## Conditional Risk Mappings

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We introduce an axiomatic definition of a conditional convex risk mapping and we derive its properties. In particular, we prove a representation theorem for conditional risk mappings in terms of conditional expectations. We also develop dynamic programming relations for multistage optimization problems involving conditional risk mappings.

Key words: Risk; Conjugate Duality; Stochastic Optimization; Dynamic Programming; Multi-Stage Stochastic Programming

MSC2000 Subject Classification: Primary: 90C15,90C48; Secondary: 91B30,90C46 OR/MS subject classification: Primary: Stochastic Programming; Secondary: Risk

This paper appeared in Mathematics of Operations Research 31 (2006), pp. 544-561. It can be downloaded from http://www.rusz.rutgers.edu/1526-5471-2006-31-03-0544.pdf