

Summer Research Paper

Model Risk and Regulatory Capital

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Abstract

We propose a method to assess model risk related to the estimation of standard market risk measures for a futures contract. We mainly focus on model risk related to uncertainties in the econometric modelling of the returns of the underlying asset. We show how to use risk measures adjusted for model risk in the computation of capital requirements associated with a position on the futures market. Our procedure allows to establish a relation between the level of capital reserves and the degree of reliability of the implemented model. By way of illustration, we perform an empirical analysis for a futures contract on the S&P 500 and a futures contract on the US \$/UK £ exchange rate. The main finding is that capital reserves computed on the basis of our adjusted risk measures are quite appropriate to deal with possible losses, even though they are considerably less conservative than capital requirements obtained according to the current BIS regulation.