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Zachary Feinstein* (zfeinste@princeton.edu) and **Birgit Rudloff**. *Time consistency of risk measures in markets with transaction costs.*

In markets with transaction costs, when capital requirements can be made in a basket of currencies or assets, risk measures are naturally set-valued functions. Definitions of different time consistency properties in the set-valued framework are given. In the set-valued case, the recursive form for multivariate risk measures, an additive property for the acceptance sets, an additive property for penalty functions (for convex risk measures), and a version of m-stability (for coherent risk measures) are all equivalent to a stronger time consistency property called multi-portfolio time consistency. As examples, we consider the superhedging problem in markets with proportional or convex transaction costs and the set-valued average value at risk. (Received September 16, 2013)