

# EViews: Introductory User Guide

## EViews Samples

Working with Samples | Working with Sample Objects

Learning support material for the courses:

- ✓ NMST537 Time Series Analysis
- ✓ NEKN432 Econometrics

Based on official [EViews Tutorials](#) & [EViews Illustrated](#).

EViews: Introductory User Guide

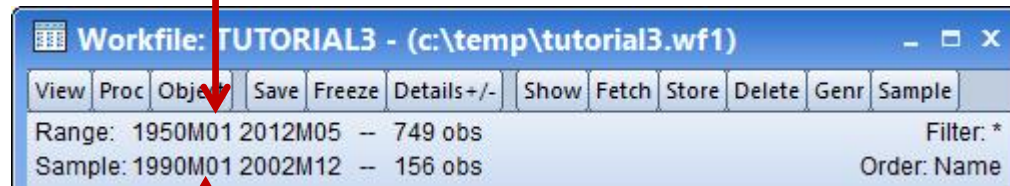
# **EIEWS SAMPLES**

# Samples

- **Samples** are (sub)sets of all observations considered in a workfile, i.e. the so-called **range of observations**.
- **Samples** may be specified over **ranges of observations**.

**Workfile Range (includes all observations)**

(here from Jan 1950 – May 2012, i.e. monthly frequency)



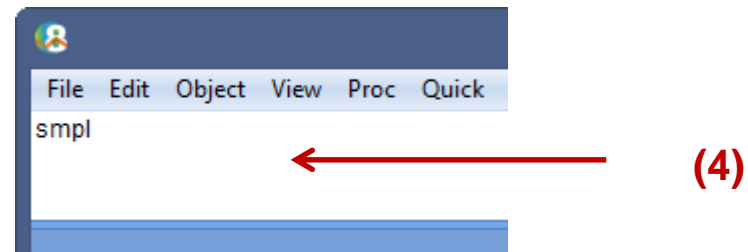
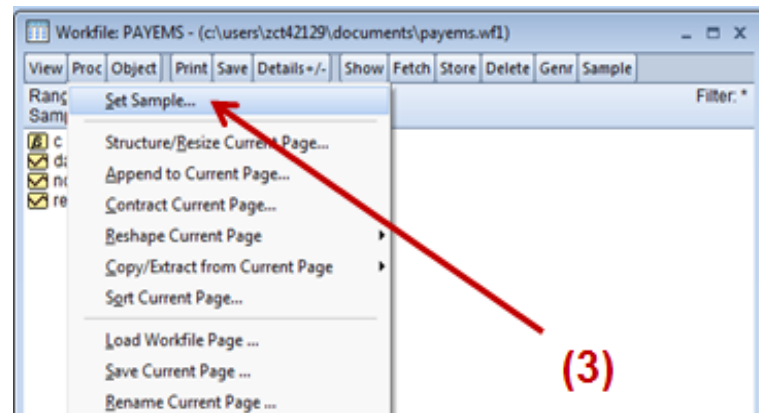
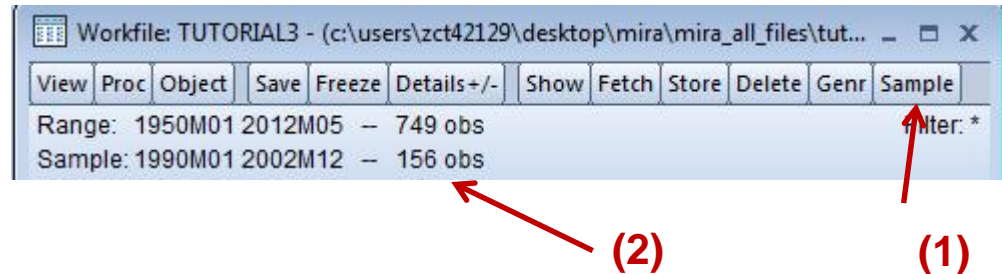
**Workfile Sample (includes only sample observations)**

(here from Jan 1990 – Dec 2002)

# Changing the Sample

## There are a few different ways to change/set the workfile sample:

- Click the **Sample** button in the workfile toolbar (1).
- Double click on the **Sample** display in workfile window (2).
- Select **Proc/Set Sample** from workfile menu (3).
- Type `smpl` in the command window (4).



