

# A Simple Theory of Asset Pricing under Model Uncertainty

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## Abstract

The focus of our paper is on the implications of model uncertainty for the cross-sectional properties of returns. We perform our analysis in a tractable single-period mean-variance framework. We show that there is an uncertainty premium in equilibrium expected returns on financial assets and study how the premium varies across the assets. In particular, the cross-sectional distribution of expected returns can be formally described by a two-factor model, where expected returns are derived as compensation for the asset's marginal contribution to the equilibrium risk and uncertainty of the market portfolio. Thus, the standard result that expected returns are related only to systematic, and not diversifiable risk, carries over to economies with model uncertainty as well. Our two-factor pricing model also illustrates that model uncertainty in financial markets may be distinguished from risk, addressing some of the observational equivalence issues raised in the literature.

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