

Contents

Preface	xv
Acknowledgments	xix
About the Contributors	xxi
 CHAPTER 1	
Introduction	1
Organization of This Book	3
Why Read This Book?	4
Note	4
 CHAPTER 2	
Data Governance in Financial Risk Management	5
Introduction	5
Data Governance Center of Excellence	6
Data Governance Assessment	8
Data Governance Maturity Model	8
Best Practices in Data Governance	10
Conclusion: Next-Generation Techniques to Reduce Data Governance Risk	12
Notes	13
 CHAPTER 3	
Information Risk and Data Quality Management	15
Introduction	15
Organizational Risk, Business Impacts, and Data Quality	15
Examples	17
Data Quality Expectations	19
Mapping Business Policies to Data Rules	21
Data Quality Inspection, Control, and Oversight: Operational Data Governance	21
Managing Information Risk via a Data Quality Scorecard	22
Summary	24
Notes	24

CHAPTER 4

Total Quality Management Using Lean Six Sigma	27
Introduction	27
Performance Targets	28
Process for Excellence	30
Process Improvement	31
Summary	35

CHAPTER 5

Reducing Risk to Financial Operations through Information Technology and Infrastructure Risk Management	37
Introduction	37
The Problem	37
Risk Source and Root Cause	42
Risk Management	43
Closing Comments	45
Global IT Standards Matrix	47
Links to IT Risk Associations and Agencies	49

CHAPTER 6

An Operational Risk Management Framework for All Organizations	53
Introduction	53
Definition and Categorization of Operational Risk	54
How Auditors and Regulators Approach Risk Management	56
How Rating Agencies Evaluate Operational Risk	57
An Operational Risk Framework for All Organizations	57
Conclusion	59

CHAPTER 7

Financial Risk Management in Asia	61
Introduction	61
Risks in Asian Supply Chains	63
Risks in Asian Financial Markets	67
Conclusion	73
Notes	73

CHAPTER 8

Doing Business in Latin America: Lessons Learned and Best Practices for the Protection of Foreign Investors	75
Introduction	75
The World Bank Indicators	76
Protection of Debt Investors	79
Protection of Minority Owners	82
Conclusion	85

CHAPTER 9

Mitigating Risk Exposure in Transitioning to the IFRS	87
Introduction	87
Revenue Recognition Risks (IAS 18)	90

Contents

ix

Derivatives (IAS 39) and Hedging Risks	91
Share-Based Compensation and Pension Risks	93
Nonfinancial Asset Risks	94
Off-Balance-Sheet Risks (Financial Assets)	94
Tax Liability Risks	96
Other Liability Risks	96
Financial Liabilities and Equity Risks	97
Business Combination Risks (Mergers and Acquisitions)	97
Financial Services Industry Risks	99
Conclusion: Suggestions to Reduce the Conversion Risks	100
Notes	101

CHAPTER 10

Quantitative Operational Risk Management Methods 103

Introduction	103
Operational Risk Overview	105
Quantitative Methods	106
Modeling Approach Operational Risk	107
Operational Value at Risk	107
Multifactor Causal Models	108
Regime Switching Models	109
Discriminant Analysis	110
Bayesian Networks	111
Process Approach to Operational Risk	111
Business Process Modeling and Simulation	111
Precursor Analysis in Operational Risk Management	112
Agent-Based Modeling	113
Six Sigma Approach to Quality and Process Control: Failure Modes and Effects Analysis	113
Conclusion	115
Bibliography	115
Notes	116

CHAPTER 11

Statistical Process Control Integrated with Engineering Process Control 117

Introduction	117
Control Schemes	118
Statistical Process Control	119
Engineering Process Control Systems	121
Finance Example	125
Conclusion	130
Bibliography	130
Notes	130

CHAPTER 12

**Business Process Management and Lean Six Sigma:
 A Next-Generation Technique to Improve Financial Risk Management 131**

Background	131
Historical Perspective	133

BPM in Financial Services—Functionality to Look For	134
Survey of Cross Industry Deployments of BPM Solutions	135
Benefits of BPM over Traditional Process Development	136
Pulte Mortgage Case Study	136
Ameriprise Financial Case Study	136
Lean Six Sigma's SIPOC Approach to BPM	137
Conclusion	139
Notes	142

CHAPTER 13

Bayesian Networks for Root Cause Analysis	143
Introduction: Risk Quantification in Finance	143
Causal Knowledge Discovery	144
Bayesian Networks	147
Conclusion	151
Bibliography	151