# Changing the Sample in Time Series Data (Part I)

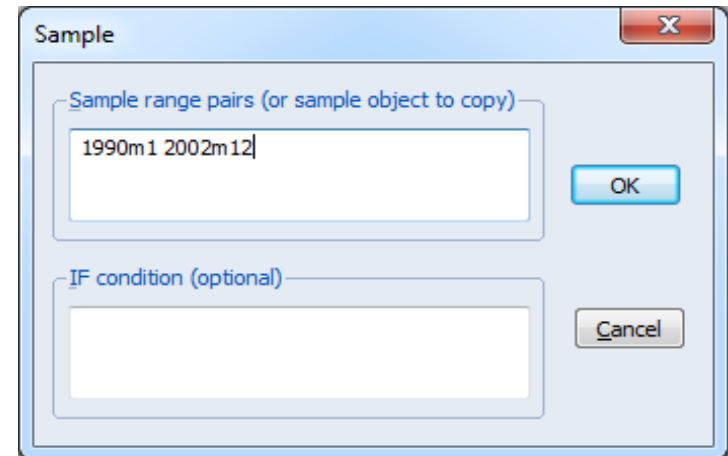
- After using any of the above methods to change/set the sample, EViews opens the **Sample** dialog box asking for input.
- Sample specifications are entered in **pairs** (as **date or observation pairs**).

## To change the sample (Example 1):

1. Select any of the above methods (1-3).
2. The **Sample dialog box** opens up. In the upper portion of the box under **Sample range pairs**, type the new sample in date pairs with spaces between the pairs, e.g. **1990m1 2002m12**.
3. Click **OK**.

### Note:

- The range will remain the same as before. The sample will be changed as was specified.
- After the sample change, all analysis are carried out over the new sample.



# Changing the Sample in Time Series Data (Part II)

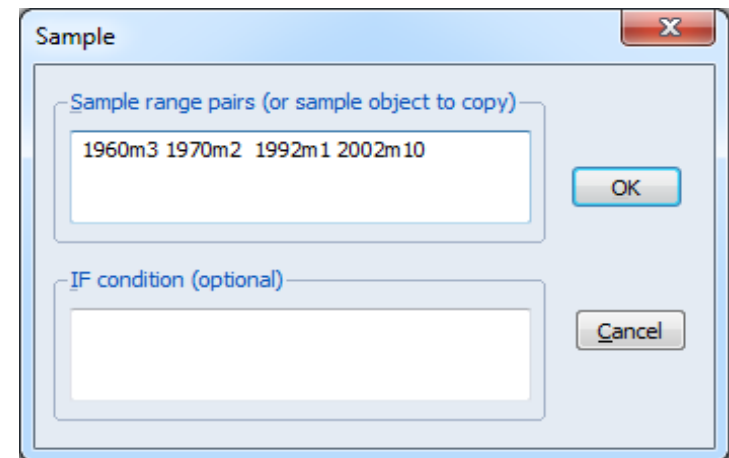
- Suppose that one would like to define the sample over two (non-overlapping) periods.
- The process is the same as before → date ranges should be typed in pairs.

## To change the sample (Example 2):

1. Select any of the methods (1-3) that allow you to change the sample.
2. The **Sample dialog box** opens up. In the upper portion of the box under **Sample range pairs**, type the new sample in date pairs with spaces between each pair, e.g. **1960m3 1970m2 1992m1 2002m10**.
3. Click **OK**.

### Note:

- The range will remain the same as before. The sample will be changed as was specified.
- After the sample change, all analysis are carried out over the new sample.



