Business and Economics Forecasting
Econ 3342
Fall, 2019
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Assignment 1

- Due Thursday September 26 (before the beginning of the class).
- You can work in groups of up to three students.
- Send your PDF responses by email and make sure you copy all members when submitting your PDF file.
- Make sure your PDF file shows your work on EViews.

1. Go to Yahoo Finance to download time series data for the S&P 500 (http://finance.yahoo.com/q?s=%5EGSPC). Click on "Historical Data," then select weekly data from your date of birth all the way until the day you finished high school.[1] Then click on "Apply." Right below the "Apply" icon there should find the option to download the data set in a format (.csv) that can be saved as a MS Excel file.

2. Import the file to EViews. Notice that you have to create the EViews workfile first with the appropriate selection of weekly frequency and the same initial and final dates.

3. Obtain the Summary Statistics of Open, High, Low and Close. Explain your results.

4. Calculate the pair-wise correlation coefficients between these four variables. Explain your results.

5. Obtain a time series graph of High and Low.

6. Estimate the following equation using OLS:

$$Close_t = \beta_0 + \beta_1 trend_t + u_t \qquad (1)$$

   You can obtain the series "trend" using the command: "genr trend = @trend"

7. Can we say that Close increases over time? Respond looking at the statistical significance of the slope coefficient. What is the interpretation of this slope coefficient?

8. What is the interpretation of the intercept? Is it statistically significant?

9. If your parents started saving money for your college education on the date you were born, do you think investing in an S&P 500 Indexed Fund would have been a good idea?[2]

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[1] Yes, you can use other dates if that make you feel older or younger. Moreover, if your version of EViews does not allow you to use large datasets, just pick a later starting date to have a smaller dataset.

[2] This can be a very complicated question to answer from a finance point of view. However, use Equation (1) and simple intuition to guide your answer.

10. What is the interpretation of the R-squared in the regression?
11. Obtain the graph for the in-sample forecast values (fitted values) and the forecasting errors (regression residuals).
12. What is the in-sample forecast for the week you turned 10 years old?