

EViews: Introductory User Guide

Data Objects Basics: Series and Groups

Creating a New Series | Bringing Data into Eviews |

Creating a New Series from Existing Series | Creating Auto Series |

Handling Missing Observations | Editing, documenting and displaying a Series |



Creating Groups | Working with Groups

Learning support material for the courses:

- ✓ **NMST537 Time Series Analysis**
- ✓ **NEKN432 Econometrics**

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

Data Series Objects: Series and Groups

- **Series** and **Groups** are the most important Data Objects in EViews.
- The actual numeric values of your data are held in the **Series** Object. 
- A collection of Series (multiple data columns) comprises a Group Object. 

EViews: Introductory User Guide

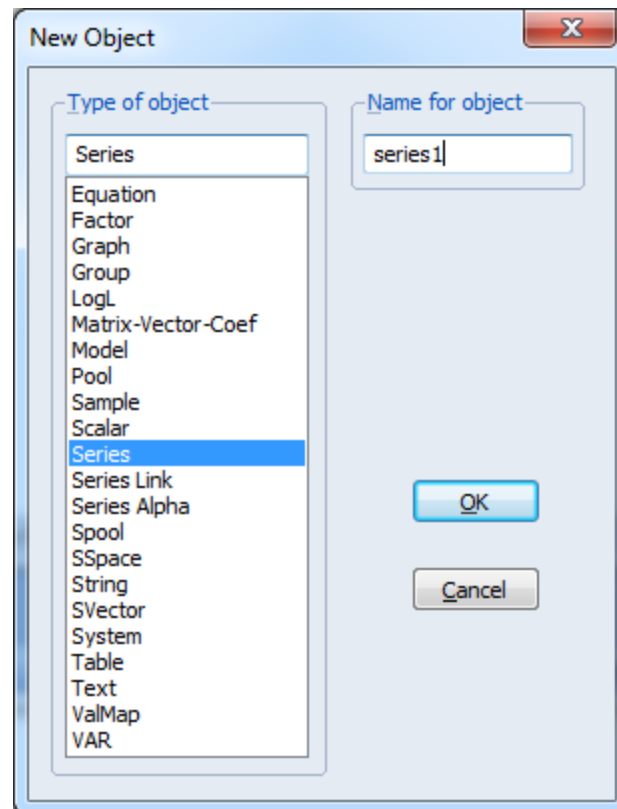
CREATING A NEW SERIES

Creating a New Series (Part I)

- There are a number of ways to create a new (empty) series in EViews.

To create a new series (Example 1):

1. Click on a page in a workfile.
2. Select **Object** → **New Object** from the main menu.
3. Click the **Series** option, name it (*series1* here).
4. Click **OK**.
5. The new series has the structure of the workfile and **NA** in all entries.



Creating a New Series (Part II)

To create a new series (Example 2):

1. On the command window type: ***series series2***

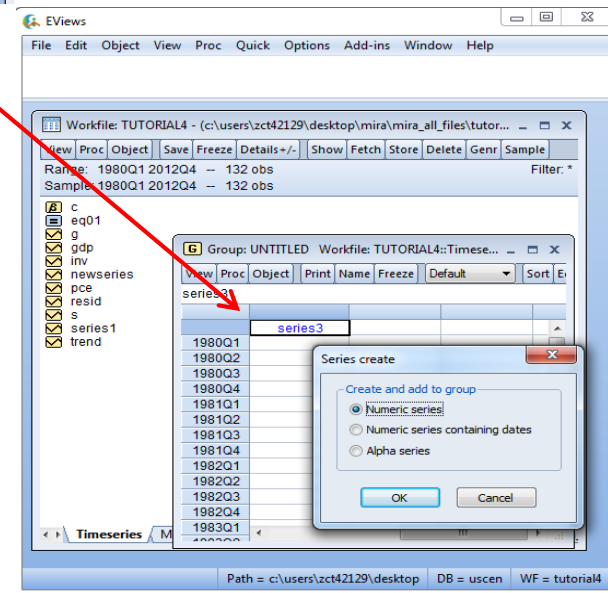
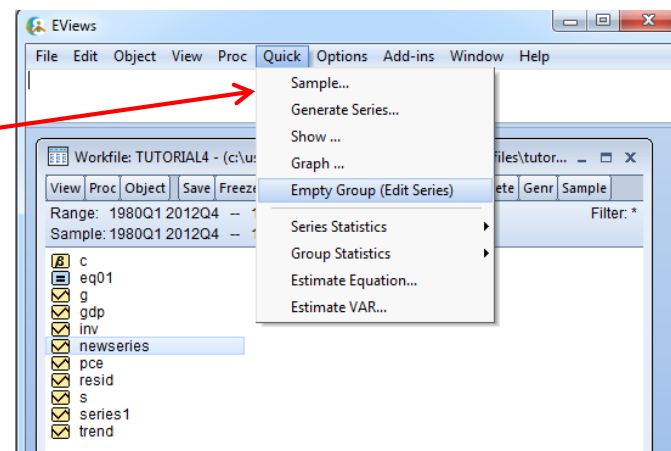
Note: This instructs EViews to create a new series and name it "series2".

2. Press **Enter**.
3. Locate the new series (*series2*) in the workfile.
4. The new series has the structure of the workfile and **NA** in all entries.

Creating a New Series (Part III)

To create a new series (Example 3):

1. Click **Quick** → **Empty Group (Edit Series)** from the menu toolbar.
2. A window opens up with a blank spreadsheet and dates on the side.
3. Scroll up one line (to the top of the spreadsheet) and type the name of the series (*series3* here).
4. Click **Enter**. The “**Series create**” dialog box opens up so you can specify the type of series.
5. Pick “**numeric series**” if the series you are creating will be filled with numeric values.
6. Click **OK**.
7. Close the untitled group (EViews asks if you would like to delete Untitled group; click Yes).
8. Locate *series3* in the workfile and open it.
9. The new series *series3* has the structure of the workfile and **NA** in all entries.




EViews: Introductory User Guide

BRINGING DATA INTO EViews

Bringing Data into an Existing Workfile (Part I)

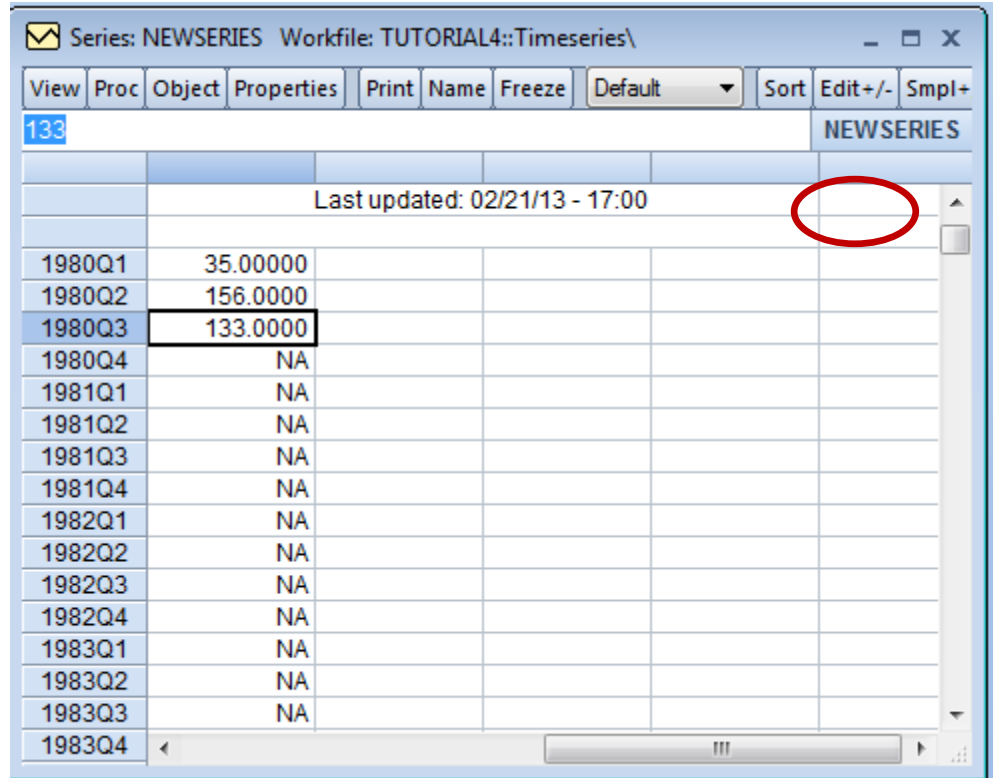
To type data in a series:

1. Click on a page and open one of the new series with empty (NA) values we created above.

2. Click the  button to turn on editing mode.

*Note: using **Edit +/-** depends on your option settings; it is needed under default settings.*

3. Start entering in data.



The screenshot shows the EViews 'Series: NEWSERIES' editor window. The title bar indicates the workfile is 'TUTORIAL4::Timeseries\'. The menu bar includes View, Proc, Object, Properties, Print, Name, Freeze, Default, Sort, Edit+/-, and Smpl+. The 'Edit+/-' button is highlighted with a red circle. The main area displays a table of data for the series 'NEWSERIES'. The first three rows contain numerical values: 35.00000, 156.0000, and 133.0000. The remaining rows are filled with 'NA' (Not Available). The 'Last updated' timestamp is '02/21/13 - 17:00'.

| Last updated: 02/21/13 - 17:00 | |
|--------------------------------|----------|
| 1980Q1 | 35.00000 |
| 1980Q2 | 156.0000 |
| 1980Q3 | 133.0000 |
| 1980Q4 | NA |
| 1981Q1 | NA |
| 1981Q2 | NA |
| 1981Q3 | NA |
| 1981Q4 | NA |
| 1982Q1 | NA |
| 1982Q2 | NA |
| 1982Q3 | NA |
| 1982Q4 | NA |
| 1983Q1 | NA |
| 1983Q2 | NA |
| 1983Q3 | NA |
| 1983Q4 | NA |

Bringing Data into an Existing Workfile (Part II)

