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Title: Equilibrium Asset Pricing with Non-Gaussian Factors and Exponential Utility

Abstract: We analyse the equilibrium asset pricing implications for an economy with single period return exposures to explicit non-Gaussian systematic factors, that may be both skewed and long-tailed, and Gaussian idiosyncratic components. Investors maximize expected exponential utility and equilibrium factor prices are shown to reflect exponentially tilted prices for non-Gaussian factor risk exposures. It is shown that these prices may be directly estimated from the univariate probability law of the factor exposure, given an estimate of average risk aversion in the economy. In addition a residual form of the capital asset pricing model continues to hold and prices the idiosyncratic or Gaussian risks. The theory is illustrated on data for the US economy using independent components analysis to identify the factors and the variance gamma model to describe the probability law of the non-Gaussian factors. It is shown that the residual CAPM accounts for no more than one percent of the pricing of risky assets, while the exponentially tilted systematic factor risk exposures account for the bulk of risky asset pricing.