# Changing the Sample in Undated Workfiles

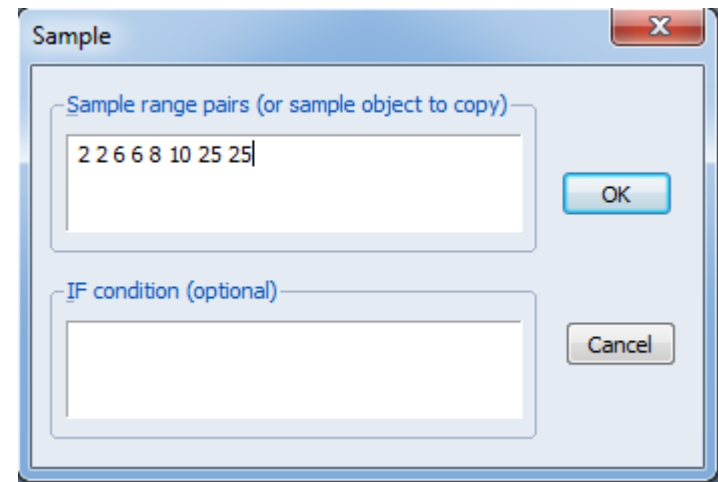
- All the principles discussed above remain unchanged.

## To redefine the sample:

1. Select any of the methods (1-3) that allow you to change the sample.
2. The **Sample dialog box** opens up. In the upper portion of the box under **Sample range pairs**, type the new sample in observation pairs with spaces between each pair, e.g. **2 2 6 6 8 10 25 25**.
3. Click **OK**.

### Note:

- The range will remain the same as before. The sample will be changed as was specified.
- After the sample change, all analysis are carried out over the new sample.



*This command instructs EViews to include only the following observations: 2<sup>nd</sup>, 6<sup>th</sup>, 8<sup>th</sup> -10<sup>th</sup> and 25<sup>th</sup>.*

# Sample Keywords (Part I)

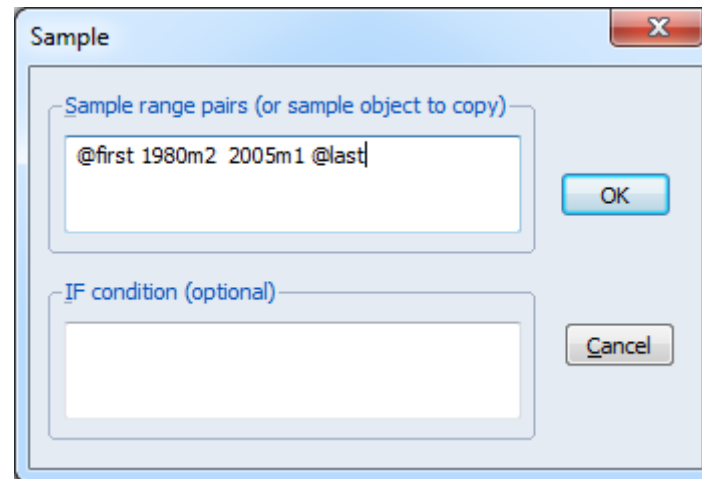
- EViews uses special keywords which make it easier to define samples.
- Sample ranges can be defined by using various formulas.

Function	Description
<b>@all</b>	Refers to the workfile range (includes all observations)
<b>@first @last</b>	Also refers to the workfile range (all obs. from first to last)
<b>@first @first</b>	Includes the first observation only
<b>@last @last</b>	Includes the last observation only
<b>@first+12 @last</b>	Excludes the first 12 observations
<b>@first @first+11</b>	Captures only the first 12 observations
<b>@first @last-15</b>	Excludes the last 15 observations
<b>@last-14 @last</b>	Captures only the last 15 observations
<b>1960m3 1960m3+11</b>	Defines a sample with 12 observations starting in <i>March 1960 – Feb 1961</i>



# Sample Keywords (Part II)

- Each sample range can be defined by using various formulas, e.g., as:



