Task

Forecasting 1 Year Timecharter Rate Handysize Bulkcarrier (Long Run Historical Series).

Choosing a model for forecasting

Since there is little data for analysis (only 222 records from 2004-01-01 to 2022-05-01), the choice was made in favor of linear models (the simplest ones): linear regression (OLS), SVM, ElasticNet.

After testing, ElasticNet was chosen.

ElasticNet

Excluded data on economic indicators (BCI, CCI, CLI) and on export and import volumes, as this information is available with a delay of 2-3 months.

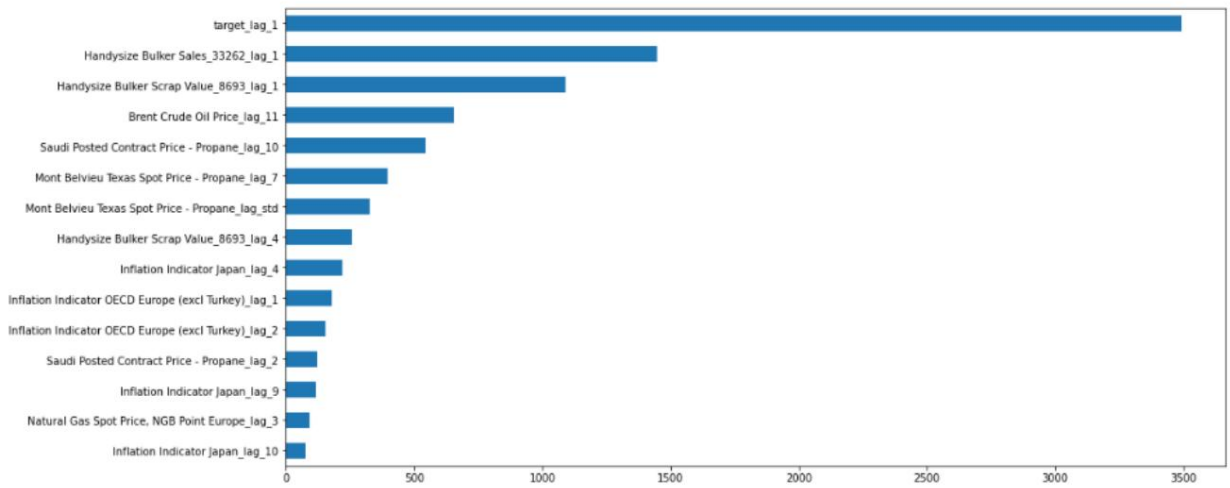
Signs are included for inflation, energy prices, in view of the hypothesis: the geopolitical situation and the economic crisis can be reflected in energy prices, inflation and the key rate.

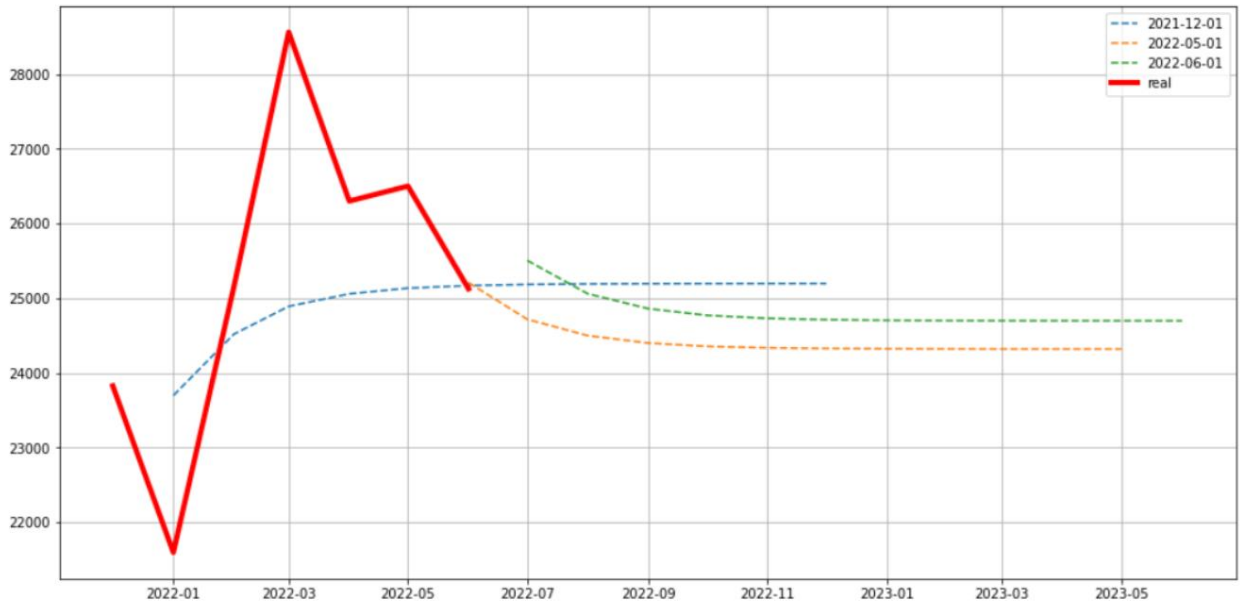
Forecast on 35 features (ElasticNet)

