Empirical Finance: Methods & Applications

Problem Set 3

Exercise 1

You have collected non-seasonally adjusted (NSA) on

- Nominal GDP,
- Exports of Goods and Services, and
- Imports of Goods and Services.

Can you seasonally adjusted (SA) them using a trend-stationaty process and dummy variables?

Exercise 2

You have collected quarterly data on US Real GDP

- Can you construct the output gap?
- Can you test whether the output gap is good out-of-sample predictor of future stock returns? Retrieve monthly observations from quarterly ones via forward filling, and construct out-of-sample predictions using an expanding window. Use the out-of-sample R-squared and the market-timing test to answer your question. Use the random walk with drift as a benchmark.