INTRODUCTION TO MONEY AND BANKING
ECO 2115

Assignment 1
Deadline: Friday, October 1, 2021
All electronic files (PDF and Excel) to be returned on Brightspace in the assignment 1 space Before 11 pm Ottawa time.

Late submissions and poor-quality presentation of the work will be penalized.

Please start this assignment early in case you have questions. If you wait until the last minute, we might not have time to get to your questions.

Fall 2021
Professor: Marc Prud'Homme

Guidelines

Please respect the following guidelines to avoid possible grade deductions:

a. If you should have questions related to the assignment, you can ask them in the Discussion forum on piazza. Also, before asking a question, look through the forum in case someone has already asked the same question. In the subject box please be specific with regards to the nature of your question (e.g., Prob 2 how to download data?).
b. You are free to discuss the assignment with your classmates. However, this is an individual assignment, and everyone should submit their own copy in the assignment space in Brighspace.
c. Those questions of the assignment that require written answers should be produced in a Word processing software such as MS Word and then saved and submitted as a PDF file. We only accept PDF files for the written part of the assignment. Please ensure that your written part of the assignment is well organized and structured and follows the chronology of the assignment. In other words, clearly identify the problem number and that problem 1 precedes problem 2, etc. So you will be submitting two files: the PDF file with your written answers and your MS Excel file based on the template.
d. When asked to include a graph in your assignment paper, make sure that it has been created in colour so we can easily identify the different data series.
e. Include a cover page with your assignment.
f. In the MS Excel template, do not move or change the parameters (the way the page is set up) that appear in this file. Simply fill in the blanks without moving or changing the set up or layouts of these various sheets. Include your answers in the cells that have been reserved for this purpose (look for the yellow highlighted cells).
g. If and when searching for the Statistics Canada V number codes (you will know what I mean when you see them in the problem statements below) you start by going to the Data link on the Statistics Canada home page (https://www150.statcan.gc.ca) … once

there, look in the right hand corner and you will see a box that reads "Search by Vector". Once on that page you can enter the vector numbers as they appear in the exercises to find your data. However, once that page appears, you will need to click on the number that appears under the SOURCE heading in the box to have access to the full historical data needed to complete some of these exercises.

h. In your calculations, limit the number of digits for your answers after the decimal to one (e.g., 12.1 and not 12.1234) unless otherwise specified.
i. Labels all graphs with titles and axis labels.
j. When creating graphs in Excel, always save them as a separate sheet in the excel file. Name that sheet by the problem number in which it was asked to create the graph like this: Graph 2b. Here is a link that shows you how to save the graph: https://www.youtube.com/watch?v=Cxwtue7AFdM
k. Name your files according to the following convention: Marc_Prudhomme 12345 (first name_Last name student number).
l. Failure to respect these instructions will result in a loss of grades.

To learn more about Statistics Canada data and how to download the data please look at these links:
https://www.statcan.gc.ca/eng/developers/csv/user-guide
https://www.statcan.gc.ca/eng/about/website-faq
https://www.youtube.com/watch?v=8u1I8AWL-Q0
https://www.youtube.com/watch?v=4jdlqFu6Yak

1. From the textbook in the Data analysis section (towards the end of the chapter) from Chapter 1. Do the following:
   Exercise 1 – Start both series in January 2000 such as is stated in the exercise but extend your series to latest available period. See the MS Excel template for details. This period is different than that of the book so that we can have access the most recent data available. Include your data and do your calculations on sheet Prob 1. Include your graph on the sheet Graph 1. Answer parts a) to c) in your MS Word document).

2. Do the financial calculations on the three MS Excel sheets named Financial Calculations 1, 2, and 3. Replace the " ? " in these sheets by your calculated value. Your calculations must use the financial functions built into MS Excel for this purpose. For a list of these functions go here: https://support.microsoft.com/en-us/office/financial-functions-reference-5658d81e-6035-4f24-89c1-fbf124c2b1d8 You will likely need to use only one of these functions for your calculations.
   a. From your calculations on sheet Financial Calculations 3, do you observe a pattern in the results as the parameters (e.g., the discount rate) change? Explain. (Answer this question in your MS Word document).

3. From the textbook in the Data analysis section (towards the end of the chapter) from Chapter 2. Do the following:
   Exercise 1 but replace September 2017 by August 2020. See the MS Excel template sheet Prob 3 for more details.
   a. Which bank asset increased the most over this period? Do the calculations in Excel put also write down the answer in your MS Word document which will converted to PDF before submitting.
   b. Which bank asset increased the least. Do the calculations in Excel put also write down the answer in your MS Word document which will converted to PDF before submitting.

4. From the textbook in the Web Exercises section (towards the end of the chapter) from Chapter 2. Do the following:
   Exercise 1. Provide the estimates for the latest available period. Note that you may have to do some minor digging on the OSFI website to find these data. (Answer this question in your MS Word document).

5. From the textbook in the Data analysis section (towards the end of the chapter) from Chapter 3. Do the following:
   Exercise 2 but replace September 2017 by the latest available data. Note how the formula for calculating the annual growth rate differs from the one in Problem 1 above, both compute annual growth rates but in a different way. See the MS Excel template for more details. Calculate the average growth rate and standard deviation as it is stated in the question in your Excel template on sheet Prob 5.

6. Replicate Figure 1-5 in the textbook. Use only 8 countries however: Canada, USA, Russia, Brazil, Mexico, UK, Japan, Euro area. Include the data on sheet Prob 6 and construct the graph. Save the graph on a different sheet in your Excel file and name it Graph 5. For the Money supply, use the M2 measure of the money supply (or if not available for a given country, use M2+ which is available when M2 is not). As for setting up the graph, include the country names next to the points as in graph. To do this bring your mouse to that point and right click and choose ADD THE DATA LABELS. You will likely see numbers, but you can type in the country names over the numbers to get the desired effect.