

Modelling Higher-Order Conditional Moment Processes in Equity Markets

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Higher-order conditional moments are used to **model returns** generating processes in equity markets. The framework provides an extension of the GARCH-M class of models as standardized residuals are no longer assumed to be identically and independently distributed (i.i.d.) and higher order moments are assumed to enter the conditional mean. The framework also represents an extension of stochastic discount factor models by allowing for nonlinear pricing kernels. Using daily value-weighted CRSP and NASDAQ returns over the period from 1990 to 1995, the empirical results show evidence of time-varying variance, skewness and kurtosis. The conditional variance and skewness are found to be priced in both portfolios, but that the conditional kurtosis is not. The empirical results also show that GARCH-M models based on either Gaussian or non-Gaussian distributions are misspecified.

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