

University of California, Los Angeles
Department of Statistics

Statistics M11
Introduction to Statistical Methods for Business and Economics

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Winter 2001

Computer Lab Assignment 1
Due on Friday, 26 January 2001

Read carefully...

- A. *The daily closing prices for International Business Machines (stock quote IBM) and Coca-Cola Enterprises, Inc. (stock quote CCE) were recorded for the period of 18 September 2000 to 19 January 2001 (86 observations). The source was <http://chart.yahoo.com/d> . Both companies are listed in the New York Stock Exchange (NYSE). These data can be retrieved in Stata as follows:*

```
. use http://www.stat.ucla.edu/~nchristo/daily
```

The first column is the DATE, the second column is the closing daily price of IBM (IBM_d), and the third column is the daily closing price of Coca-Cola (CCE_d).

- B. *The monthly closing prices for International Business Machines (stock quote IBM) and Coca-Cola Enterprises (stock quote CCE) were recorded for the period of September 1994 to December 2000 (76 observations). The source was <http://chart.yahoo.com/d> . These data can be retrieved in Stata as follows:*

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. use http://www.stat.ucla.edu/~nchristo/monthly
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The first column is the DATE, the second column is the closing monthly price of IBM (IBM_m), and the third column is the monthly closing price for Coca-Cola (CCE_m).

Using the data in the two files – One file at a time:

1. *Convert the daily and monthly closing prices into daily and monthly returns. In order to do this you should copy the data (from the Stata editor) and paste them in Excel. Using Excel you can easily convert the prices into returns. How? If today's closing price is \$110 and yesterday's closing price was \$100 the today's return is $(110-100)/100=0.10$ or 10%.*

2. *Then copy the returns from Excel into Stata. Save the returns as Stata file. You should do this for both daily and monthly data. Now you have the original two Stata files (daily and monthly closing prices) and the two new Stata files that you just saved (daily and monthly returns). The original daily prices file contains 86 observations while the daily returns file contains 85 observations. Similarly the monthly prices file contains 76 observations while the monthly returns file contains 75 observations. Why?*
3. *Analyze the daily returns of IBM and Coca-Cola. In your analysis you should include histograms, boxplots, and descriptive statistics for the daily returns of the two companies. Copy and paste all the Stata outputs into Microsoft Word. Write a few comments for each graph you present. You should also make a comparison between the two companies.*
4. *Analyze the monthly returns of IBM and Coca-Cola. In your analysis you should include histograms, boxplots, and descriptive statistics for the daily returns of the two companies. Copy and paste all the Stata outputs into Microsoft Word. Write a few comments for each graph you present. You should also make a comparison between the two companies.*
5. *Compare the daily with the monthly returns of IBM.
Compare the daily with the monthly returns of Coca-Cola.
What do you find?*

Good Luck!