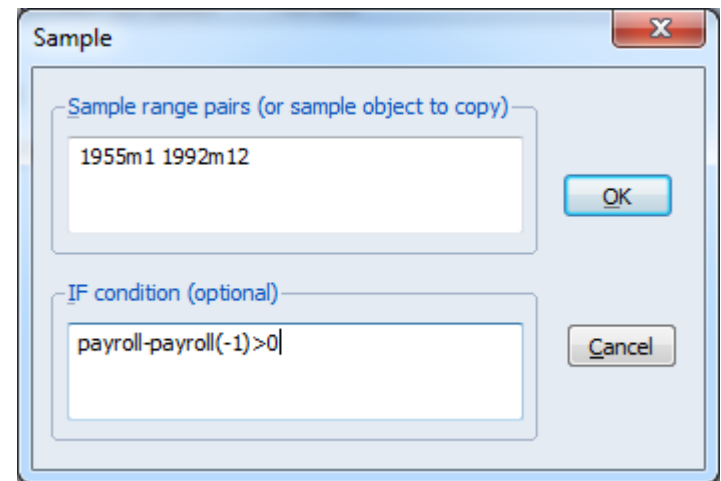
*This command instructs EViews to include all observations from the first observation to Feb 1980 and from Jan 2005 to the last observation.*

# Sample *IF* Statements (Part I)

- The lower portion of the **Sample dialog box** allows you to add conditions to sample specifications.
- It allows to restrict the sample only to those observations when some conditions are satisfied.

## To define sample using *IF* condition:

1. Select any of the methods (1-3) that allow you to change the sample.
2. The **Sample dialog box** opens up. In the upper portion of the box, type first the sample dates (in pairs), e.g. **1955m1 1992m12**
3. In the bottom portion of the **Sample box** under ***IF condition***, define the conditions to be met, e.g. **payroll-payroll(-1)>0**. This specification instructs EViews to only include those observations for which the condition is satisfied, i.e. when the payroll increased from the previous month.
4. Click **OK**.



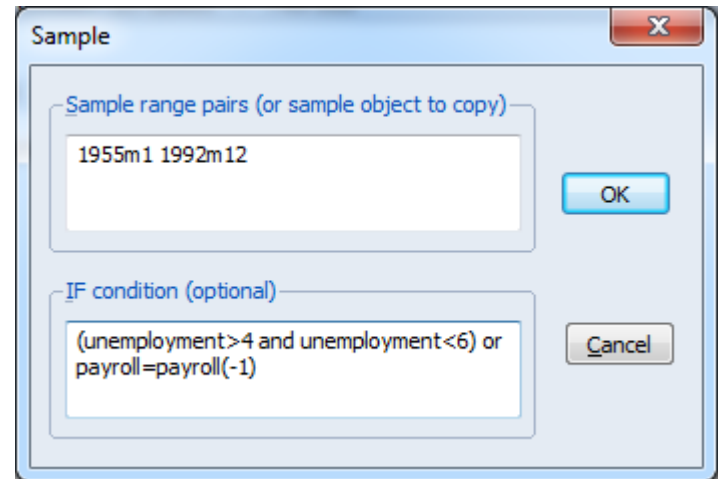
*payroll(-1)* denotes the first lag of payroll series .

# Sample *IF* Statements (Part II)

- One might define more complex conditions.

## To define sample using *IF* condition:

1. Select any of the methods (1-3) that allow you to change the sample.
2. The **Sample dialog box** opens up. In the upper portion of the box, type first the sample dates (in pairs), e.g. **1955m1 1992m12**
3. In the bottom portion of the **Sample box** under **IF condition**, define the conditions to be met, e.g. **(unemployment>4 and unemployment<6) or payroll=payroll(-1)**. This specification instructs EViews to only include those observations for which the condition is satisfied, i.e. when the actual payroll equals the payroll from the previous month or the unemployment is greater than 4 and less than 6.
4. Click **OK**.



