

Valuing embedded options under jump diffusion models

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Abstract

We consider the valuation of various embedded options in equity-linked products. We are interested in modeling the stock price as the exponential of a Brownian motion plus an independent compound Poisson process. Results for exponential stopping of a Levy process are used to derive a series of closed-form formulas for a variety of contingent call and put options, lookback options, and barrier options with single or double barriers. This talk is based on joint work with Hans Gerber and Elias Shiu.