

ME2720 Macroeconomics for Business

Assignment 4 Financial Markets

Deadline: December 5, 2017 at 13:15[†]

General Comments & Instructions

In most empirical exercises it is hard to find the exact variable you are looking for. Presumably, you will need to make assumptions in order to solve questions¹. Of course you should clearly state (and motivate!) your assumptions so that others can evaluate your work. Also, do not forget to document which methods and formulas were used to perform calculations, as we all know that different formulas yield different results! Finally, note that an important part of this exercise is to offer economic interpretations of your results.

All teams are required to solve at least 2 of the 5 exercises in Assignment 3. If it is your turn to present the solutions to a particular exercise in class then you need to send me your presentation slides a day in advance (December 3, before 13:15).

Last but not least, the solutions that you hand in must be comprised in ONE coherent *pdf*-file, supplemented with ONE Excel file, or alternatively with the code of the programming language you used, where all calculations must be easy to follow. The *pdf*-file should be easy to read, logically structured, and it must clearly show what you have done and which databases you have used.

[†]Submission to luis.perez@indek.kth.se.

¹For instance, you are interested in the total number of workers in the economy but such data are not available. Then, it might be a good idea to look at the total population aged 18–64 as it represents the population that could *legally* work.

Presentations

- (1) Beating the Market
Group 9: Sandra Skohg, Gabriella Hamilton, Sofia Freij
- (2) Financial Market Development and Economic Growth
Group 14: Konstantinos Papakonstantinou, Christos Dimitriou
- (3) Risk-adjusted Return
Group 2: Alice Aslander, Frida Nilsson, Joel Gedin
- (4) Stock Returns and the Weekend Effect
Group 6: Kyra Jetten, Rick van Oostende

1 Beating the Market

Randomly select one stock market index, collect data for at least 10 years², starting as close in time to the current date as possible, and then assess the claim that “it is on average most profitable to buy stocks in October and sell them in May”. Compare this strategy with the eleven other possible 7-months holding periods. Also compare the strategy with keeping the same stocks all year around. Remember to provide comments and explain how you did the analysis.

2 Financial Market Development and Economic Growth

The financial sector has many important functions in the economy, e.g. saving mobilization, risk management, acquiring information about investment opportunities, monitoring borrowers and exerting corporate control, facilitating the exchange of goods and services, etc. The better the financial sector is at performing these tasks, the better will the economy work. This exercise asks you to investigate the relationship between the financial sector’s development³ and the growth rate of real GDP per capita. See Figure 1 below for inspiration.

[Figure 1 about here.]

²*Hint:* You can find financial data at <http://www.nasdaqomxnordic.com/>.

³*Hint:* The World Bank has useful statistics for this exercise, especially the Global Financial Development dataset.

3 Risk-adjusted Return

Randomly select ten stocks and gather daily data over closing prices for at least three consecutive years. Try to be as close in time as possible to the current date. Then calculate the average daily return and the standard deviation of daily returns for each stock and plot the resulting statistics in a graph like Figure 2 and insert a linear trend line. What result did you expect to find (why?) and how did the actual result compare to your expectations?

[Figure 2 about here.]

4 Stock Returns and the Weekend Effect

Randomly pick one stock market index and gather daily data for at least three years. What day of the week (Monday, Tuesday, . . .) had the largest percentage return on average and what day of the week had the lowest percentage return on average according to your data? Present your results in a graph (similar to Figure 3) showing average return for all five days of the week and provide explanations (scientific or non-scientific—creativity encouraged!) for your findings!

[Figure 3 about here.]

5 Your choice!

Make a short macroeconomic analysis of whatever topic you are interested in!

