Consumption, insurance and health decisions under life-time uncertainty

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We formalize a global objective under separation of preferences for risk and intertemporal substitution. We discuss its connection with stochastic differential utility (time-continuous recursive utility) which is based on local separation. For a Merton market the optimal decisions with respect to consumption and investment coincide. We consider two more general markets and characterize the solutions for these markets. In one case we study an incomplete market by adding an extra state process. In another case, we study the effects from an uncertain lifetime and access to life insurance. The latter gives new insight in how, possibly, an endogenous demand for hump-shaped consumption can arise even with 'fair' pricing of insurance. Finally, we discuss briefly how frictions in the insurance market may, or may not, alter the conclusions.