

This thesis deals with analyzing multivariate financial and economical data. The first section describes the theory of multivariate time series and multivariate ARMA models. The second part deals with some models with exogenous variables such as simultaneous equations models and ARMAX model. In the final chapter, the described theory is applied to analyze the reciprocal dependence of time series of inflation rates and dependence of inflation rates on various macroeconomical indicators. The results were obtained by software Mathematica 8, Mathematica 10, EViews and R.