Time Series Analysis

Homework assignment #3

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Problems

1. Prove the formula for the kurtosis of the $GARCH(1,1)$ model stated in Lecture Notes #2.

2. Carry out a detailed proof of equations (42) and (43), namely the VECM form of the $VAR(p)$ model, in Lecture Notes #3.

3. Consider the last 5 years worth of daily levels of the S&P 500 index and the volatility VIX index. The Bloomberg symols for these indices are SPX `Index`, and VIX `Index`, respectively. Design and carry out a test for Granger causality between these two indices.

This assignment is due on September 24