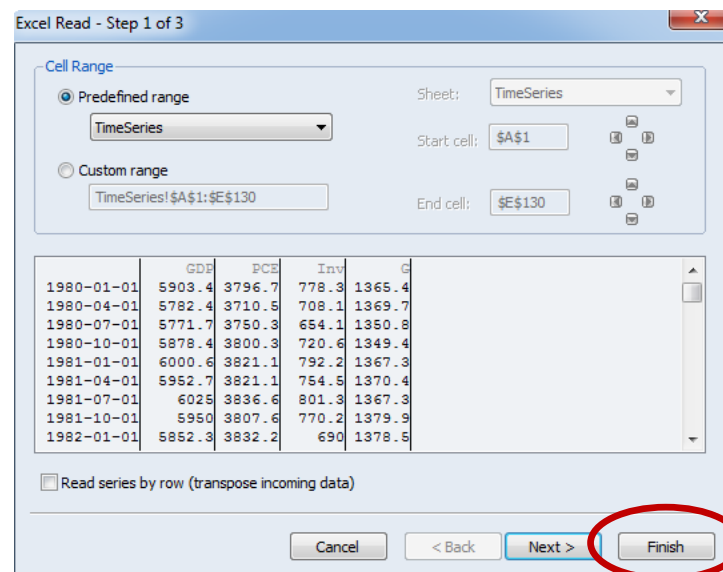
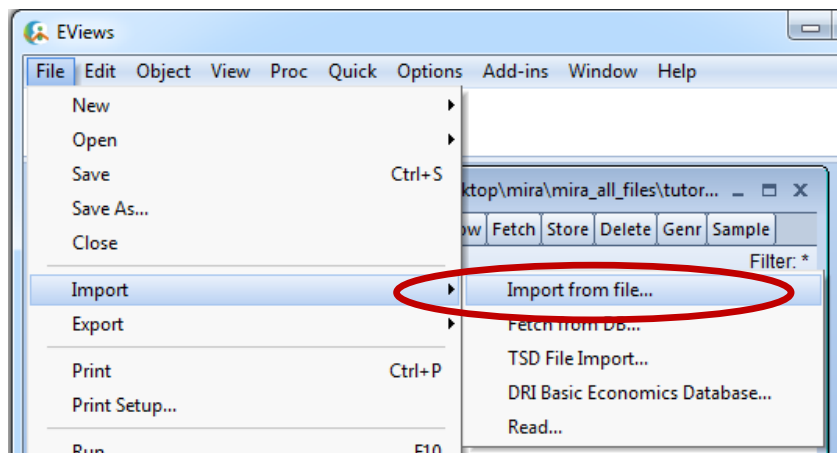
To bring data in EViews by Copy/Paste:

1. Open the data in Excel or any other application.
2. Highlight the series you wish to bring into EViews and select **Edit** → **Copy**.
Note: you do not need to copy dates since the EViews workfile is already structured by date.
3. In EViews workfile click **Quick** → **Empty Group (Edit Series)**.
4. A window opens up with a blank spreadsheet and dates on the side. Place the cursor on the upper-left cell, right-hand-click, and choose **Paste**.

Bringing Data into an Existing Workfile (Part III)

To import data into a workfile:

1. On the menu bar, select **File** (or **Proc**) → **Import** → **Import from file**. A standard **File Open** dialog box appears which allows you to locate the file.
2. Click **Open** once you locate the file. The **Excel Read** dialog box opens up prompting for additional information for the import procedure.
3. Click **Finish** to load the data.



Bringing Data into EViews: Notes

- The easiest way to get data from a *single source* into EViews is by using **File → Open → Foreign Data as Workfile**.
- One main difference between **Open Foreign Data as Workfile** and **Import** is that the first method brings in the data while at the same time creating a new workfile, while **Import** brings data into an existing workfile.
- If the data comes from various sources (files), it is perhaps best to follow these steps to bring data into EViews:
 1. Use **File → Open → Foreign Data as Workfile** for the more complex or the largest files. This also creates a new workfile with a similar structure as the source data file.
 2. Use **File → Import** or **Copy/Paste** (as shown in the previous two examples) to add data from other sources into the main workfile. Please note, that the data in all files should have the same structure (i.e., monthly, quarterly, etc.).

EViews: Introductory User Guide

CREATING A NEW SERIES FROM EXISTING SERIES

Creating a New Series by Transforming an Existing Series (Part I)

- One can create a series by transforming an existing series.
- For example, suppose you would like to create a series $y = \log(\text{gdp})$.

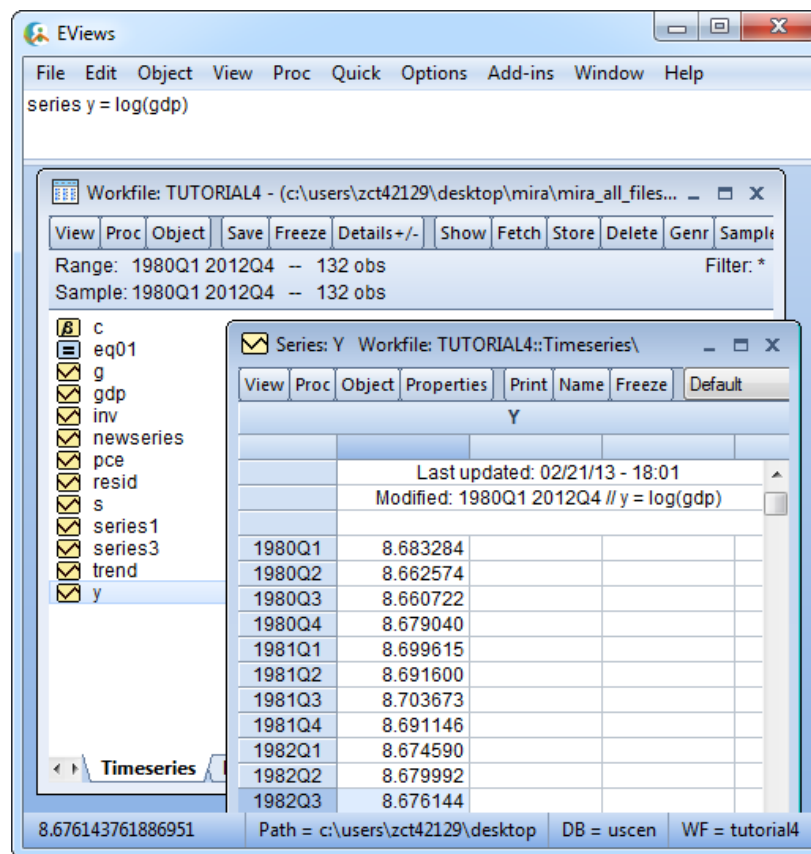
To create a series by transforming an existing series (Example 1):

1. Click on a page in a workfile.
2. In the command window, type:

series y = log(gdp).
3. Press the **Enter** key.
4. The new series y has been created.

Note: in EViews, $\log(x)$ is the natural logarithm.

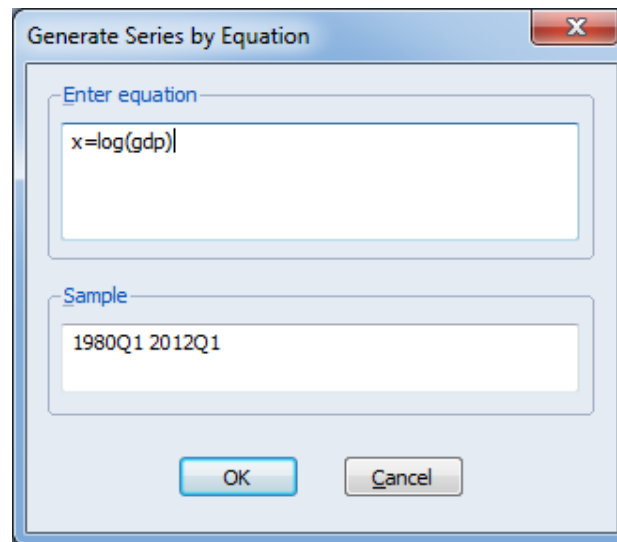
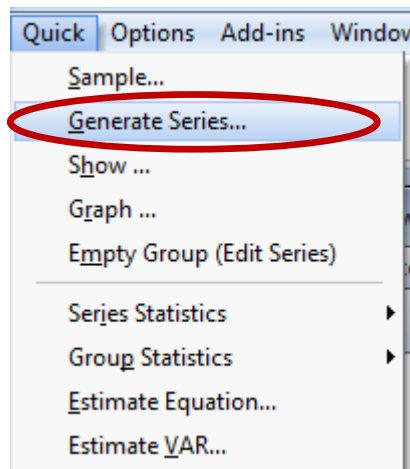
Note: an alternative way to create a series is to type genr y= log(gdp) in the command window.



Creating a New Series by Transforming an Existing Series (Part II)

To create a series by transforming an existing series (Example 2):

1. On a workfile page, click **Quick** → **Generate Series** from the menu toolbar.
2. The window **Generate Series by Equation** opens.
3. Type your data transformation here (in this case, $x=\log(gdp)$).
4. Click **OK**.
5. The new series x has been created.



A screenshot of the 'Series: X' workfile window. It shows a table with the following data:

| X | |
|--------|----------|
| 1980Q1 | 8.683284 |
| 1980Q2 | 8.662574 |
| 1980Q3 | 8.660722 |
| 1980Q4 | 8.679040 |
| 1981Q1 | 8.699615 |
| 1981Q2 | 8.691600 |
| 1981Q3 | 8.703673 |
| 1981Q4 | 8.691146 |
| 1982Q1 | 8.674590 |
| 1982Q2 | 8.679992 |
| 1982Q3 | |

Creating Series Using Samples (Part I)

- One can use samples to create a new series from an existing series.
- Suppose you would like to create a series $w1 = \log(gdp)$ if gdp increases compared to the previous period.

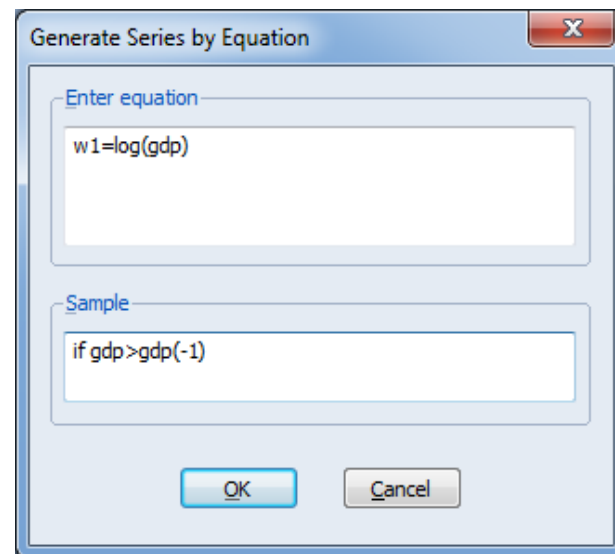
To create a series by using samples (Example 1):

1. Click on a workfile page, then click **Quick** → **Generate Series** from the menu toolbar.
2. The window **Generate Series by Equation** opens. On the top portion, under **Enter Equation**, type the desired transformation, e.g. **$w1 = \log(gdp)$** .
3. In the lower portion of the box under **Sample**, type the *IF* sample condition, e.g. **$\text{if } gdp > gdp(-1)$** .
4. The new series $w1$ has the structure of the gdp series. NAs are propagated for those values that do not satisfy the *IF* condition.