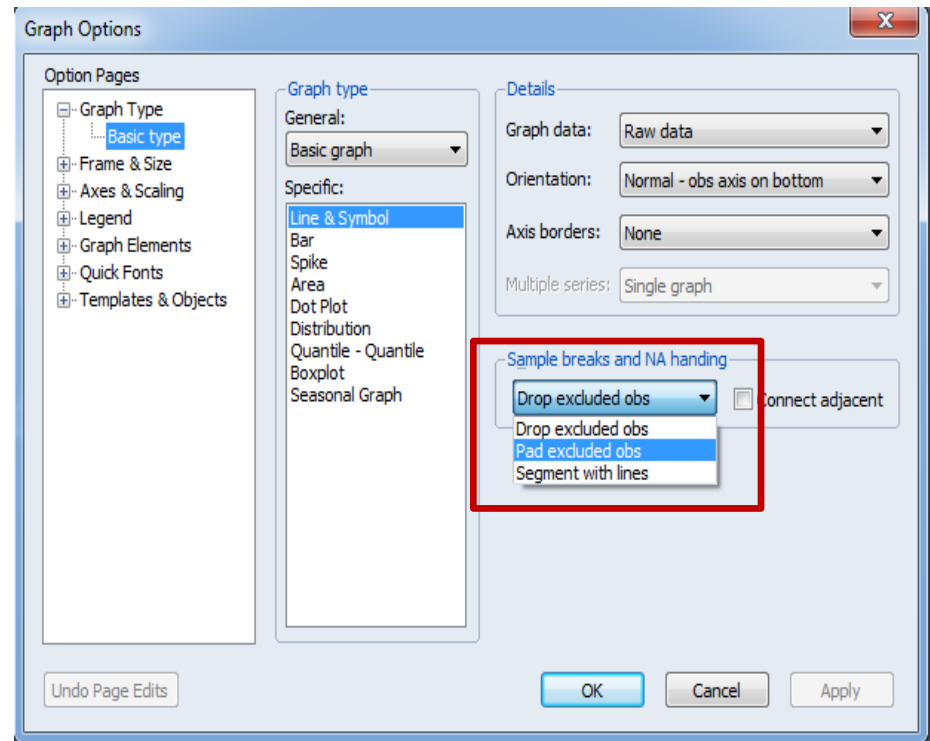
*This command instructs EViews to include only those observations when “unemployment” was between 4 and 6 or when “payroll” was unchanged from the previous month.*

# Sample *IF* Statements (Part III)

- You can set the graph so that the sample is defined over all months.
- In particular, the observations for which the *IF* condition does not hold are shown as missing data.

## To change the graph defined over a sample:

1. Double-click on the graph to bring up the **Graph Option** dialog box.
2. Under **Sample breaks and NA handling**, select **Pad excluded obs**.
3. Click **OK**.



EViews: Introductory User Guide

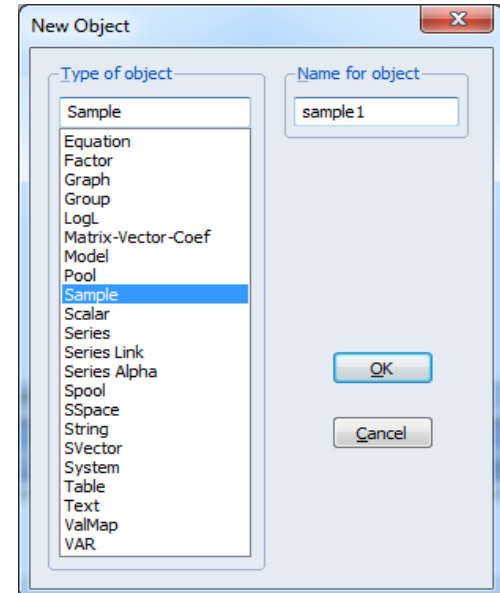
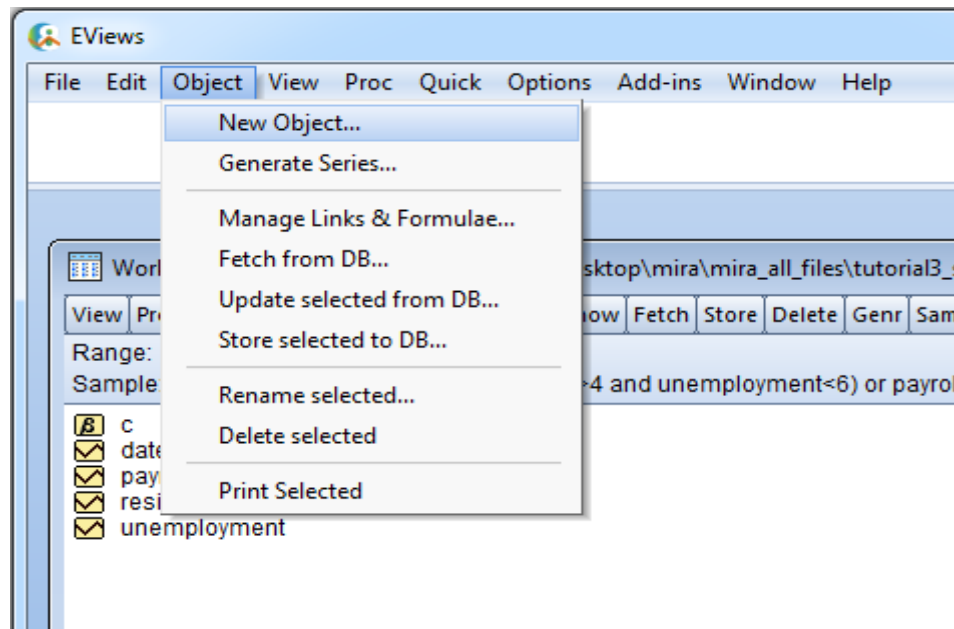
# **SAMPLE OBJECTS**

