



THE UNIVERSITY OF
CHICAGO

Department of Statistics

MASTER'S THESIS PRESENTATION

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Application of optimal portfolio selection methods based on
expected-shortfall with copula induced dependence.

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Jones 304, 5747 S. Ellis Avenue

ABSTRACT

In the optimal portfolio selection problem, I implemented an application on minimizing the optimal expected-shortfall as our objective function. First, I setup several scenarios of margins and copulas to conduct the computation framework for the selection of weights based on previous theorem, and we are able to select margins and copulas for real-data analysis. Next, I illustrate this framework in a real-world stock portfolio, and conducted a comparative analysis with Markowitz portfolio selection.