Note: $gdp(-1)$ denotes the first lag of gdp series.

Note: one can replace NA values by using command series $w2 = @nan(w1, 0)$, which instructs EViews to create a new series $w2$ equal to $w1$ if $w1 \neq NA$, and 0 otherwise.

Note: a new series can be created by using various samples.



Creating Series Using Samples (Part II)

To create a series by using sample (Example 2):

1. In the command window, type, for instance, the following:

smpl @first+1 @last

s = s(-1) + @trend

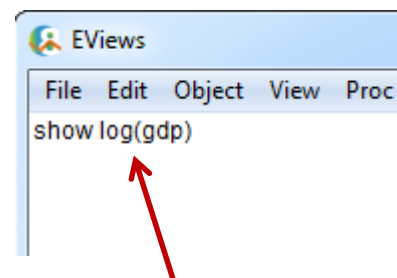
2. Press the **Enter** key.
3. The new series *s* has been defined on the sample started from the 2nd observation (***@first+1***) to the last observation (***@last***). The first observation of *s* has contained an initial value (necessary for defining *s*). The new series is generated as the sum of the lagged value of *s*, i.e. *s*(-1), and the corresponding component of the trend series ***@trend*** (i.e. the series with values 0, ..., *T*, where 0 matches to the first observation of the workfile range and *T* to the last one).

EViews: Introductory User Guide

AUTO SERIES

Auto Series

- EViews allows you to work with expressions directly, without having to create and save a new series.
- Expressions that are used in place of a series, are called **auto series**.
- To create auto series simply enter expressions anywhere you might use a series name.
- The great advantage of auto-series is that when the underlying data changes, the auto-series will automatically reflect these changes.
- The auto-series is deleted from the memory when you close the auto-series window. If you wish to save the series, simply click on the button **Name** and enter a name.



Command **show log(gdp)**
creates an auto series *log(gdp)*

A screenshot of the EViews series window for 'LOG(GDP)'. The title bar says 'Series: LOG(GDP) Workfile: TIMESERI...'. The window has tabs for 'View', 'Proc', 'Object', 'Properties', 'Print', 'Name', and 'Freeze'. The 'Properties' tab is selected, and 'LOG(GDP)' is circled in red. Below the tabs, it says 'Last updated: 07/30/12 - 19:56' and 'Formula: log(gdp)'. The main area is a table with two columns: the first column contains time periods from 1980Q1 to 1982Q2, and the second column contains the corresponding log(gdp) values.

| 1980Q1 | 8.683284 |
|--------|----------|
| 1980Q2 | 8.662574 |
| 1980Q3 | 8.660722 |
| 1980Q4 | 8.679040 |
| 1981Q1 | 8.699615 |
| 1981Q2 | 8.691600 |
| 1981Q3 | 8.703673 |
| 1981Q4 | 8.691146 |
| 1982Q1 | 8.674500 |
| 1982Q2 | |

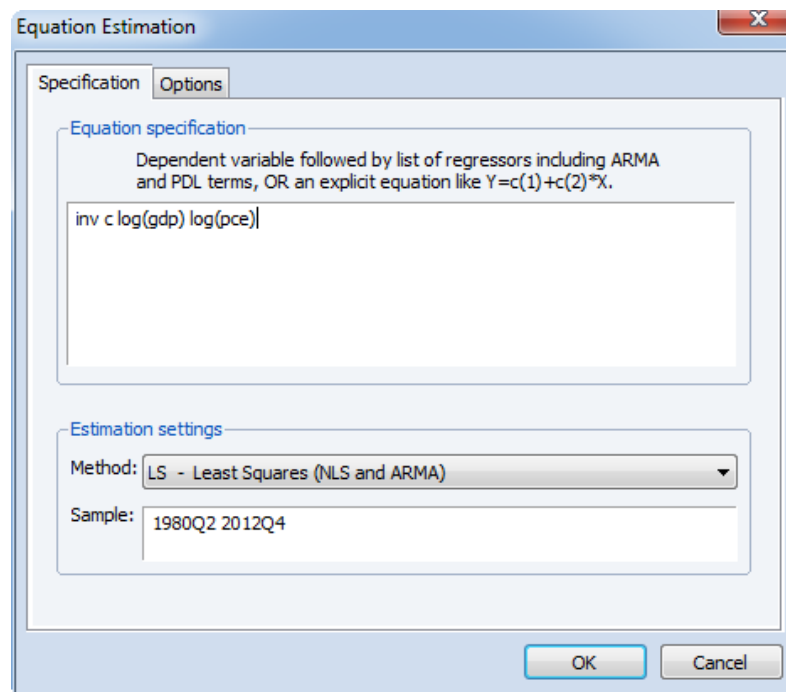
Auto Series in Regressions

- You can use auto series expressions when estimating a regression.
- Auto series can be dependent and/or independent variables.

To specify an equation with Auto Series:

1. Click on a workfile page.
2. Click on **Quick** → **Estimate Equation**.
3. The **Equation Estimation** dialog box opens up. Type here your series and auto series, using spaces as shown. Note that **c** stands for the intercept.
4. Click **OK**.
5. The regression model is estimated. If an auto series is the dependent variable, EViews will forecast the untransformed variable and adjust the estimated confidence interval.

Note: $@pcy(x)$ denotes the year-over-year change in x ; $\log(x)$ denotes the log of x ; $d(x)$ denotes the first difference in x .



EViews: Introductory User Guide

MISSING VALUES

Notes on Missing Values

- EViews uses the code **NA** to represent missing data values.
- EViews always excludes observations with **NAs** from statistical calculations.

Identifying NA Values to Eviews

- EViews will identify correctly any missing data codes from binary files created by other statistical programs.
- When reading data from a foreign source (such as Excel), EViews will automatically convert all non-numeric text into **NA** when it expects a numerical value.
- If missing data is identified by “-999” or “0” (or some other value) in the external file, you can instruct EViews to translate these into **NA** values.

Missing Values: Examples (Part I)

Missing Values in EViews (Example 1):

1. Load the data in EViews by clicking on **File** → **Open** → **Foreign Data as Workfile**
2. The **Excel Read** dialog box opens up. Click on **Next**.
3. Under **Text Representing NA** specify the missing code. In these cases, the missing data in an external file are coded as:
 - ✓ *none*
 - ✓ "0"
4. Press **Finish**.

The top screenshot shows the 'Excel Read - Step 2 of 3' dialog box. The 'Text representing NA' field is set to 'none'. The preview table shows the following data:

| Series01 | Inv |
|------------|-------|
| 1980-01-01 | 778.3 |
| 1980-04-01 | 708.1 |
| 1980-07-01 | 654.1 |
| 1980-10-01 | 720.6 |
| 1981-01-01 | "0" |
| 1981-04-01 | 754.6 |
| 1981-07-01 | 801.3 |
| 1981-10-01 | 770.2 |

The bottom screenshot shows the same dialog box, but the 'Text representing NA' field is set to '"0"'. The preview table shows the following data:

| Series01 | Inv |
|------------|-------|
| 1980-01-01 | 778.3 |
| 1980-04-01 | 708.1 |
| 1980-07-01 | 654.1 |
| 1980-10-01 | 720.6 |
| 1981-01-01 | "0" |
| 1981-04-01 | 754.6 |
| 1981-07-01 | 801.3 |
| 1981-10-01 | 770.2 |

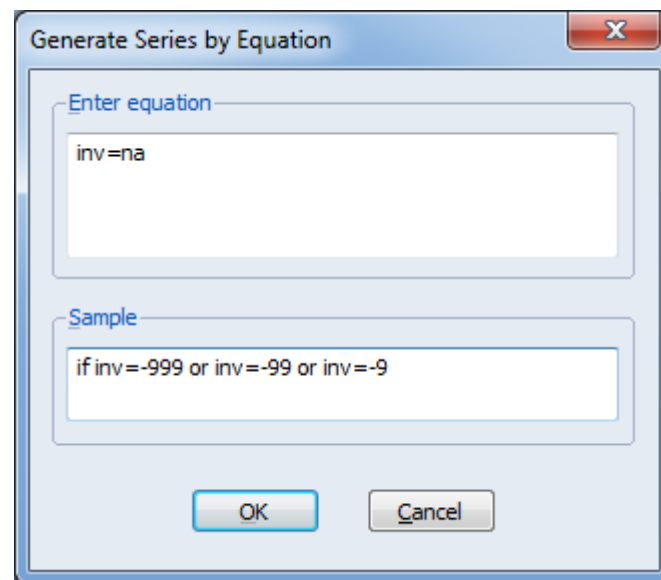
Missing Values: Examples (Part II)

Missing Values in Eviews (Example 2):

1. One can also defined **NAs** in a workfile directly. Click on **Quick** → **Generate Series by Equation**.
2. The **Generate Series by Equation** box opens up.
3. Recode the values as shown below by defining an *IF* condition.
4. Click **OK**.

Note: an alternative way to recode the data would be to type the following in the command window:

series y = @recode(inv = -9 or inv = -99 or inv = -999, NA, inv)



This box tells EViews to set to **NA** all *inv* values if these values are -999, or -99, or -9.