Figures

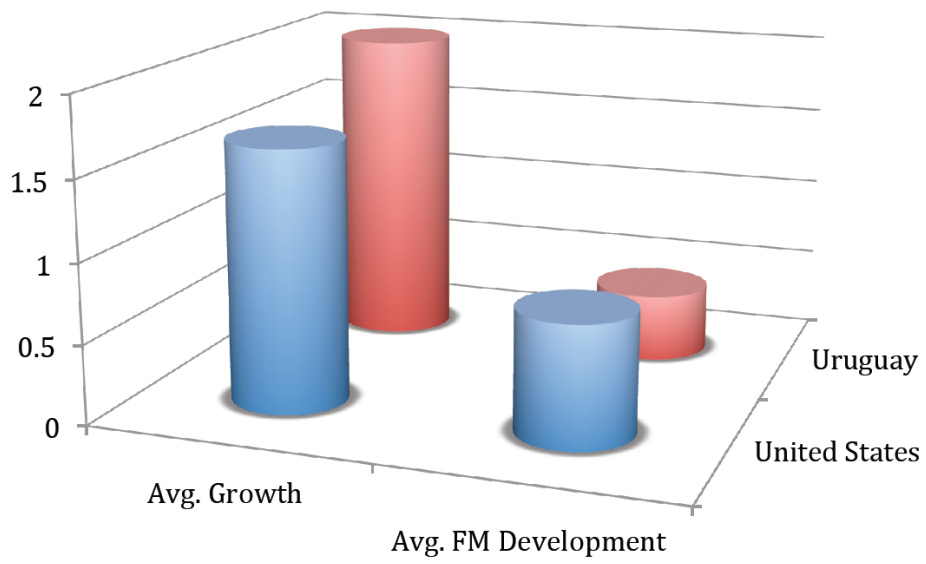


Figure 1: US vs. Uruguay, 1980-2013

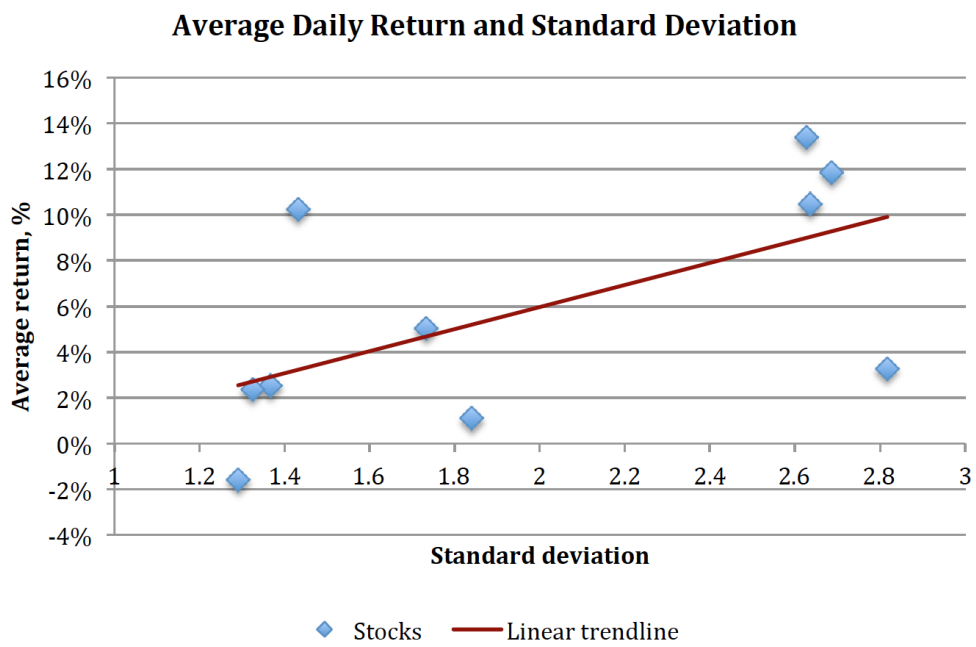


Figure 2: Avg. stock returns and std. deviation

Average return

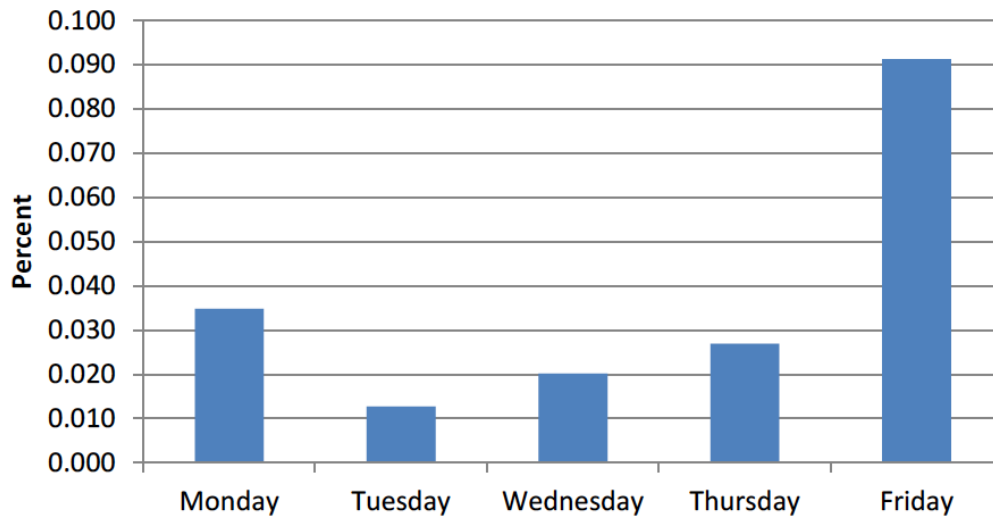


Figure 3: Stock returns and weekdays