

(0,0,1), therefore the transfer function model is ARIMAX (3,1,1) (0,0,1) according to the following formula:

$$y_t = \frac{(0.155+0.019B)}{(1+0.217)} x_{t-3} + \frac{1}{(1+0.2105)} e_t$$

The ARIMAX (3,1,1) (0,0,1) model outperformed the ARIMA (0,1,2) model according to the criteria (AIC), (RMSE). The growth of the index in the stock market has been slow based on the daily values of the Dow Jones Index. By the predictive values calculated according to the ARIMAX (3,1,1) and (0,0,1) model, it was found that the effect of the sharp decline in Brent crude prices due to the COVID 19 epidemic was slight and began fairly late. After the third day, the Dow Jones index values returned to normal nature.

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