Missing Values: Handling NAs

- Ordinarily, any operations involving an **NA** value will result in **NA**.
- For example, comparisons involving **NA** values, propagate **NA** values.
- EViews includes a set of special functions that help out in handling **NAs**.

| Key Functions | Descriptions |
|----------------------------|--|
| @isna(x) | takes the value of 1 if $X = \text{NA}$, 0 otherwise. |
| @nan(x,y) | takes the value of X if $X \neq \text{NA}$ and Y if $X = \text{NA}$. |
| @nan(x,0) | takes the value of X if $X \neq \text{NA}$ and 0 if $X = \text{NA}$. |
| series z = (x=y) | series is equal to 1 if $x = y$ and 0 otherwise. NAs are propagated (if any of the series has missing values). |
| series z=@eqna(x,y) | series is equal to 1 if $x = y$ and 0 otherwise. NAs are not propagated (missing values are replaced with 0). |
| series z=neqna(x,y) | series is equal to 1 if x and y are not equal and 0 if they are equal. NAs are not propagated (missing values are replaced with 0). |

EViews: Introductory User Guide

EDITING, DOCUMENTING, DISPLAYING SERIES

Editing a Series in EViews: Notes (Part I)

- It is easy to edit a series in EViews.
- EViews does not remember the “original” state of the data in the spreadsheet. Once you used an array expression to change the data, that change is permanent and all subsequent modifications are made using the new data.


Editing a Series in EViews: Notes (Part II)

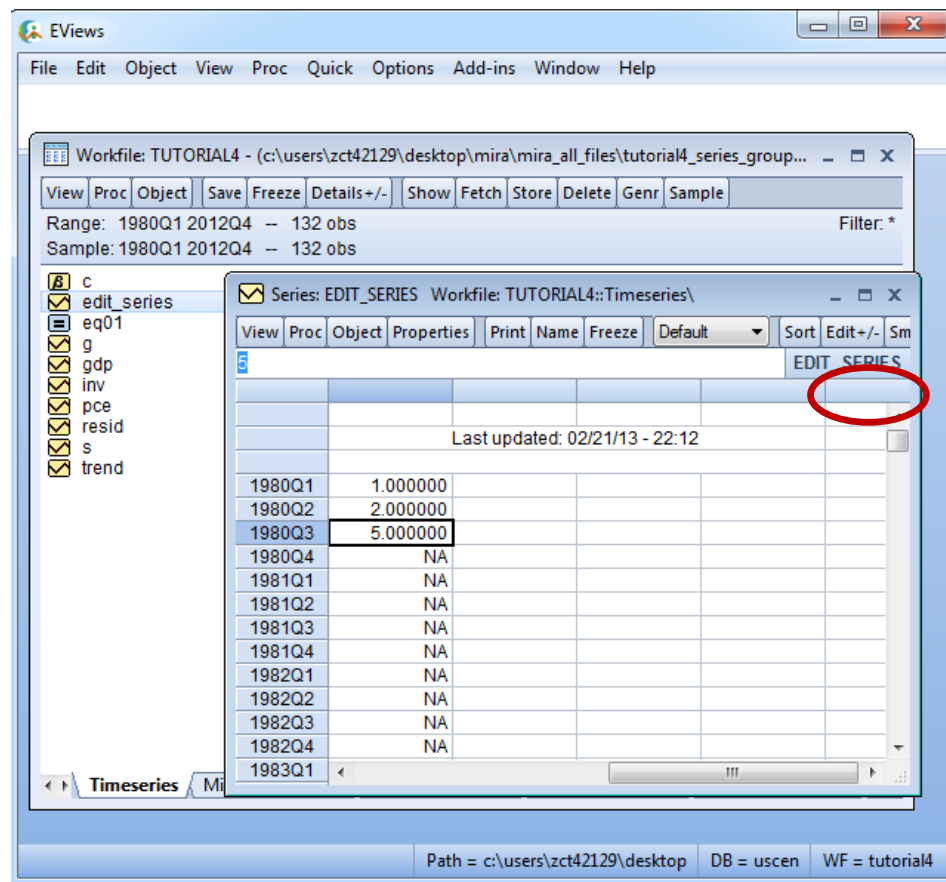
- Operators (e.g. “+=1”, “+_1”) define how the new values are computed.

| Editing Operator | Description |
|------------------|---|
| = | Overwrites the existing value with a new value. |
| += | Adds the new value to the existing value. |
| -= | Subtracts the new value from the existing value. |
| *= | Multiplies the existing value by the new value. |
| /= | Divides the existing value by the new value. |
| =_ | Overwrites the existing value with the previous cell's value. |
| +_ | Adds the new value to the previous cell's value. |
| -_ | Subtracts the new value from the previous cell's value. |
| *_ | Multiplies the previous cell's value by the new value. |
| /_ | Divides the previous cell's value by the new value. |
| \ | Reverses the order of the selected cells. |

Editing a Series: Examples (Part I)

Editing a series (Example 1):

1. Click on a workfile page.
2. Double-click to open series data.
3. Click the  button on the series toolbar to turn on editing mode. This allows you to type in data, change data, etc.



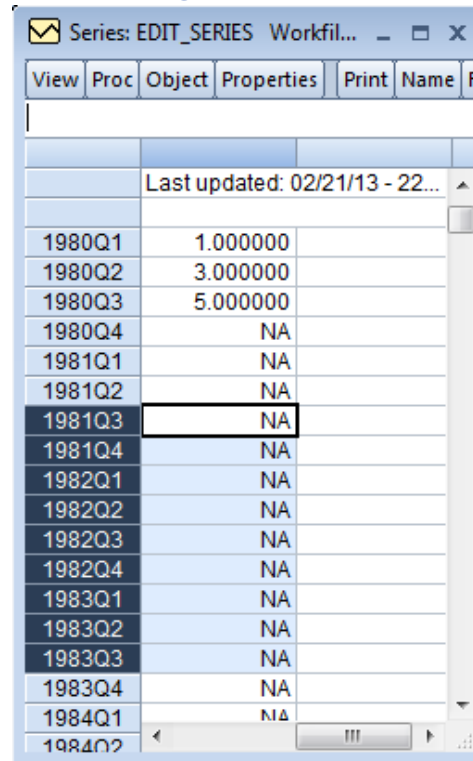
Editing a Series: Examples (Part II)

Editing a series (Example 2):

1. Click on a workfile page.
2. Double-click to open series data.
3. Highlight the cells you would like to edit.
4. Type “=4” in the edit window at the top of the series.
5. Press **Enter**.

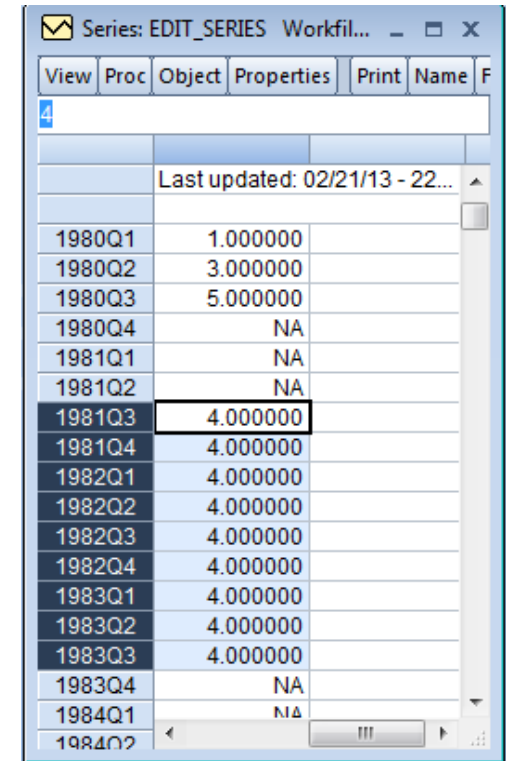
Note: the series cells are replaced with the value we specified.

Original Series



| Series: EDIT_SERIES Workfil... | |
|--------------------------------|-------------------------------------|
| View | Proc Object Properties Print Name F |
| Last updated: 02/21/13 - 22... | |
| 1980Q1 | 1.000000 |
| 1980Q2 | 3.000000 |
| 1980Q3 | 5.000000 |
| 1980Q4 | NA |
| 1981Q1 | NA |
| 1981Q2 | NA |
| 1981Q3 | NA |
| 1981Q4 | NA |
| 1982Q1 | NA |
| 1982Q2 | NA |
| 1982Q3 | NA |
| 1982Q4 | NA |
| 1983Q1 | NA |
| 1983Q2 | NA |
| 1983Q3 | NA |
| 1983Q4 | NA |
| 1984Q1 | NA |
| 1984Q2 | NA |

Edited Series



| Series: EDIT_SERIES Workfil... | |
|--------------------------------|-------------------------------------|
| View | Proc Object Properties Print Name F |
| Last updated: 02/21/13 - 22... | |
| 1980Q1 | 1.000000 |
| 1980Q2 | 3.000000 |
| 1980Q3 | 5.000000 |
| 1980Q4 | NA |
| 1981Q1 | NA |
| 1981Q2 | NA |
| 1981Q3 | 4.000000 |
| 1981Q4 | 4.000000 |
| 1982Q1 | 4.000000 |
| 1982Q2 | 4.000000 |
| 1982Q3 | 4.000000 |
| 1982Q4 | 4.000000 |
| 1983Q1 | 4.000000 |
| 1983Q2 | 4.000000 |
| 1983Q3 | 4.000000 |
| 1983Q4 | NA |
| 1984Q1 | NA |
| 1984Q2 | NA |

Editing a Series: Examples (Part IV)

Editing a series (Example 4):

1. Follow steps 1-2 in Example 2.
2. Highlight the cells you would like to edit.
3. Type “=10..20” in the edit window at the top of the series.

Note: This instructs EViews that the starting value of the series is 10 and the end is 20. The cells in between were interpolated using simple linear interpolation.

4. Press **Enter**.

Note: if one types “+_5..14” in the edit window at the top of the series, this will instruct EViews to add the numbers between the range of 5 and 14 (interpolated) to the previous cell’s values.

Note: You do not need to specify start and end values for the range of interpolation. If you simply type “..”, EViews will consider the value of the previous/next cell (outside the highlighted range) as a start/end points.

Original Series

Series: EDIT_SERIES ...