MAPE:
[2.35490482, 2.33511422, 1.80911336, 2.50729122, 3.70040668, 3.9446434, 3.97655004, 4.51077093, 5.11941482, 5.40506158, 5 51939151, 7.55414195, 7.57903803, 7.98114975, 8.79285509, 8.08972703, 8.28971402, 8.19358011]

Mean MAPE score: 5.425714920460543

Features (35):

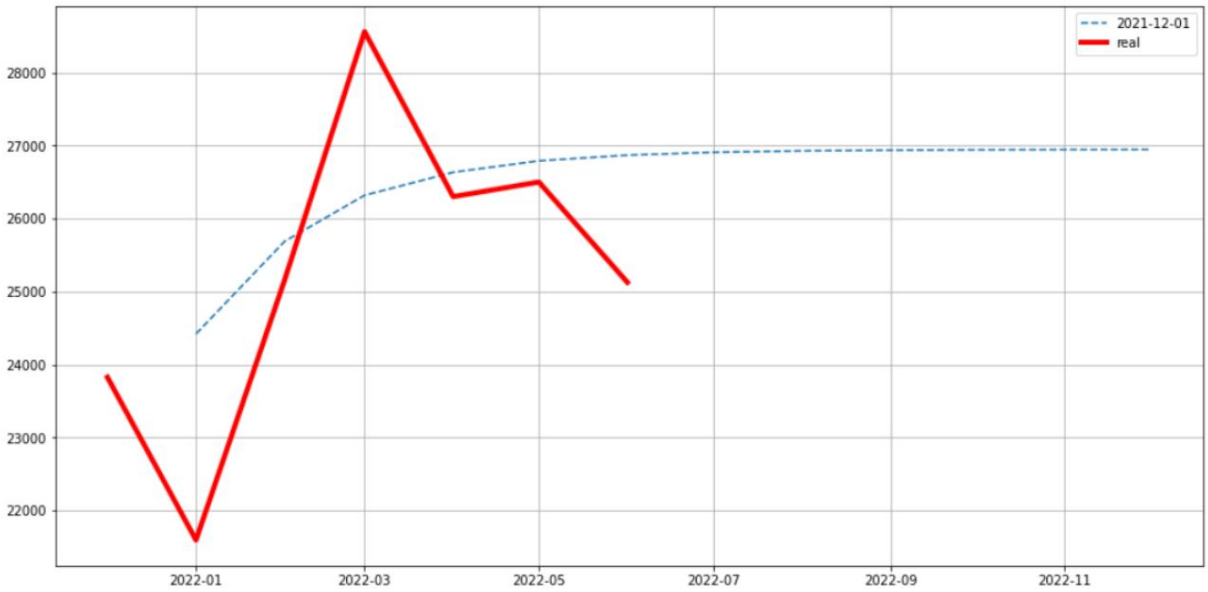




When studying on 2021-12-01 MAPE for the period from 2022-01-01 to 2022-06-01: 5.86%. Forecast from 07-2022 for 12 months (green line) while maintaining exogenous factors at
approximately the same level as in 2022-06-01:

07-2022 – 25 504.35
08-2022 – 25 058.47

It should be noted that when selecting features and training the model until 2021-12, a forecast for 2022 is more or less consistent with the real one.
state of affairs:



That is, there is a tendency to increase, and not to fall, in the rate in the first months of 2022.