

Abstract: In this paper we present the first axiomatic characterisation of preferences that can be represented by a Choquet integral with respect to an exact capacity. The characterising axiom, Binary Diversification, is novel and reflects an inclination for bets on events, thereby capturing a specific type of ambiguity aversion. Furthermore, we demonstrate that the three capacity classes balanced, exact and convex fully exhaust all levels of our family of k-nary Diversification axioms, a unifying framework. We demonstrate that k-nary Diversification has a clear interpretation regarding its dual-self expected utility representation (Chandrasekher et al. (2022)). Finally, we illustrate an implication for multiobjective shortest path problems to demonstrate that our results can be applied in other research fields in which the Choquet integral is utilised.

The paper is joint work with Florian Kauffeldt.