View Proc Object Properties Print

5

Last updated: 02/2...

| | |
|--------|----------|
| 1980Q1 | 1.000000 |
| 1980Q2 | 3.000000 |
| 1980Q3 | 5.000000 |
| 1980Q4 | NA |
| 1981Q1 | NA |
| 1981Q2 | NA |
| 1981Q3 | 5.000000 |
| 1981Q4 | 6.000000 |
| 1982Q1 | 7.000000 |
| 1982Q2 | 8.000000 |
| 1982Q3 | 9.000000 |
| 1982Q4 | 10.00000 |
| 1983Q1 | 11.00000 |
| 1983Q2 | 12.00000 |
| 1983Q3 | 13.00000 |
| 1983Q4 | NA |
| 1984Q1 | NA |
| 1984Q2 | |

Edited Series

Series: EDIT_SERIES ...

| View | Proc | Object | Properties | Print |
|-----------------------|----------|--------|------------|-------|
| 10 | | | | |
| Last updated: 02/2... | | | | |
| 1980Q1 | 1.000000 | | | |
| 1980Q2 | 3.000000 | | | |
| 1980Q3 | 5.000000 | | | |
| 1980Q4 | NA | | | |
| 1981Q1 | NA | | | |
| 1981Q2 | NA | | | |
| 1981Q3 | 10.00000 | | | |
| 1981Q4 | 11.25000 | | | |
| 1982Q1 | 12.50000 | | | |
| 1982Q2 | 13.75000 | | | |
| 1982Q3 | 15.00000 | | | |
| 1982Q4 | 16.25000 | | | |
| 1983Q1 | 17.50000 | | | |
| 1983Q2 | 18.75000 | | | |
| 1983Q3 | 20.00000 | | | |
| 1983Q4 | NA | | | |
| 1984Q1 | NA | | | |
| 1984Q2 | | | | |

Editing a Series: Interpolating NA values

- You can also interpolate missing (**NA**) values.
- There are a number of interpolation techniques in Eviews.
- Each interpolation technique has its own symbol.

| Editing Operator | Description |
|------------------|---|
| — | Repeats previous non-missing values. |
| ^ | Linear Interpolation. |
| ~ | Cubic spline interpolation. |
| & | Catmull-Rom spline interpolation. |
| ^* | Log-linear (multiplicative) interpolation (linear in log of data). |
| ~* | Multiplicative cubic spline interpolation (cubic spline on the log data). |
| &* | Multiplicative Catmull-Rom spline interpolation. |

Interpolating NA values: Examples (Part I)

Interpolating NA values (Example 1):

1. Click on a workfile page.
2. Double-click to open series data.
3. Highlight the cells you would like to edit.
As you can see, there are a number of missing values.
4. Type “_” in the edit window at the top of the series.
5. Press **Enter**.

Original Series

| Year | Quarter | Value |
|------|---------|----------|
| 1980 | Q1 | 1.000000 |
| 1980 | Q2 | 3.000000 |
| 1980 | Q3 | 5.000000 |
| 1980 | Q4 | NA |
| 1981 | Q1 | NA |
| 1981 | Q2 | NA |
| 1981 | Q3 | 5.000000 |
| 1981 | Q4 | 5.946036 |
| 1982 | Q1 | 7.071068 |
| 1982 | Q2 | 8.408964 |
| 1982 | Q3 | 10.00000 |
| 1982 | Q4 | 11.89207 |
| 1983 | Q1 | 14.14214 |
| 1983 | Q2 | 16.81793 |
| 1983 | Q3 | 20.00000 |
| 1983 | Q4 | NA |
| 1984 | Q1 | NA |
| 1984 | Q2 | NA |
| 1984 | Q3 | NA |
| 1984 | Q4 | NA |
| 1985 | Q1 | NA |

Edited Series

| Year | Quarter | Value |
|------|---------|----------|
| 1980 | Q1 | 1.000000 |
| 1980 | Q2 | 3.000000 |
| 1980 | Q3 | 5.000000 |
| 1980 | Q4 | 5.000000 |
| 1981 | Q1 | 5.000000 |
| 1981 | Q2 | 5.000000 |
| 1981 | Q3 | 5.000000 |
| 1981 | Q4 | 5.946036 |
| 1982 | Q1 | 7.071068 |
| 1982 | Q2 | 8.408964 |
| 1982 | Q3 | 10.00000 |
| 1982 | Q4 | 11.89207 |
| 1983 | Q1 | 14.14214 |
| 1983 | Q2 | 16.81793 |
| 1983 | Q3 | 20.00000 |
| 1983 | Q4 | 20.00000 |
| 1984 | Q1 | 20.00000 |
| 1984 | Q2 | 20.00000 |
| 1984 | Q3 | 20.00000 |
| 1984 | Q4 | NA |
| 1985 | Q1 | NA |

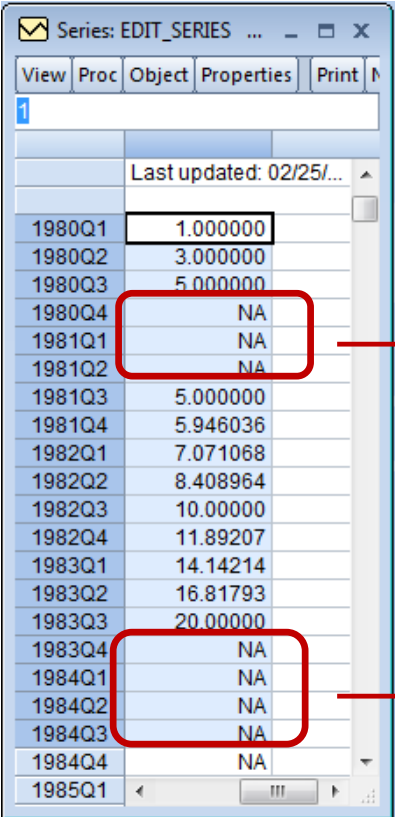
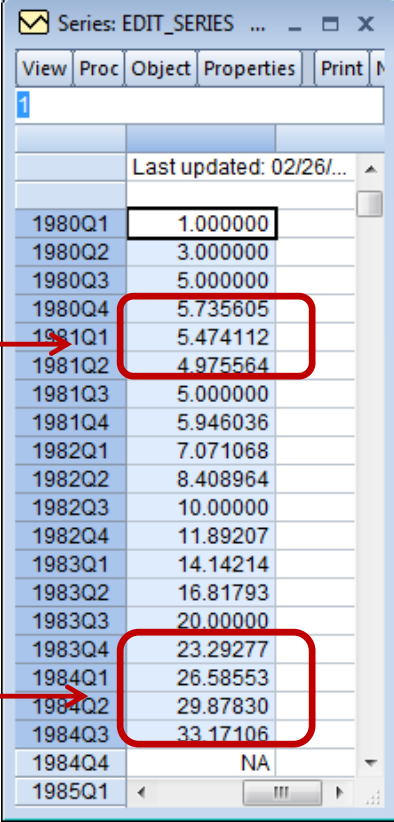
Interpolating NA values: Examples (Part II)

Interpolating NA values (Example 2):

1. Click on a workfile page.
2. Double-click to open series data.
3. Highlight the cells you would like to edit.
As you can see, there are a number of missing values.
4. Type “~” in the edit window at the top of the series.

*Note: We simply instructed EViews to interpolate all **NA** values using a cubic spline method.*

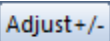
5. Press **Enter**.

| Original Series | | Edited Series | |
|---|-----------|--|-----------|
|  | |  | |
| Last updated: 02/25/... | | Last updated: 02/26/... | |
| 1980Q1 | 1.000000 | 1980Q1 | 1.000000 |
| 1980Q2 | 3.000000 | 1980Q2 | 3.000000 |
| 1980Q3 | 5.000000 | 1980Q3 | 5.000000 |
| 1980Q4 | NA | 1980Q4 | 5.735605 |
| 1981Q1 | NA | 1981Q1 | 5.474112 |
| 1981Q2 | NA | 1981Q2 | 4.975564 |
| 1981Q3 | 5.000000 | 1981Q3 | 5.000000 |
| 1981Q4 | 5.946036 | 1981Q4 | 5.946036 |
| 1982Q1 | 7.071068 | 1982Q1 | 7.071068 |
| 1982Q2 | 8.408964 | 1982Q2 | 8.408964 |
| 1982Q3 | 10.000000 | 1982Q3 | 10.000000 |
| 1982Q4 | 11.89207 | 1982Q4 | 11.89207 |
| 1983Q1 | 14.14214 | 1983Q1 | 14.14214 |
| 1983Q2 | 16.81793 | 1983Q2 | 16.81793 |
| 1983Q3 | 20.000000 | 1983Q3 | 20.000000 |
| 1983Q4 | NA | 1983Q4 | 23.29277 |
| 1984Q1 | NA | 1984Q1 | 26.58553 |
| 1984Q2 | NA | 1984Q2 | 29.87830 |
| 1984Q3 | NA | 1984Q3 | 33.17106 |
| 1984Q4 | NA | 1984Q4 | NA |
| 1985Q1 | NA | 1985Q1 | NA |

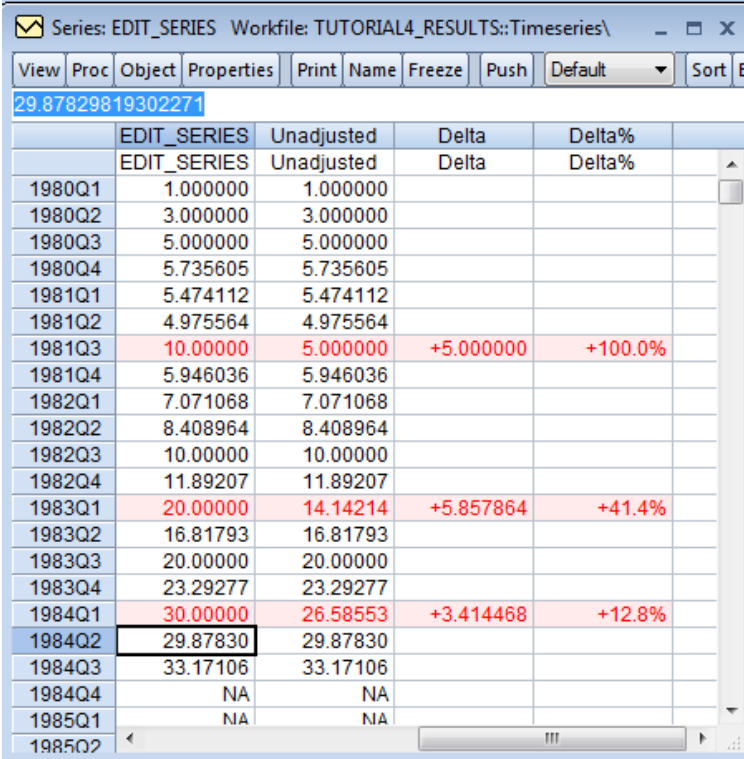
Adjust Mode: Example

- An new feature in EViews 8 is the **Adjust** mode which allows you to compare the data in the original series to any changes you may make.

