What drives stock market index in the long and short-run: A structural model approach.

Erhan Muğaloğlu
Abdullah Gul University, Turkey
erhan.mugaloglu@agu.edu.tr

Nuh Conağası
Abdullah Gul University, Turkey
nuh.conagasi@agu.edu.tr

Ahmet Türetmiş
Abdullah Gul University, Turkey
ahmet.turetmis@agu.edu.tr

Abstract:

SP-500 index is globally known stock market containing investors ranging between global funds to individuals. This portfolio of profit seeking investors change their buying behavior considering risks and profits with respect to fixed income assets. Since COVID-19 Pandemic has effected harshly both production and service sectors, SP-500 index containing biggest functioning companies of the US also influenced by the Pandemic as expected. In our research we took 10 Years interest rate data as investment funding rate, 2 years interest rate as short term debt rate and risk aversion behavior indicator, vix as market volatility indicator and lastly SP-500 data; with the aim of investigating long run relations and short term dynamics of stock market index with respect to fixed return asset returns and market implied volatility. Apart from previous literature, We establish a structural vector error correction model (VECM) to estimate model parameters regarding finance and economic theory by imposing restrictions on long-run and contemporaneous impact matrices. These identifying assumptions are; (i) in the long run, market volatility don't affect other variables and (ii) short-term rates are affected only by its related structural shocks, Our structural VECM model provides significant parameter estimates as well as reliable impulse response functions for the pre-COVID-19 Pandemic period weekly data from 2011 to 2020. Then it simulates this structural VECM model to forecast the effects of the pandemic on the stock market index, SP-500, and lastly presents its accuracy.

Keywords: COVID-19, vix, structural vector error correction model, market index

JEL Codes: g11, e43,

econTR