

Abstract

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This paper studies the nonlinear asset pricing kernel approximation by using orthonormal polynomials of state variables in which the pricing kernel specification is restricted by preference theory. We approximate the true asset pricing kernel for monetary assets by considering consumption-based and Fama-French asset pricing models in which the consumer is assumed to have inter-temporally non-separable preference. We study the classical consumption-based kernels and multifactor (Fama-French) kernels in our asset pricing models. Our results suggest that the multi-factor pricing kernels with nonlinearity and non-separable utility specifications have significantly improved performance.