

Some Applications of Linear Programming to Managing Liquidation Risk

Marco Avellaneda

Courant Institute, USA

Abstract:

Liquidation risk is an important area in Finance, to say the least. Institutions are often burdened with inventories of derivatives and OTC products from insolvent counterparties. These portfolios must be closed out in conditions of limited liquidity in the marketplace. We present a mini-max approach to liquidation which leads to a class of algorithms that can be implemented using Linear Programming. The method can be applied in a variety of practical situations, including the liquidation of portfolios of listed and OTC derivatives, equities and equity options by central counter-parties.