

Contaminated Variance-Mean Mixing Model

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We consider the Generalised Normal Variance-Mean (GNVM) model in which the mixing random variable is Gamma distributed for financial return data. This model generalises the popular Variance-Gamma (VG) distribution. This GNVM model can be interpreted as the addition of noise to a (skew) VG base. In this presentation, we will not only discuss the parameter estimation of the general model, but also discuss how to utilize this noise contamination for desirable results. A simulation study will be used to illustrate the results.

Key Words: Normal Variance-Mean mixture distribution, Maximum likelihood estimation, Variance Gamma distribution, JAGS.