

As a rough test for overall consistency and raw fit, the results of these Bayesian as-if-lognormal calibration exercises speak for themselves.

8. Conclusion

The δ -theory model of this paper is predicting that, when viewed through the lens of the standard frequentist calibration paradigm, there will simultaneously appear to be an “excess volatility puzzle,” a “risk-free rate puzzle,” and an “equity premium puzzle,” whose magnitudes of discrepancy are very close numerically to what is actually observed in the data. This paper shows that such numerical “discrepancies” are puzzles, however, only when seen through a non-Bayesian lens. From a Bayesian perspective, the “puzzling” numbers being observed in the data are telling an internally-consistent fully-rational story about the implicit prior distribution of background structural-parameter risk stemming from the uncertain growth process that is generating such data.

In principle, consumption-based representative agent models provide a complete answer to all asset pricing questions and give a unified theory integrating together the economics of finance with the real economy. In practice, consumption-based representative agent models with standard preferences and a traditional degree of relative risk aversion work poorly when the variance of the growth of future consumption is point-calibrated to the sample variance of its past values. The theme of this paper is that there is an internally consistent theoretical justification for treating the non-observable variance of the subjective future growth rate as if it were equal to the observed variance of a comprehensive economy-wide index of asset returns, for which interpretation the simple standard neoclassical model has the potential to work well in practice.

References

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