Title: Multivariate GARCH

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Abstract: This thesis will examine the regional and global linkages as evidence the integrated markets consist of stock markets in Frankfurt, Amsterdam, Prague the U.S. Therefore we will utilize the multivariate GARCH approach that investigates into the dynamics of volatility transmission of related foreign exchange rates. Also, we will define three basic model classes. For each of the model classes a theoretical review, basic properties and estimation procedure with proofs are provided. We illustrate approach by applying the models to daily market data. Our two main aims are discussing and reporting the existence of regional and global stock markets linkages and provide a comparison of such multivariate GARCH models on the data sample. We find out that the estimated time-varying conditional correlations indicate limited integration among the markets which implies that investors can benefit from the risk reduction by investing in the different stock markets especially during the crisis.