

Andrey A. Kudryavtsev
St. Petersburg State University, Russia

A Short Review of Risk Measuring

Risk measuring is an important topic in modern financial mathematics and actuarial science. However, the general theory of risk measuring does not exist. Instead, there are a number of (sometimes very) different approaches, and the set of risk measures looks like a silage. This number is so large that it is difficult to make a classification of risk measures with mutually exclusive classes.

The aim of the review is to explain the target for risk measuring and to draw basic approaches to do so. In the beginning some general aspects are discussed: why there is no general definition of risk measure, sets of axioms etc. Further, different approaches are presented. First of all, two general approaches to measure risks are discussed – the variance and the Value-at-Risk. Many others are explained as related measures. It helps to understand some logical connections between different risk measures.

This short course (2 hours) could be useful for researchers who specialised in financial, insurance and other business applications of mathematical modelling.