FN6811 – Financial Time Series Analysis

ASSIGNMENT

Due Date: 24/December/2023 by 6:00 pm.

The Excel file "FTSE_Aug2010_Nov2023.xlsx" contains daily FTSE100 index series from 03/Aug/2010 to 03/Nov/2023, a total of 3359 observations. The FTSE100 index is a share index of the 100 largest companies listed on the London Stock Exchange. The company you work for intends to invest in the British market and plans to create a portfolio exactly resembling the composition of the FTSE100 index. Therefore the company is interested in the behavior of the FTSE100 return series, defined as $R_t = 100 \times \log[\text{PRICE(t)/PRICE(t-1)}]$. Based on the given data, you (as the company's top quantitative researcher) are expected to thoroughly analyze the data and build an adequate model for the return series and its volatility. In your report, among other important things, you need to justify the proposed model, interpret the modeling results so that your boss/company can appreciate your work, and also point out the limitations of your analysis.