk 297	
9.3 Volatility risk 305	
Summary 313	
Bibliography 314	
Exercises 315	
Appendix: Risk-adjusted return on capital 315	
10 Financial crisis and securitization	318
10.1 Crisis and regulation 319	
10.2 Credit derivatives 328	
10.3 Securitization 339	
Summary 347	
Bibliography 348	
Exercises 349	
Appendix: A model of SPVs 349	
11 Hedging techniques	352
11.1 Market risk hedging 353	
11.2 Credit risk hedging 360	
11.3 Advanced IRR hedging 371	
Summary 379	
Bibliography 380	
Exercises 381	
12 Beyond normality and correlation	383
12.1 Copula functions 384	
12.2 Extreme value theory 393	
12.3 Beyond VaR 400	
Summary 408	
Bibliography 408	
Exercises 410	
Appendix: VaR for portfolios of derivatives 410	
13 Advanced topics	412
13.1 VaR advances 413	
13.2 Alternative risk transfer 419	
13.3 High-frequency trading 426	
Summary 432	
Bibliography 433	
Exercises 434	
Appendix: Power laws for intraday data 435	

14 The future of financial risk management	437
14.1 The role of corporate governance	438
14.2 The banking sector	443
14.3 Challenges for research	451
Summary	458
Bibliography	458
Exercises	459
 <i>Index</i>	 461