Assignment 10 - Time Series in SAS

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Instruction

Record a video to answer the following questions using SAS Enterprise Guide. You can find a similar video at the below link.

Video Instruction

Questions

Working with the inflation data. The dataset contains monthly observations in the US from 1950-2 to 1990-12. A time series containing :

- pai1: one-month inflation rate (in percent, annual rate)

- pai3: three-month inflation rate (in percent, annual rate)

- tb1: one-month T-bill rate (in percent, annual rate)

- tb3: three-month T-bill rate (in percent, annual rate)

- cpi: CPI for urban consumers, all items (the 1982-1984 average is set to 100)

Do the follows.

- Create a time series of one month T-bill rate (which is the variable `tb1`)

- Plot the time series

- Plot the Exponential Smoothing with the weight of .1

- Create a training time series where the time is from 1950-1985

- Model the training series using the ARIMA(1,1,1) and plot the forecast

- Use the model to make forecast for the next years of 1986-1990

- Export the forecast to Excel and calculate the Mean Absolute Percentage Error (MAPE) of the forecasting.