

1154-60-1916 **Semere Gebresilasie*** (habtemicaels@wit.edu), 48 Woodward St, Everett, MA 02149. *Pricing Variance Swaps for the Discrete BN-S Model*. Preliminary report.

We introduce a discrete Barndorff-Nielsen and Shephard stochastic volatility model where the non Gaussian Ornstein Uhlenbeck process describes the instantaneous variance of an underlying asset. We developed a closed form solution for the variance swaps for financial markets driven by a Barndorff-Nielsen and Shephard (BN-S) type Levy process. We present a discrete time model to determine the arbitrage free pricing of variance swaps alongside simulations to provide numerical results in support of our findings. Model fitting and parameter estimation are included. (Received September 16, 2019)