# Sample Objects (Part I)

- If you need to work with a number of different samples, it may be useful to define these samples as **Objects**.

## To create a *Sample Object*:

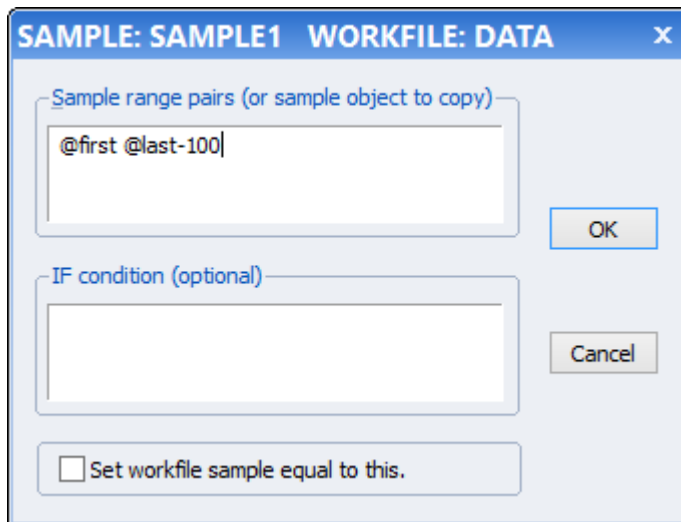
- Select **Object** → **New Object** from the menu.
- Click the **Sample** option, name it (in this case *sample 1*), and then click **OK**.
- The **Sample** dialog box opens up; specify your sample here.



# Sample Objects (Part II)

- To illustrate sample objects, let us create two sample objects:
  - ✓ **Sample 1:** includes all but the last 100 observations of the data.
  - ✓ **Sample 2:** includes only the last 100 observations of the data.

***Note:** before proceeding with these two sample objects, let us first set the sample equal to the workfile range by typing in the command window: **smpl @all**.*



**SAMPLE: SAMPLE1 WORKFILE: DATA**

Sample range pairs (or sample object to copy)

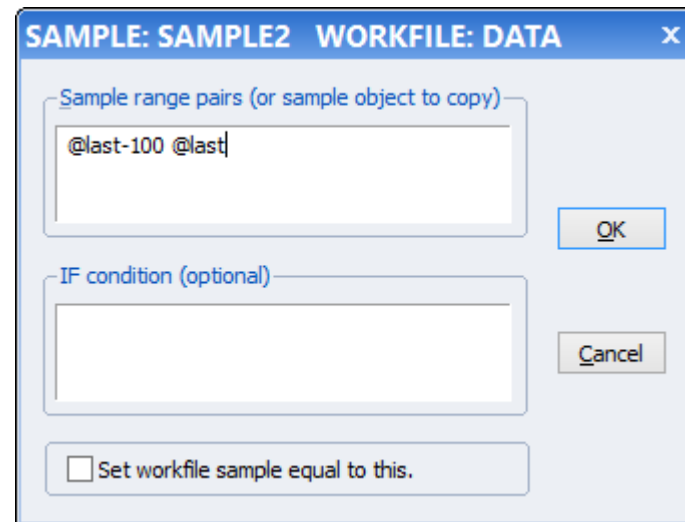
@first @last-100

IF condition (optional)

☐ Set workfile sample equal to this.

