

## EViews Primer

### I. Getting Started

#### A. Open a workfile in EViews.

- Go to “File”, then “New”, and select “Workfile”.
- Time series data: Specify the data frequency and range. Next to “Frequency” you have several options. Once the range is specified, you cannot extend your dataset outside the range. You may restrict the sample within a range. To specify the dates, EViews uses the following convention: 1995:1 would read as the first quarter of 1995 for quarterly data. If the data were monthly, this would read as the first month of 1995. If daily, the first day of 1995, and so on. Once you have specified the “Start” and “End” dates, click “OK”.
- Cross section data: Specify “Unstructured/Undated” and indicate the number of observations. I would recommend setting the number comfortably above the number of observations you have because it is more difficult to expand the number of observations than to reduce the number later on.
- Be sure and save your workfile. Simply click “Save” on the toolbar within the workfile, and EViews will ask you what you want to name the workfile.

#### B. Fetch the relevant data series from an Excel spreadsheet.

- Go to “Procs” then “Import” then “Read from text/Lotus/Excel”. Select the file you want to import.
- Make sure the “Upper-left data cell” is the cell with the first data value. For time series data, don’t import the actual dates (usually included in an Excel file). Indicate the number of series in the file, and EViews will import their names as they appear in the Excel spreadsheet. Then click “OK”.
- The series should now appear in your EViews file. To check that the data were imported correctly, view the summary statistics or a graph of the data.
- While you can fetch text files (txt), it is usually easier to have the data sorted and organized in Excel first. This minimizes the likelihood of making an error when importing the data.

### II. Data Analysis

#### A. Viewing the data

- Double click on a series. The spreadsheet for this series will appear by default.
- Within this window, you can plot the data. Go to “View” and “Graph”, then “Line” for a line graph.
- You can always change the range of the data if you want to view a particular time frame or subset of the data. In the workfile, click on “Sample”, then change the range accordingly.
- You can also view the summary statistics for this data. Go to “View” then “Descriptive statistics”
- You can view the correlogram for a series by selecting “View”, then “Correlogram”.

#### B. Conditions

- Conditions give you an easy way to limit the sample to selected observations, based on a variety of criteria.
- If there are certain observations you want to exclude without deleting your data, you can use the “If” condition that appears in the “Sample” window.
- Indicate the criteria in the form of a positive if-then statements in the “IF” box. For instance, if you want to exclude people who earn less than \$1,000, type “earnings>1000” to include observations with more than 1000.

#### C. Two or more variables

- You can test the relationships between different variables in your sample by grouping them. To create a group:
  - select the series you want to group (holding down the Ctrl key to select multiple variables),
  - while these series are highlighted, right click on the mouse and choose “Open as Group”
  - you can analyze statistical relationships between the variables, such as correlation, hypothesis tests, etc.
- This puts the variables into one spreadsheet. The same commands apply as above.
- To look at the relationship between two variables, you can create a scatterplot, or compute the correlation between the two variables by going to “View” then “Correlations” then “Common sample”.

### III. Creating Graphs

- Double click on a series. The spreadsheet for this series will appear.
- To plot the data, go to “View” and “Graph”, then “Line” for a line graph, “Bar” for a bar graph, etc.
- To look at a histogram of the data, go to “View” and “Descriptive Statistics”. EViews gives you the distribution of the data, along with basic summary statistics for your sample.
- Click “Freeze”. This opens a separate window with a graph that you will be able to manipulate. This is very important – it’s easy to forget to do. It is important to do this so that your image is saved as an object in EViews. Any changes you make to a group or series is not saved. Changes to a graph are saved.
- Notice, once you create a graph using the “Freeze” command, if you change the data in the workfile (sample, deleting an observation, etc.), this will not be updated in these frozen graphs.
- You can add text, change the color of the line, font, etc. once you have the graph. You can also remove objects.
- You can add shading (common with time series plots) by click on “add shade” and indicating which dates you want shaded. Don’t see the “add shade” option? You probably forgot to create a graph using the “Freeze” command.

### IV. Regression

#### A. Layout

- You can run regressions in EViews by choosing “Quick”, then “Estimate Equation”
  - A window will open asking you which type of regression you want to run (OLS, weighted least squares, logit, etc.). OLS is the default setting in this window.
  - At the bottom of the window, it shows you the sample over which it will run the regression. You can change this if you want to do subsamples, or if you want to limit the data in some way using Conditions.
  - In the regression The first variable you list is the dependent variable.
  - The second variable you list is always the constant term, indicated with a “c” in EViews
  - After the constant term, you can include explanatory variables.
  - The “resid” series stores the residuals from the last regression you ran.

For example, to run the regression  $y_t = \alpha + \beta_1 x_t + \beta_2 z_t + \varepsilon_t$ : y c x z

#### B. Special forms

- You can include lagged values using (-1) for one lag, (-2) for two lags and so on.

For the regression  $y_t = \alpha + \beta_1 y_{t-1} + \beta_2 y_{t-2} + \beta_3 x_t + \varepsilon_t$ : y c y(-1) y(-2) x

- You can also include functional forms in the regression.

For the regression  $\ln(y_t) = \alpha + \beta_1 x_t + \beta_2 x_{t-1} + \beta_3 x_{t-2} + \varepsilon_t$ : log(y) c x x(-1) x(-2)

For the regression  $y_t = \alpha + \beta_1 x_t + \beta_2 x_t^2 + \varepsilon_t$ : y c x x^2

- EViews has some built-in commands for commonly-used time series terms, such as trends and ARMA terms.

For the regression  $\ln(y_t) = \alpha + \beta_1 t + \beta_2 t^2 + \varepsilon_t$  log(y) c @trend @trend^2

For the ARMA(2,1) regression  $y_t = \alpha + \beta_1 y_{t-1} + \beta_2 y_{t-2} + \varepsilon_t + \theta_1 \varepsilon_t$ : y c AR(1) AR(2) MA(1)

#### C. Conditions (Sample restrictions)

- You can restrict the sample you want to include. Do this by indicating the criteria in the form of a positive if-then statements.

For instance, if you want to exclude people who earn less than \$1,000 per year: `earnings>1000`  
to include the observations with a value of more than 1000 for the variable `earnings`.