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Tao Pang* (tpang@ncsu.edu) and **Weidong Tian**. *A Portfolio Optimization Problem with Consumption Constraints.*

We consider a portfolio optimization problem of Merton's type in which there is a positive lower bound on the consumption to reflect the minimum living standard constraint in the real world. The constraint, also simple, makes the problem much more complicated. The state space consists of two regions: constrained region and unconstrained region, which are part of the solution. We derive the Hamilton-Jacobi-Bellman equations and obtain the explicit solutions and the optimal strategies on both regions. (Received January 18, 2021)