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**Carol Alexander, Jun Deng and Bin Zou\*** (bin.zou@uconn.edu), 341 Mansfield Road U1009, Department of Mathematics, University of Connecticut, Storrs, CT 06269-1009. *Optimal Hedging with Margin Constraints and Default Aversion and its Application to Bitcoin Perpetual Futures.*

We consider a futures hedging problem subject to a budget constraint that limits the ability of a hedger with default aversion to meet margin requirements. We derive a semi-closed form for an optimal hedging strategy with dual objectives – to minimize both the variance of the hedged portfolio and the probability of forced liquidations due to margin calls. An empirical analysis of bitcoin shows that the optimal strategy not only achieves superior hedge effectiveness, but also reduces the probability of forced liquidations to an acceptable level. We also compare how the hedger’s default aversion impacts the performance of optimal hedging based on minute-level data across major bitcoin spot and perpetual futures markets. (Received January 05, 2021)