The economic value of controlling for large losses in portfolio selection

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Abstract: During financial crises equity portfolios have suffered large losses. Methodologies for portfolio selection taking into account the possibility of large losses have existed for decades but their economic value is not well established. This article investigates the economic value in reducing the probability of large losses in portfolio selection. We combine mean-variance analysis with semi-parametric estimation of potential portfolio large losses. We find that strategies that reduce the probability of large losses outperform efficient minimum variance portfolios, especially when semi-parametric estimation is used. Our results are robust to transaction costs.

Key words and phrases: portfolio selection, portfolio tail probability, Extreme Value Theory, risk management.