

The lectures will focus on the theoretical aspect of risk measures. The objective is to expose the audience to the recent theoretical advances in the design of risk measures.

More specifically, the lectures will start with a review of the more familiar VaR measure, which helps to set the stage and gives us an opportunity to introduce the necessary terminologies. We will then provide a detailed study of two static risk measures, one of which is the coherent risk measure proposed by Artzner, P., F. Delbaen, J. Eber and D. Heath (1999) and the other is that proposed by Basak and Shapiro (1998). The main focus of the lectures, however, is dynamic risk measures. Here we will study two risk measures proposed in the literature. One is by Artzner, P., F. Delbaen, J. Eber, D. Heath, and H. Ku (2004), and the other by Wang (2003). The focus will be the dynamic consistency issue.

## References

- [1] Artzner, P., F. Delbaen, J. Eber and D. Heath (1999): “Coherent Measures of Risk,” *Mathematical Finance*.
- [2] Artzner, P., F. Delbaen, J. Eber, D. Heath, and H. Ku (2004): “Coherent Multiperiod Risk Adjusted Values and Bellman’s Principle.”
- [3] Basak, S. and A. Shapiro (2001) “Value-at-Risk Based Risk Management: Optimal Policies and Asset Prices,” *Review of Financial Studies*, 14, 371-405
- [4] Wang, T. (2003): “A Class of Dynamic Risk Measures,” working paper.