Risk Measures

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Simulations

Ignacio gave us the idea of checking if the measures used in the literature have an intrinsic cap in the correlation. We are going to simulate a population distribution of r from a population and see what are the correlations expected. This correlations depend on the distribution. Take for example HL, where the rparamater is estimated in intervals; in the interior of one of the intervals, it is clear that the correlation of r levels will be zero.

we can explore the effects of considering a uniform distribution and see how the measures work, and also try to develop a more theoritically based argument for the limits observed in the correlation. Simulation will only serve as a graphical description of the general argument.

We have to assume a distribution of r in the general population that is meaningful, i.e. consider previous data and consider the mean and SD from the population (there most be differences according to different populations, but a higher SD should no create too much problem) once the mean from the population is estimated, we can consider what would be the effect of considering for example smaller intervals around the mean. Some researcher might argue that this could create a biased estimation because of experimenters demands and reference points. It is for future discussion the tradeoff between the low correlation given no-that-accurate measures and the biased caused by this measures.

Other measures might be different given other biases and this is something we should try to replicate. There are some papers that have run simulations in order to understand the effect of the measures and how easy or complicated it is to elicit the r level in the population.