Integrative Case 1

Online Information, Statistical Techniques, and Policy Analysis

As a junior financial analyst in a brokerage firm, you have been asked by your boss to demonstrate the usefulness of the World Wide Web as a convenient resource for financial research. You have also been asked to answer a number of questions about the general conduct of monetary policy in Canada. As an incentive, you are given one week of paid holidays to the Greek islands in the Aegean Sea.

One popular source of Canadian data is the CANSIM II database maintained by Statistics Canada. Using the electronic data resources at your university's library, access the CANSIM II database and locate historical data on a number of key macroeconomic variables. Your objective is to use the World Wide Web to transfer information via the Internet, to use statistical graphics and analysis to process the information, and to compare the macroeconomic performance in Canada in the 1990s with three other recent decades—the 1960s, 1970s, and 1980s.

1. Get monthly data from January 1960 to December 1999 on core CPI (Consumer Price Index) to compare the inflation performance in Canada in the 1990s with other recent decades, such as the 1960s, 1970s, and 1980s. In particular,

- Calculate the inflation rate over the entire period and present a time series plot of the series (that is, graph the inflation rate series against time).
- Calculate the average inflation rate and its standard deviation over each of the last four decades, and comment on the level and variability of inflation over time.
- Which were the worst and best decades in terms of inflation?

2. Another aspect of macroeconomic performance (beyond inflation performance) is growth in real GDP. Find an annual real GDP (chained in 1996 dollars) series in CANSIM II and calculate the annual real GDP growth rate from 1960 to 1999.

- Graph the real growth rate of the economy.
- Present summary statistics for each of the last four decades on the average real growth rate and its volatility.
- Which decade had the slowest real growth? The highest?
- Which decade had the most stable economic growth?

3. It would be an oversight to neglect the money supply and the role of monetary policy. Get monthly data, from January 1967 to December 1999, on the M1 measure of the money supply (a commonly used measure of the money supply).

Calculate and graph the money growth rate.

- Which decade had the slowest money growth? The highest?
- Which decade had the lowest money growth volatility? The highest?
- Compare the average inflation rate and the average money growth rate over each of the four decades.

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