Credit Risk Management
Pricing, Measurement, and Modeling
## Contents

1 Introduction ............................................. 1

2 Credit Risk Management ................................ 5
  2.1 Credit Risk Organization ............................ 5
  2.2 Trading and Investment Banking .................... 8
  2.3 Basel Credit Risk Management Requirements ...... 12

3 Rating and Scoring Systems ............................ 19
  3.1 Rating Quality Measurement and Validation ....... 19
  3.2 Analytical Ratings .................................. 34
  3.3 Regression Rating Systems .......................... 37
  3.4 Alternative Automated Rating Systems .......... 74
  3.5 Expected Loss, LGD, and EAD Estimations ........ 94
  3.6 Basel II Rating Based Approach .................... 110

4 Portfolio Credit Risk ..................................... 117
  4.1 Economic Capital, Expected, and Unexpected Losses 118
  4.2 CreditMetrics ....................................... 120
  4.3 CreditRisk+ ......................................... 133
  4.4 CreditPortfolioView ................................. 139
  4.5 KMV Portfolio Manager .............................. 142
  4.6 Comparison of the Models ........................... 150
  4.7 Vasicek's Model and the Basel Capital Calculation 152

5 Credit Derivatives and Counterparty Credit Risk .......... 159
  5.1 Credit Derivatives Market .......................... 160
  5.2 Valuation of Multi-name Credit Derivatives ....... 179
  5.3 Advanced Dependence Modeling .................... 190
  5.4 Dynamic Intensity of Default Modeling .......... 204
  5.5 Basel on Credit Derivatives and Securitization .... 217
  5.6 Counterparty Credit Risk .......................... 219