

**'Non-Classical' Uncertainty and the Existence of Valued Preferences  
for Risk**

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We show that if a portfolio of a derivative asset and a stock is put in a non-classical (or quantum physical) uncertainty environment, such portfolio will not be risk free and preferences for risk premia will exist. The existence of 'non-classical' uncertainty induces the existence of valued preferences for risk. The existence of such valued preferences calls for the existence of a so called 'valued' martingale.