

1116-91-2978 **Haijun Li*** (lih@math.wsu.edu), Department of Mathematics and Statistics, Washington State University, Pullman, WA 99164. *Regularly Varying Asymptotics for Tail Risk*

A risk measure is a functional of loss variables satisfying a set of operational axioms. These axioms reflect the risk perception of agents (or regulators) involved in the situation under consideration. It follows from duality theory that a coherent risk measure of loss X arises as the supremum of expected values of loss X under various scenarios. In this talk, we will discuss some fundamental ideas to derive asymptotics of coherent risk and its variants for losses that satisfy some tail stability patterns. These asymptotics provide a statistically tractable tool in analyzing tail risk. The method is based on theory of regular variation, and both univariate and multivariate cases will be discussed. (Received September 28, 2015)