

Chapter 3: Data Exploration Problems

1. Probably the most famous stock index is the Dow Jones Industrial Average. Plot this index (FRED code: DJIA) over the period from 1960 to the present. (LO2)

Hint: At the FRED Web site, go to “Data Tools,” then “Create Your Own Graphs,” and input “DJIA” in the search box. You will see a plot beginning in the 1890s. To choose a time period different from the default period, set the desired dates in the “Observation Date Range” box that appears under the “Line 1” summary of the data and select “Redraw Graph”.

2. Plot the percent change from a year ago of the Dow Jones Industrial Average (FRED code: DJIA). Discuss the behavior of changes in the index before, during, and after recession periods, which are indicated by the vertical, shaded bars in the graph. (LO2)

Hint: Continuing from where you ended Data Exploration problem 1, change the “Units” dropdown box from “Index” to “Percent Change from Year Ago;” change the “Frequency” dropdown box to “Monthly” from “Daily;” and select “Redraw Graph.” Changing to “Percent Change from Year Ago” highlights the swings in the index, while using the monthly frequency averages out daily fluctuations that obscure the big pattern.

3. Do changes in stock values affect the wealth of households? Beginning in 1960, plot on a quarterly basis the percent change from a year ago of the Dow Jones Industrial Average (FRED code: DJIA) and the percent change from a year ago of household net worth (FRED code: TNWBSHNO). Compare the two lines. (LO2)

Hint: At the FRED Web site, go to “Data Tools,” then “Create Your Own Graphs,” and input the code for Dow Jones index (FRED code: DJIA) in the search box. You will see a plot beginning in the 1890s. To choose a time period different from the default period, set the desired dates in the “Observation Date Range” dropdown box that appears under the “Line 1” summary of the data and select 1960-01-01. Change the “Units” dropdown box from “Index” to “Percent Change from Year Ago,” change the “Frequency” dropdown box to “Monthly” from “Daily,” and select “Redraw Graph.” Then select “Add Data Series,” enter the code for household net worth (FRED code: TNWBSHNO), and set the start date in the Observation Date Range to January 1960. Finally “Redraw Graph.”

4. The Dow Jones Industrial Average is an index of the prices of only 30 stocks. Consider a much broader measure of the stock market—the market value of equities (FRED code: MVEONWMVBSNNCB) —which sums the price of each stock times the number of outstanding shares. After plotting it, comment on its pattern since the mid-1990s. (LO2)

Hint: At the FRED Web site, go to “Data Tools,” then “Create Your Own Graphs,” and input the code for the market value of equities (FRED code: MVEONWMVBSNNCB) in the search box.

5. In Data Exploration Problem 3, you looked at changes in household net worth. In Data Exploration Problem 4 you examined stock market wealth. Aside from stock market wealth, what other assets contribute to household net worth? (*LO1*)