Adjust Mode (Example):

- Double-click to open an edited series on a workfile page.
- Click on the  button in the series toolbar. EViews will add additional columns to the spreadsheet view. The first new column titled **Unadjusted** contains a copy of the series values at the moment you entered adjust mode. This **Unadjusted** column is fixed and does not change if you change the data.
- Change several data inputs.
- You can notice that EViews has filled in two new columns Delta and Delta%.

Note: Delta/Delta% show the raw/percentage difference between the original Unadjusted series, and the current values in the series.



| | EDIT_SERIES | Unadjusted | Delta | Delta% |
|--------|-------------|------------|-----------|---------|
| 1980Q1 | 1.000000 | 1.000000 | | |
| 1980Q2 | 3.000000 | 3.000000 | | |
| 1980Q3 | 5.000000 | 5.000000 | | |
| 1980Q4 | 5.735605 | 5.735605 | | |
| 1981Q1 | 5.474112 | 5.474112 | | |
| 1981Q2 | 4.975564 | 4.975564 | | |
| 1981Q3 | 10.00000 | 5.000000 | +5.000000 | +100.0% |
| 1981Q4 | 5.946036 | 5.946036 | | |
| 1982Q1 | 7.071068 | 7.071068 | | |
| 1982Q2 | 8.408964 | 8.408964 | | |
| 1982Q3 | 10.00000 | 10.00000 | | |
| 1982Q4 | 11.89207 | 11.89207 | | |
| 1983Q1 | 20.00000 | 14.14214 | +5.857864 | +41.4% |
| 1983Q2 | 16.81793 | 16.81793 | | |
| 1983Q3 | 20.00000 | 20.00000 | | |
| 1983Q4 | 23.29277 | 23.29277 | | |
| 1984Q1 | 30.00000 | 26.58553 | +3.414468 | +12.8% |
| 1984Q2 | 29.87830 | 29.87830 | | |
| 1984Q3 | 33.17106 | 33.17106 | | |
| 1984Q4 | NA | NA | | |
| 1985Q1 | NA | NA | | |
| 1985Q2 | | | | |

In **Adjust** mode, you can edit any of the cells in the raw series column (the left-most column), or in the **Delta** or **Delta%** columns.

Adjust Mode: Notes

- Unlike simple editing of a series in which changes are permanent, changes in **Adjust** mode can be reversed.
- When you exit the **Adjust** mode, either by toggling the **Adjust +/-** button, or by closing the series, EViews asks you if you would like to keep the changes you made.
- Note also that any changes made while in **Adjust** mode are “live”, meaning that any operations performed using the series will use the current edited values.
- However, exiting the **Adjust** mode offers you the chance to revert back to the pre-adjusted values. This property of the **Adjust** mode can be very useful since it allows you to perform quick “what if” analysis without permanently changing the series.

Documenting a Series

- EViews allows you to add more information on your data (source, units, remarks) using the ***Label View***.

To add documentation to your data:

1. On the menu toolbar of a series you wish to document select **View** → **Label**.
2. The **Series View** changes to allow you to add remarks and other data documentation.

Displaying a Series (Part I)

- You can resize the width of a column, change the way the data is displayed, etc., by opening the series spreadsheet display.
- Clicking on the **Default** button displays a drop-down menu, which tells EViews the format of the data.
- The **Default** shows data in raw form; you can change the way the data is displayed by choosing other options from the drop-down menu.

Series: GDP Workfile: TIMESERIES::Timeseries\

View Proc Object Properties Print Name Freeze Default Sort Edit+/- Smpl+

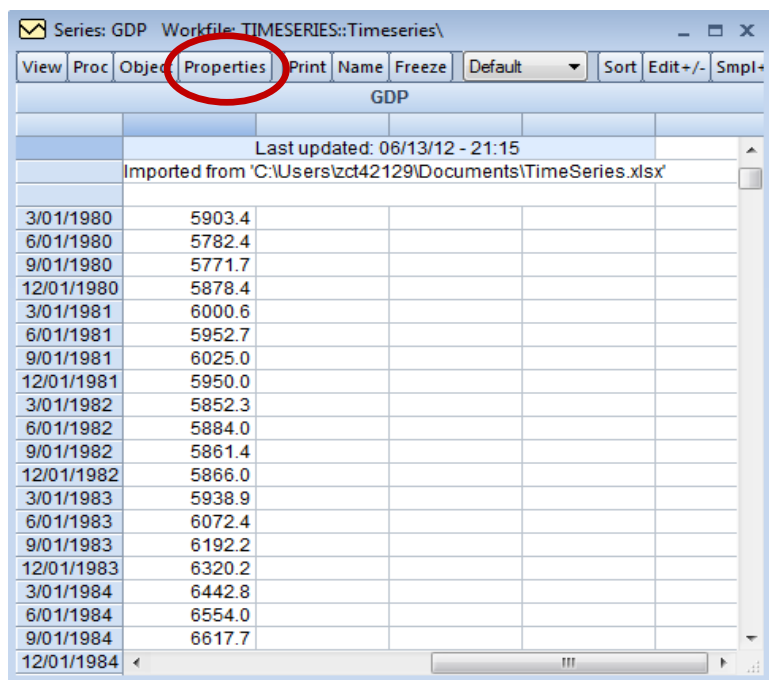
GDP

Last updated: 06/13/12
Imported from 'C:\Users\zct42129\Documents\EViews\series.xlsx'

| | | |
|------------|--------|--|
| 3/01/1980 | 5903.4 | |
| 6/01/1980 | 5782.4 | |
| 9/01/1980 | 5771.7 | |
| 12/01/1980 | 5878.4 | |
| 3/01/1981 | 6000.6 | |
| 6/01/1981 | 5952.7 | |
| 9/01/1981 | 6025.0 | |
| 12/01/1981 | 5950.0 | |
| 3/01/1982 | 5852.3 | |
| 6/01/1982 | 5884.0 | |
| 9/01/1982 | 5861.4 | |
| 12/01/1982 | 5866.0 | |
| 3/01/1983 | 5938.9 | |
| 6/01/1983 | 6072.4 | |
| 9/01/1983 | 6192.2 | |
| 12/01/1983 | 6320.2 | |
| 3/01/1984 | 6442.8 | |
| 6/01/1984 | 6554.0 | |
| 9/01/1984 | 6617.7 | |
| 12/01/1984 | | |

Displaying a Series (Part II)

- You can customize the formatting of a series by clicking the **Properties** toolbar of a series spreadsheet.
- This opens up the **Properties** dialog box. Select the **Display** tab.
- This menu allows you to change the number of decimals, separate thousands with a comma, or display numbers as fractions.



Series: GDP Workfile: TIMESERIES::Timeseries\

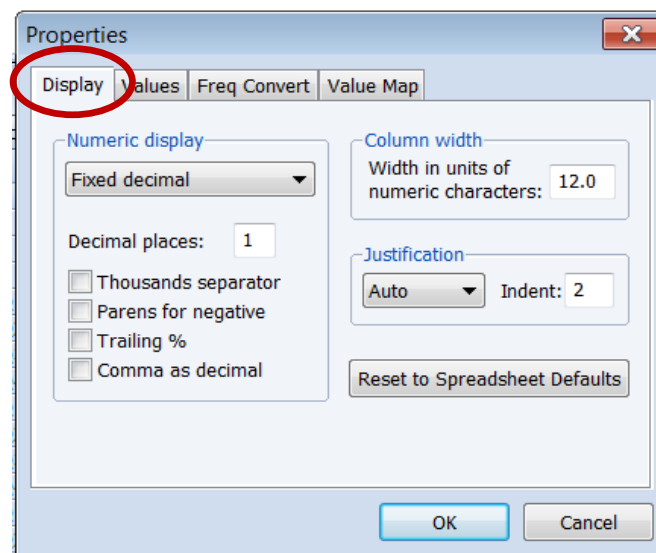
View Proc Object **Properties** Print Name Freeze Default Sort Edit+/- Smp+

GDP

Last updated: 06/13/12 - 21:15

Imported from 'C:\Users\zct42129\Documents\TimeSeries.xlsx'

| Date | GDP |
|------------|--------|
| 3/01/1980 | 5903.4 |
| 6/01/1980 | 5782.4 |
| 9/01/1980 | 5771.7 |
| 12/01/1980 | 5878.4 |
| 3/01/1981 | 6000.6 |
| 6/01/1981 | 5952.7 |
| 9/01/1981 | 6025.0 |
| 12/01/1981 | 5950.0 |
| 3/01/1982 | 5852.3 |
| 6/01/1982 | 5884.0 |
| 9/01/1982 | 5861.4 |
| 12/01/1982 | 5866.0 |
| 3/01/1983 | 5938.9 |
| 6/01/1983 | 6072.4 |
| 9/01/1983 | 6192.2 |
| 12/01/1983 | 6320.2 |
| 3/01/1984 | 6442.8 |
| 6/01/1984 | 6554.0 |
| 9/01/1984 | 6617.7 |
| 12/01/1984 | |



Properties

Display Values Freq Convert Value Map

Numeric display

Fixed decimal

Decimal places: 1

☐ Thousands separator

☐ Parens for negative

☐ Trailing %

☐ Comma as decimal

Column width

Width in units of numeric characters: 12.0

Justification

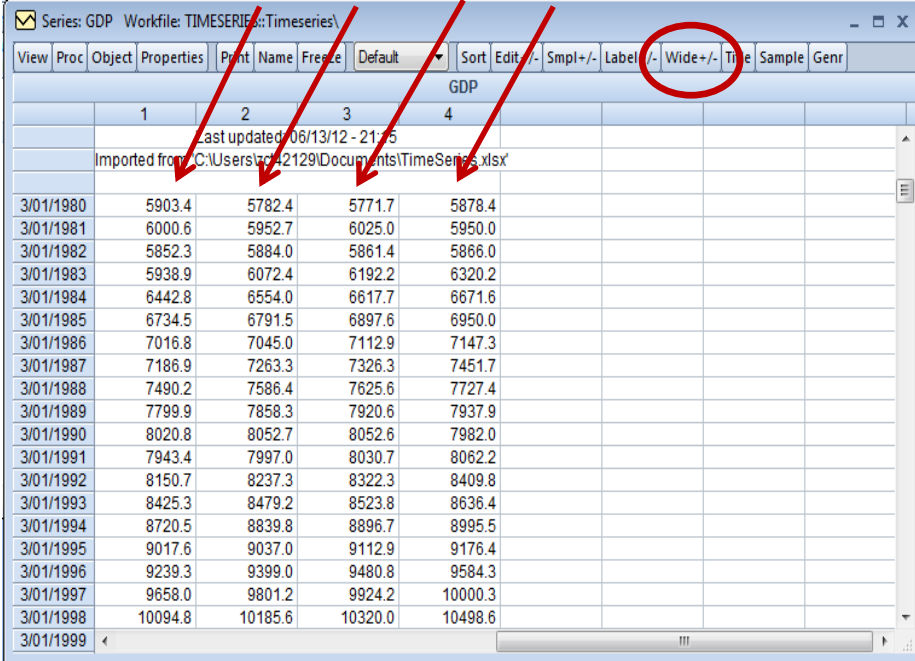
Auto Indent: 2

Reset to Spreadsheet Defaults

OK Cancel

Displaying a Series: Narrow vs. Wide

- You can customize the formatting of a series by pressing the **Wide+/-** button from the series spreadsheet toolbar.
- This command arranges the data by the frequency of the series. In this example, it is quarterly.
- A quarterly series will display 4 observations per row, etc.



