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A Note on Deriving Rank-Dependent Utility Using Additive Joint Receipt R. Duncan Luce, Peter C. Fishburn

This note generalizes the derivation of the rank-dependent utility model given in Luce and Fishburn (1991) to the case where the utility of the joint receipt, $U(x, y)$, of two sums of money need not be additive but rather is of the form $U(x, y) = U(x) + U(y)$. Assuming that U is concave for gains and $U(0)=0$, it is shown that this form together with the assumption yields the bounded exponential form for gains. Similar equations hold for losses. The mixed case is less well understood.