

The bachelor thesis discusses causality in multiple time series. Granger causality, along with its more general counterparts instantaneous causality and multistep causality, are utilized to study the mutual influence of the individual components of a multiple time series. These concepts are investigated within the framework of vector autoregressive models VAR. After the introduction of basic definitions and facts, the construction of VAR model is described including methods for order selection and verification. Subsequently, causal relations within the model are examined. Finally, empirical analysis of real financial market data is performed using tests procedures programmed with computational software Mathematica.