Series: GDP Workfile: TIMESERIES::Timeseries

View Proc Object Properties Print Name Freeze Default Sort Edit Smp1+/- Label +/- Wide+/- Time Sample Genr

GDP

Last updated: 06/13/12 - 21:15

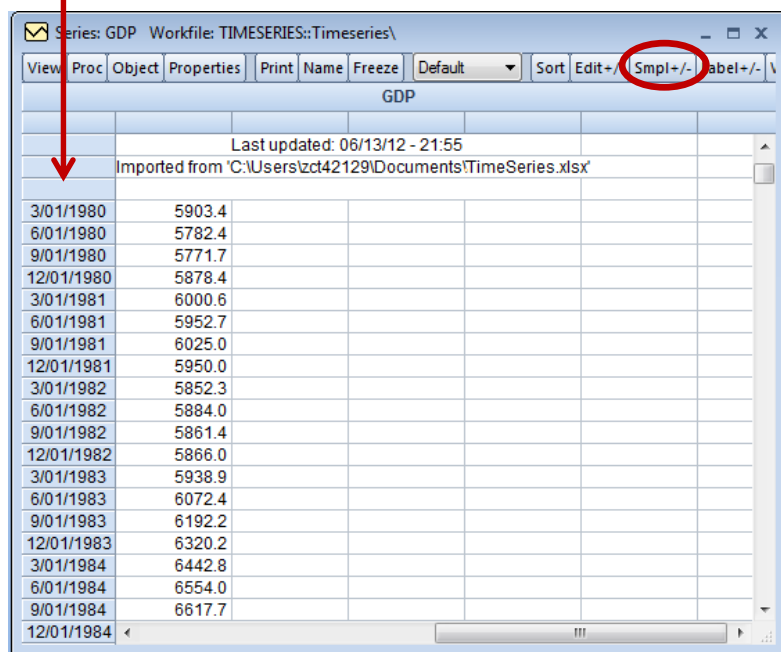
Imported from: C:\Users\lg42129\Documents\TimeSeries.xlsx

| | 1 | 2 | 3 | 4 | | | | |
|-----------|---------|---------|---------|---------|--|--|--|--|
| 3/01/1980 | 5903.4 | 5782.4 | 5771.7 | 5878.4 | | | | |
| 3/01/1981 | 6000.6 | 5952.7 | 6025.0 | 5950.0 | | | | |
| 3/01/1982 | 5852.3 | 5884.0 | 5861.4 | 5866.0 | | | | |
| 3/01/1983 | 5938.9 | 6072.4 | 6192.2 | 6320.2 | | | | |
| 3/01/1984 | 6442.8 | 6554.0 | 6617.7 | 6671.6 | | | | |
| 3/01/1985 | 6734.5 | 6791.5 | 6897.6 | 6950.0 | | | | |
| 3/01/1986 | 7016.8 | 7045.0 | 7112.9 | 7147.3 | | | | |
| 3/01/1987 | 7186.9 | 7263.3 | 7326.3 | 7451.7 | | | | |
| 3/01/1988 | 7490.2 | 7586.4 | 7625.6 | 7727.4 | | | | |
| 3/01/1989 | 7799.9 | 7858.3 | 7920.6 | 7937.9 | | | | |
| 3/01/1990 | 8020.8 | 8052.7 | 8052.6 | 7982.0 | | | | |
| 3/01/1991 | 7943.4 | 7997.0 | 8030.7 | 8062.2 | | | | |
| 3/01/1992 | 8150.7 | 8237.3 | 8322.3 | 8409.8 | | | | |
| 3/01/1993 | 8425.3 | 8479.2 | 8523.8 | 8636.4 | | | | |
| 3/01/1994 | 8720.5 | 8839.8 | 8896.7 | 8995.5 | | | | |
| 3/01/1995 | 9017.6 | 9037.0 | 9112.9 | 9176.4 | | | | |
| 3/01/1996 | 9239.3 | 9399.0 | 9480.8 | 9584.3 | | | | |
| 3/01/1997 | 9658.0 | 9801.2 | 9924.2 | 10000.3 | | | | |
| 3/01/1998 | 10094.8 | 10185.6 | 10320.0 | 10498.6 | | | | |
| 3/01/1999 | | | | | | | | |

Displaying a Series: Sample Adjustments

- You can toggle between the full range of observations and the current sample by pressing the button **Smpl+/-** from the series spreadsheet toolbar.

Full Sample



Series: GDP Workfile: TIMESERIES::Timeseries\

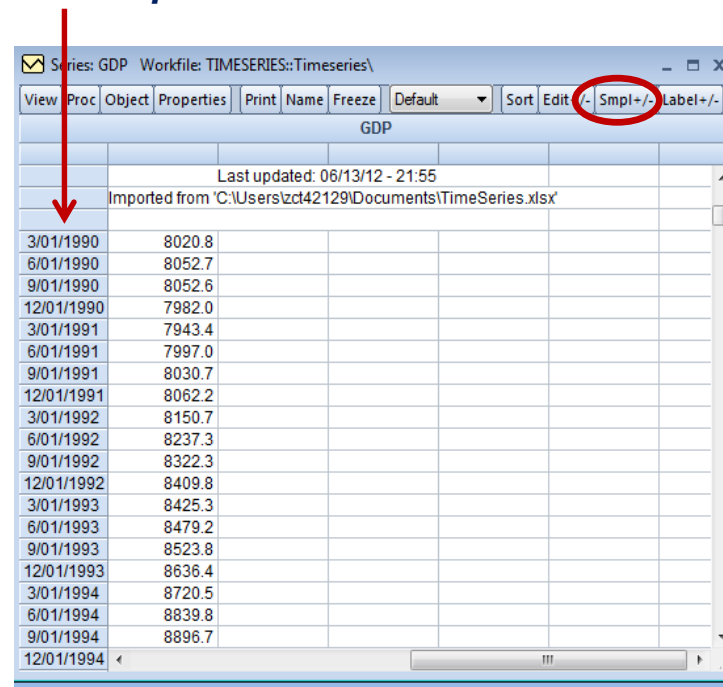
View Proc Object Properties Print Name Freeze Default Sort Edit+/- **Smpl+/-** Label+/-

GDP

Last updated: 06/13/12 - 21:55
Imported from 'C:\Users\zct42129\Documents\TimeSeries.xlsx'

| | |
|------------|--------|
| 3/01/1980 | 5903.4 |
| 6/01/1980 | 5782.4 |
| 9/01/1980 | 5771.7 |
| 12/01/1980 | 5878.4 |
| 3/01/1981 | 6000.6 |
| 6/01/1981 | 5952.7 |
| 9/01/1981 | 6025.0 |
| 12/01/1981 | 5950.0 |
| 3/01/1982 | 5852.3 |
| 6/01/1982 | 5884.0 |
| 9/01/1982 | 5861.4 |
| 12/01/1982 | 5866.0 |
| 3/01/1983 | 5938.9 |
| 6/01/1983 | 6072.4 |
| 9/01/1983 | 6192.2 |
| 12/01/1983 | 6320.2 |
| 3/01/1984 | 6442.8 |
| 6/01/1984 | 6554.0 |
| 9/01/1984 | 6617.7 |
| 12/01/1984 | |

New Sample



Series: GDP Workfile: TIMESERIES::Timeseries\

View Proc Object Properties Print Name Freeze Default Sort Edit+/- **Smpl+/-** Label+/-

GDP

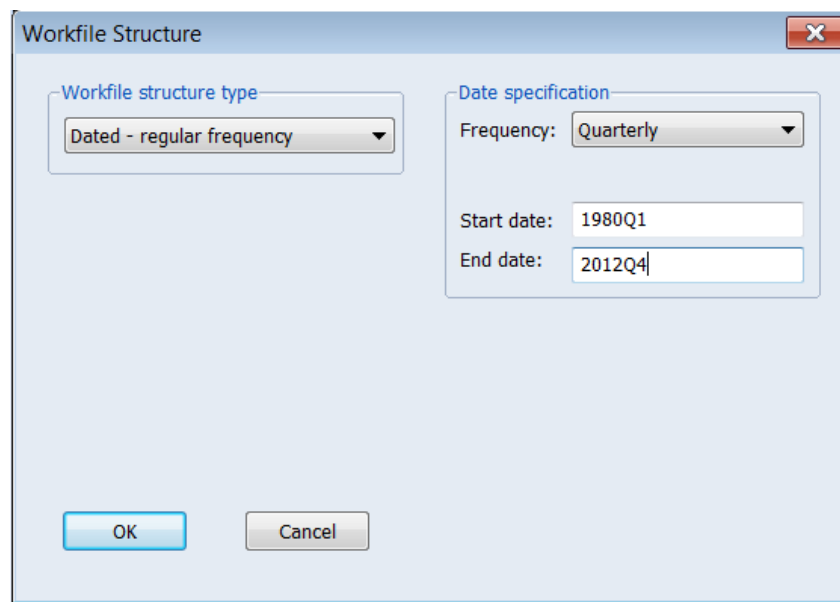
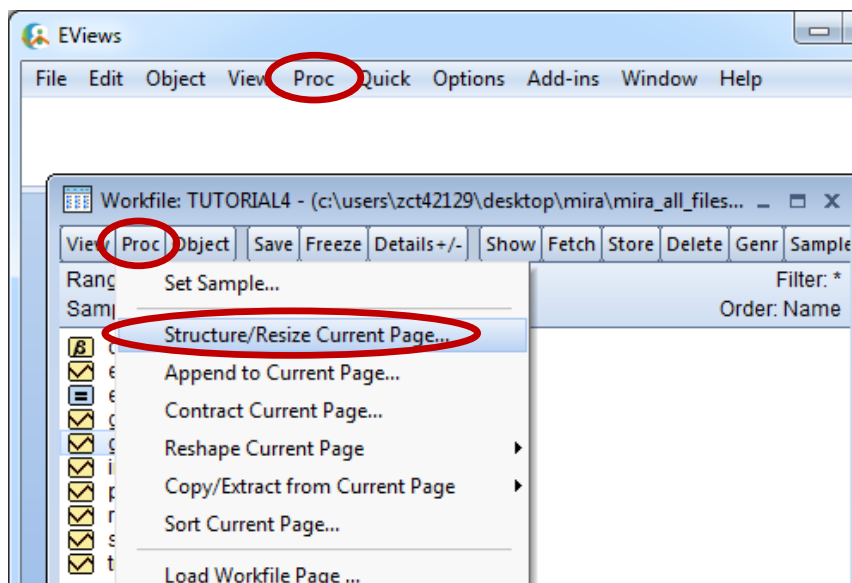
Last updated: 06/13/12 - 21:55
Imported from 'C:\Users\zct42129\Documents\TimeSeries.xlsx'

