Tales on Tails

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Research Impact

Financial modeling should not aim only to the development of new methods and models per se but rather should shed light on possible deficiencies in regulation and practice in financial markets. This chapter summarizes the main findings to the light of their possible applications for practitioners and regulators. This thesis sheds light on some issues related to systemic risk and risk management.

Chapter 2 reveals the characteristics of single stocks both in isolation from the index and in comparison to the it. This study has therefore important implications both for practitioners and policy makers as it highlights that systematic tail events happen in concordance with significant macroeconomic news. From a practitioner's perspective this implies that when these events happen the benefits arising from portfolio diversification are less pronounced as a large cross-section of companies exhibit an extreme negative return. From a regulator perspective, this chapter sheds light on which are the companies/sectors that exhibit extreme downward returns more frequently compared to the others therefore highlighting which are the riskiest companies.

Chapter 3 focuses on the usage of High-Frequency data for better forecasting returns. distribution. This chapter develops new models investigating which features of the data are relevant for daily risk measures. In a model validation exercise, this study concludes that High-Frequency data provide a simpler but valid alternative to existing model.

Chapter 4 takes the perspective of the risk manager of an institution that has a longer investment horizon and investigates how an annual risk measure should be estimated. Therefore, this study draws implications relevant for both practitioners and regulators. This study highlights that due to the empirical properties of volatility, measured using High-Frequency data, the annual return distribution highly differs from the normal one therefore implying a more conservative VaR estimate. Further, this study provides a simple rule of thumb to obtain the annual VaR when the daily one is at hand.