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Modeling the excess return of ČEZ a.s. stock

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We propose a multifactor asset pricing model for evaluation of excess return of ČEZ a.s. stock which is derived from the Asset pricing theory. Besides the market risk, factors, that can affect the performance of ČEZ a.s. stock, are also added. They are the price of electricity, the price of natural gas, the price of CO₂ emission permits and index of industrial production. Taking into account a possible persistence of the excess return and external shocks, the autoregressive and moving average terms are also included into the model. It is therefore an ARMAX model from econometric perspective. We verify the validity of the model on monthly and quarterly data from 9-2007 to 4-2023. The results of our analysis show that the model we propose can exceedingly well explain the variability of excess return of ČEZ a.s. stock in both monthly and quarterly time frequencies. The results obtained show that the proposed model has extremely high explanatory power.

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