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Oleksii Mostovyi* (oleksii.mostovyi@uconn.edu), University of Connecticut, Department of Mathematics, U1009, 341 Mansfield Road, Storrs, CT 06269, and **Mihai Sirbu**. *Sensitivity analysis of the utility maximization problem with respect to model perturbations.*

We study the sensitivity of the expected utility maximization problem in a continuous semimartingale market with respect to small changes in the market price of risk. Assuming that the preferences of a rational economic agent are modeled with a general utility function, we obtain a second-order expansion of the value function, a first-order approximation of the terminal wealth, and construct trading strategies that match the indirect utility function up to the second order. If a risk-tolerance wealth process exists, using it as a numeraire and under an appropriate change of measure, we reduce the approximation problem to a Kunita-Watanabe decomposition. This talk is based on the joint work with Mihai Sirbu. (Received August 11, 2017)