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Optimal Risk-Sharing with Effort and Project Choice

We consider first-best risk-sharing problems in which “the agent” can control both the drift (effort choice) and the volatility of the underlying process (project selection). In a model of delegated portfolio management, it is optimal to compensate the manager with an option-type payoff, where the functional form of the option is obtained as a solution to an ordinary differential equation. In the general case, the optimal contract is a fixed point of a functional that connects the agent’s and the principal’s maximization problems. We apply martingale/duality methods.

Joint work with Jaksza Cvitanic and Fernando Zapatero.