OK Cancel

*Sample1 excludes the last 100 observations from the workfile range*



**SAMPLE: SAMPLE2 WORKFILE: DATA**

Sample range pairs (or sample object to copy)

@last-100 @last

IF condition (optional)

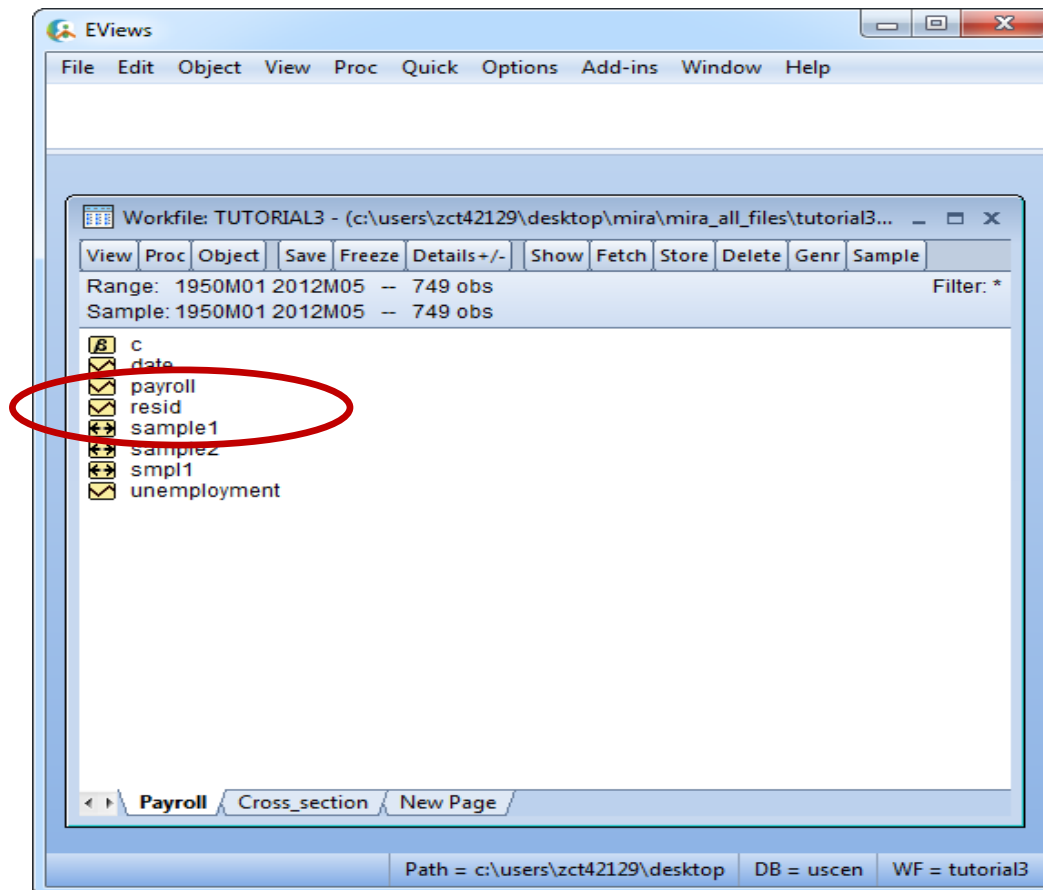
☐ Set workfile sample equal to this.

OK Cancel

*Sample2 includes only the last 100 observations from the workfile range*

# Sample Objects (Part III)

- Both are saved as Objects in the workfile.
- One can use these samples to perform estimation or predictions.





**Radek Hendrych**

**Charles University**

**Faculty of Mathematics and Physics**

**Department of Probability and Mathematical Statistics**

**Sokolovská 83, 186 75 Prague, Czech Republic**

**E-mail: [hendrych@karlin.mff.cuni.cz](mailto:hendrych@karlin.mff.cuni.cz)**