國立政治大學統計學系
學　術　演　講

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題　目：Financial analytics of BTC inverse options in a stochastic volatility world

時　間：民國 114 年 6 月 2 日 (星期一) 下午 1：30

地　點：國立政治大學逸仙樓 050101 教室

摘　要：

Bitcoin (BTC) has attracted a plethora of investors and professional traders and has certainly - among crypto currencies (CC) - become an almost inevitable asset class in today's financial markets. Deribit, a centralized CC exchange, dominates about 90\% of the global crypto options market, where, in particular, the BTC options are settled in BTC. However, analytical explorations into the pricing of CC options are limited since the dynamics of the underlying CCs are highly volatile and are often dominated by the absence of liquidity. Here, we present the stochastic volatility with correlated jumps (SVCJ) model, which enhances the pricing of the BTC option. We present refined simulation methods to calibrate the SVCJ framework for BTC options, and provide a Delta formula for hedging routines. We find that the SVCJ model shows the best-fitting properties in in-sample and out-of-sample performance over simpler models. It also maintains a consistent hedging accuracy dynamically. Our findings offer substantial information for effective BTC options trading, paving the way for better risk management and investment strategies.

歡迎參加

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