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Measuring gap risk for CPPI strategies: implied and otherwise

Constant Proportion Portfolio Insurance (CPPI) is a an investment strategy designed to provide principal protection along with the potential of upside in the case of performance of the underlying asset. In continuous time, with continuous rebalancing (and no jumps in the underlying asset value) the strategy is guaranteed to end with a portfolio worth at least the initial investment amount. Therefore the main risk in implementing the strategy in practice is "gap risk", the probability that the asset price drops more quickly than the portfolio can be rebalanced. We outline some attempts to calibrate a simple jump diffusion model to provide an estimate of the cost of this gap risk for CPPI strategies.