Optimal Order Execution with Bounded Rate of Transaction

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Abstract. In this research work, we considered an optimal execution model with transaction costs and with constraints on the transaction rates. Under one setting of the parameters, we showed that the optimal value function is the viscosity solution to the associated HJB equation. In the infinite horizon scenario, we found the closed-form solution and the optimal control policy. Regularities of the value function are investigated. Finite time horizon cases and comparison to singular type control are also provided.