CHAPTER 14

Analytics: Secrets to Deriving Business Value and Insights out of Information	153
Abstract	153
Introduction	154
Information Technology and Service Evolution	155
Information Analytics Technology Landscape	156
Future Analytics Technologies	166
Conclusion	167
Notes	167

CHAPTER 15

Embedded Predictive Analytics: Transforming Risk Management from Review Function to Competitive Advantage	171
Introduction	171
Execution Risk in the Financial Services Industry	171
Business Processes	172
Predictive Analytics: Technology-Enabled Analytic Methods	173
Conclusion: Managing Risk Competitively	180

CHAPTER 16

Reducing the Financial Risks in Litigation and Legal Discovery	183
Background	183
The Sedona Conference and the New Rules of Civil Procedure	184
U.S. Court Rulings under the New FRCP	189
U.S. Rulings Impacting Businesses Outside the United States	192
Best Practices and Next-Generation Techniques	193
Conclusion	195
Notes	195

CHAPTER 17

The Circle of Trust

197

Introduction	197
Is Three Sigma Good Enough?	198
Economic Value of a Sigma	199
The Six Sigma Audit	200
Conclusion	202
Notes	202

CHAPTER 18

Reducing Liability Risk through Best Environmental Practices

203

Introduction	203
The Economy and the Environment	205
Environmental Risks: Risks and the Securities and Exchange Commission (SEC)	206
Impact of Industrial Environmental Management on Firms Competitive Advantage	208
Shift in Industrial Ecosystem toward Sustainability	210
Industrial Profitability and Sustainable Development	212
Pollution Trading and Firms Financial Performance	214
Conclusion	215
Notes	215
Bibliography	218

CHAPTER 19

**Beyond Segregation of Duties: Next-Generation Techniques in
Evaluating User Access Control Risks**

219

Introduction	219
User Access Controls, Not Just Segregation of Duties	219
Risk Assessment Methodology	220
The Next Generation of Segregation of Duties: User Access Controls	221
Current State and Future Direction of Risk Advisory and Audit Firms	227
Current State and Future Direction of ERP Software Vendors	230
Conclusion	231
Notes	232

CHAPTER 20

Transaction-Based Cross-Enterprise Risk Management

233

Overview	233
Background	234
Basel II and Current U.S. Implementation	235
Current State of Enterprise Risk Management	236
Financial Accounting versus Risk Accounting	240
10 Principles of Effective Enterprise Risk Management	240
A Transactional Approach	241
Cross-Enterprise Solution	244
Predictive Risk Models	250
Conventional Solutions versus Cross-Enterprise Process	251

Conclusion	254
Notes	255

CHAPTER 21

Throughput Accounting	257
Background	257
The Five Focusing Steps	258
Throughput Accounting	259
Elements of Throughput Accounting	260
Evaluating Financial Decisions	261
Role of a Constraint	262
Applying T, I, and OE to Traditional Business Measures	263
Product Cost—Throughput Accounting versus Cost Accounting	264
Analyzing Products Based on Throughput per Constraint Unit	266
How Can a Company Increase T/CU?	268
Key Decisions Areas to Apply Throughput Accounting	269
Summary	270
Appendix: Common Questions and Answers	271
Notes	272

CHAPTER 22

Environmental Consistency Confidence: Scientific Method in Financial Risk Management	273
Introduction	273
Paradigms Applied—Values, Control, Reengineering, and Costing	275
Environmental Consistency Confidence—Statistical Head, Cultural Heart	276
What Is a Key Risk Indicator (KRI)?	277
Case Study: Global Commodities Firm	278
Predictive Key Risk Indicators for Losses and Incidents (PKRI⇔LI) Issues	280
Case Study: European Investment Bank	280
What Is Current Practice?	283
Bigger Canvases for Scientific Management	285
Conclusion	286
Bibliography	287
Notes	287

CHAPTER 23

Quality in the Front Office: Reducing Process Variation in Trading Firms	289
Introduction	289
Development Methodology for Quantitatively Driven Projects in Finance	290
Waterfall Process for Continuous Improvement (Kaizen)	296
Conclusion	296
Notes	296

CHAPTER 24

**The Root Cause of the Global Financial Crisis and Corporate Board
Reforms to Prevent Future Failures in Risk Management**

299

Introduction

299

Background to the Global Financial Crisis of 2007–2009

299

Why This Crisis Deserves Close Scrutiny

300

The Root Cause of Catastrophic Failure in Financial Risk

Management

301

How to Prevent Future Failures in Financial Risk Management

303

Conclusion

318

Notes

319

Index

321

<http://www.pbookshop.com>

<http://www.pbookshop.com>