## Monetary time consistent utility functions

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**Abstract.** The study of time consistent utility functions is related to backward SDE's and to non linear PDE. The stochastic approach permits to find solutions for these optimisation problems. The classification of these monetary utility functions is known and permits to put the optimisation problem into a framework of stochastic optimisation.

**Keywords** backward SDE's; nonlinear PDE's; stochastic optimisation; utility functions