This paper provides the optimal multivariate intertemporal portfolio for an ambiguity averse investor, who has access to stocks and derivative markets, in closed form. The stock prices follow stochastic co-variance processes and the investor can have different levels of uncertainty about the diffusion parts of the stocks and the covariance structure. We find strong evidence that the optimal exposures to stock and covariance risks are significantly affected by ambiguity aversion. Welfare analyses show that investors who ignore model uncertainty incur large losses, larger than those suffered under the embedded one-dimensional cases. We further confirm large welfare losses from not trading in derivatives as well as ignoring intertemporal hedging, we study the impact of ambiguity in that regard and justify the importance of including these factors in the scope of portfolio optimization. Conditions for a well-behaved solution in general and verification theorems for the incomplete market case are provided.
Welfare loss

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Leitbild:

Occurences:

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