

The thesis deals with the concept of cointegration which represents appropriate tool in the analysis of nonstationary processes. First we summarized most commonly used test for the presence of the unit root in individual time series. Next we concentrate on the models which are commonly used in the cointegration analysis of the time series. We are extensively described error-correction (EC) model which could be used in the analysis of few cointegrating relations. We also pay attention to testing of the linear restrictions on cointegrating relations and testing the hypothesis of weekly exogeneity of examined series by employing likelihood ratio. For the single equation cointegration analysis we described autoregressive distributed lags model (ADL) in detail. We illustrated straight connection between EC and ADL models. Next we introduce the models VAR, VMA, Phillips triangular representation and cointegrating regression. We were concerned with description of relationships between models and we summarized their advantages and disadvantages. Final we illustrated theoretical results in the analysis of the real time series. In the final choice of model we could reduced vector error-correction model to single equation ADL model without the loss of efficiency and we could verified the relationship between them. By employing the tests of linear restriction on cointegrating relation and tests of exogeneity and Granger causality we achieved the better identification of the model in the background of economic theory.