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Nota di contenuto	Acknowledgements; List of Contributors; Preface; Books and Collections of Papers on Stochastic Programming; Contents; 1. Introduction and Summary; Part I. Papers in Finance; 2. Longevity Risk Management for Individual Investors Woo Chang Kim, John M. Mulvey, Koray D. Simsek and Min Jeong Kim; 1 Introduction; 2 Model; 3 Numerical results; 3.1 First example: Retirement planning without longevity risk consideration; 3.2 Second example: Impact of longevity risk to retirement planning; 3.3 Third example: Longevity risks in pension benefits; 4 Conclusions; References 3. Optimal Stochastic Programming-Based Personal Financial Planning with Intermediate and Long-Term Goals Vittorio Moriggia, Giorgio Consigli and Gaetano Iaquinta1 Introduction; 2 The asset-liability management model; 2.1 Individual wealth, consumption and investment targets; 2.2 Random coefficients and scenarios; 2.3 The optimization problem; 3 Numerical implementation and case study; 3.1

Decision tool modular structure; 3.1.1 Individual policy statement; 3.1.2 Scenario manager; 3.1.3 Output; 3.2 Case study; 3.2.1 Optimal solutions; 4 Conclusion; References
4. Intertemporal Surplus Management with Jump Risks Mareen Benk1 Introduction; 2 An intertemporal surplus management model with jump risks - a three-fund theorem; 3 Risk preference, and funding ratio; 4 Conclusions; Appendix I: Derivation of the asset specific risk factor of the first jump component; Appendix II: Derivation of equation (16); Appendix III: Derivation of equation (17); References; 5. Jump-Diffusion Risk-Sensitive Benchmarked Asset Management Mark Davis and Sebastien Lleo; 1 Introduction; 2 Analytical setting; 2.1 Factor dynamics; 2.2 Asset market dynamics
2.3 Benchmark modelling2.4 Portfolio dynamics; 2.5 Investment constraints; 2.6 Problem formulation; 3 Dynamic programming and the value function; 3.1 The risk-sensitive control problems under Ph; 3.2 Properties of the value function; 3.3 Main result; 4 Existence of a classical (C1,2) solution under affine drift assumptions; 5 Existence of a classical (C1,2) solution under standard control assumptions; 6 Verification; 6.1 The unique maximizer of the supremum (60) is the optimal control, i.e. h*(t,Xt) = h (t,Xt,D (t,Xt)); 6.2 Verification; 7 Conclusion; References
6. Dynamic Portfolio Optimization under Regime-Based Firm Strength Chanaka Edirisinghe and Xin Zhang1 Introduction; 2 DEA-based relative firm strength; 2.1 Financial DEA model; 2.2 Parameters of RFS; 2.3 Correlation analysis; 3 Modeling market regimes; 3.1 Regime analysis (1971-2010); 3.2 Regime-based firm-RFS; 4 Portfolio optimization under regime-based RFS; 4.1 RFS-based stock selections; 4.2 Decisions under regime-scenarios; 4.3 Transactions cost model; 4.4 Budget constraints; 4.5 Risk-return framework; 4.6 Two-period optimization model; 5 Model application
5.1 RFS estimation and firm selections

Sommario/riassunto

This book shows the breadth and depth of stochastic programming applications. All the papers presented here involve optimization over the scenarios that represent possible future outcomes of the uncertainty problems. The applications, which were presented at the 12th International Conference on Stochastic Programming held in Halifax, Nova Scotia in August 2010, span the rich field of uses of these models. The finance papers discuss such diverse problems as longevity risk management of individual investors, personal financial planning, intertemporal surplus management, asset management with ben