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The range-dependent utility model as a general framework for decisions under risk, uncertainty and time

The range-dependent utility model for risk is a modification of Expected Utility Theory in which the utility function depends on the range of lottery outcomes. The decision utility model is a simple special case of the range-dependent utility model in which monetary Certainty Equivalents are scale- and shift invariant. We propose to extend these models in a several ways: in the decision utility model we let Certainty Equivalents be scale- but not shift- invariant to allow for wealth effects which are present especially when lottery outcome ranges spread over large intervals. We also extend the range-dependent utility model for the uncertainty case with the Hurwicz criterion being the special case for the extreme complete ignorance case. Finally we show how the range-dependent utility model can be used to model time preferences.