| | |
|------------|--------|
| 3/01/1990 | 8020.8 |
| 6/01/1990 | 8052.7 |
| 9/01/1990 | 8052.6 |
| 12/01/1990 | 7982.0 |
| 3/01/1991 | 7943.4 |
| 6/01/1991 | 7997.0 |
| 9/01/1991 | 8030.7 |
| 12/01/1991 | 8062.2 |
| 3/01/1992 | 8150.7 |
| 6/01/1992 | 8237.3 |
| 9/01/1992 | 8322.3 |
| 12/01/1992 | 8409.8 |
| 3/01/1993 | 8425.3 |
| 6/01/1993 | 8479.2 |
| 9/01/1993 | 8523.8 |
| 12/01/1993 | 8636.4 |
| 3/01/1994 | 8720.5 |
| 6/01/1994 | 8839.8 |
| 9/01/1994 | 8896.7 |
| 12/01/1994 | |

Adding Observations to Existing Workfiles

To add observations to an existing workfile:

1. Click on a workfile page and select **Proc** → **Structure/Resize Current Page** (either from the main menu toolbar or the workfile toolbar). Alternatively you can double-click **Range** in the upper pane of the workfile window.
2. The **Workfile Structure** dialog box opens up which allows you change the range of the workfile. Extend the range of the workfile here.
3. Click **OK**. EViews adds missing values (**NA**) corresponding to the extended observation range.



EViews: Introductory User Guide

GROUPS

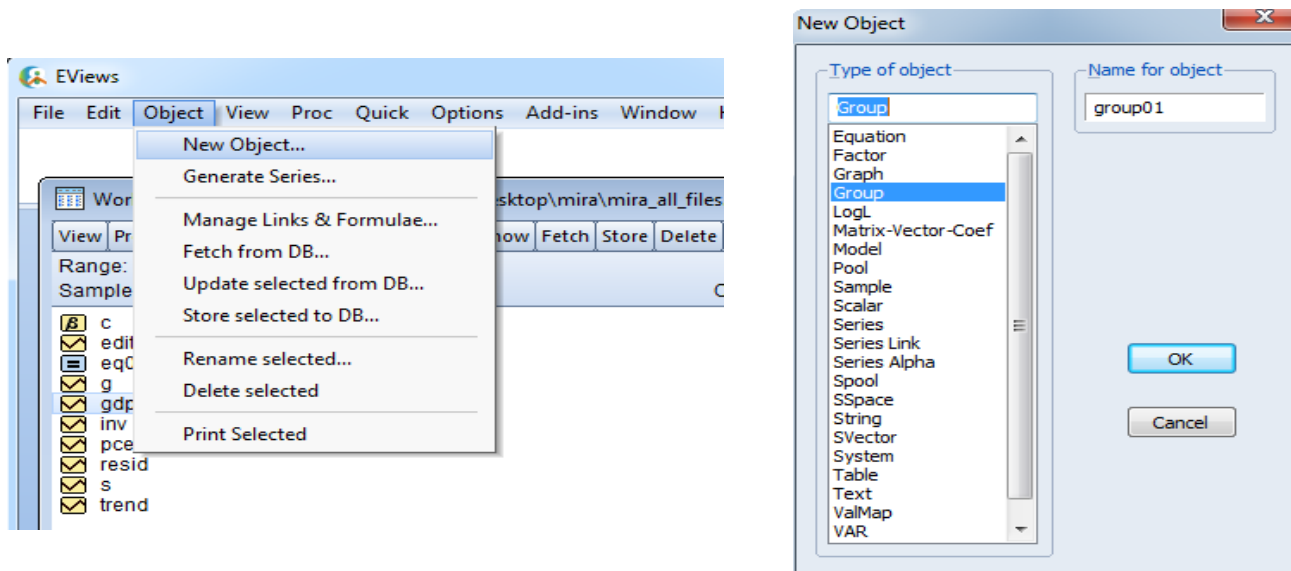
Groups

- Groups help you work with multiple series.
- A Group is a list of series names (and potentially mathematical expressions) that provides access to all the data in that list.
- Once you create a **Group Object**, you can use the group name in many places to refer to all the series contained in that group.
- A few features of groups:
 - ✓ A group is a “live” feed and is NOT a copy of each individual series. This means that if the data in one of the series changes, these changes will also be reflected in the group containing the series.
 - ✓ If a series is deleted from a workfile, the series identifier will be maintained. In the group spreadsheet the deleted series will contain NA values.
 - ✓ Renaming a series changes the reference in every group containing the series.

Creating Groups: Examples (Part I)

To create a group (Example 1):

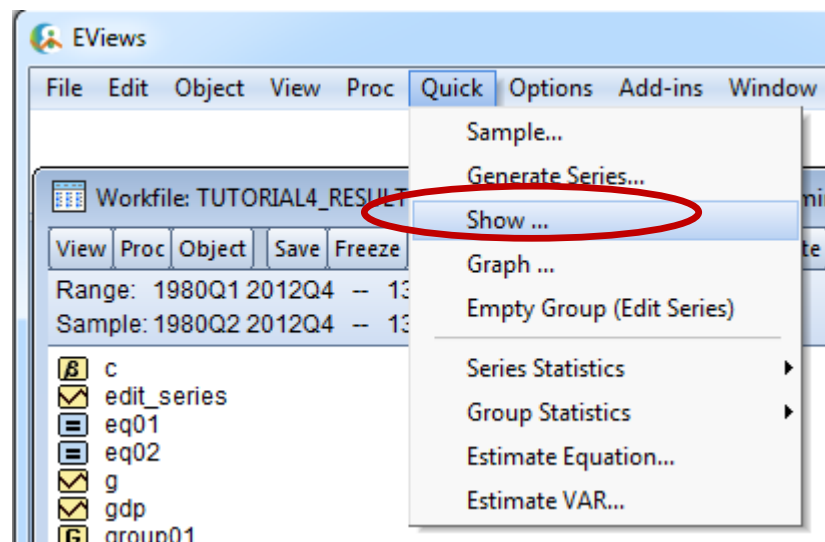
1. Click on a workfile page. Select **Object** → **New Object** from the main menu.
2. The **New Object** box opens up. Select the **Group** option.
3. You can name your group under the section **Name for object** (in this case, we named it *group01*), then press **OK**.
4. The **Series List** window appears.
5. Enter the series names you wish to include in the group (separated by spaces).



Creating Groups: Examples (Part II)

To create a group (Example 2):

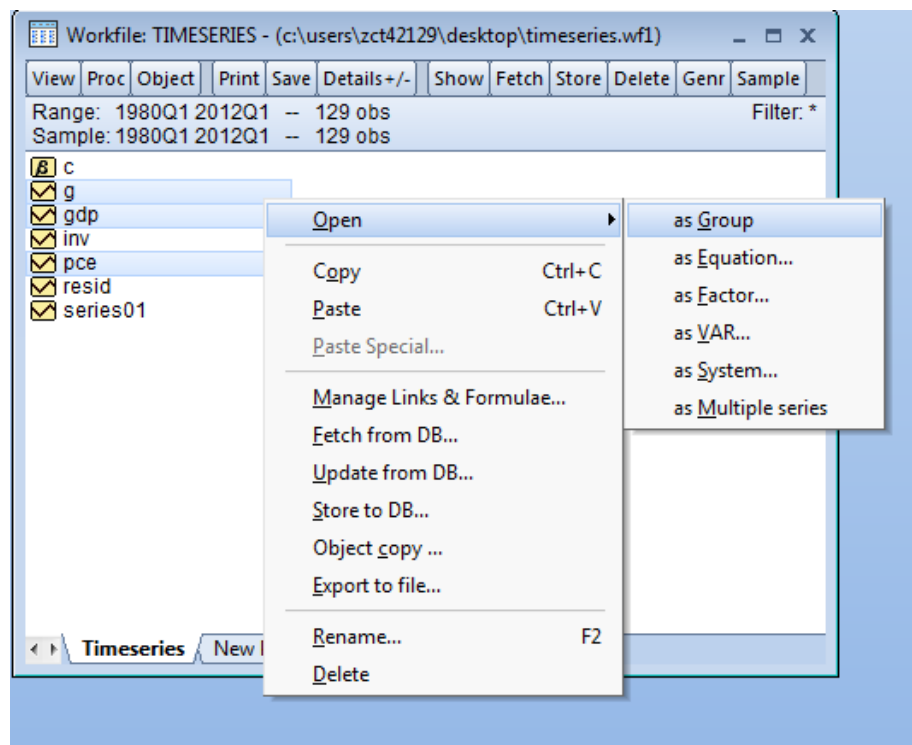
1. Click on a workfile page.
2. Select **Quick** → **Show** from the main menu (or **Show** from the workfile menu).
3. The **Show** window appears. Type here the names of the series you wish to include.
4. Press **OK**.
5. If you would like to save the group, click the **Name** button. Enter the series name. Press **OK**.



Creating Groups: Examples (Part III)

To create a group (Example 3):

1. Click on a workfile page. Highlight the series you wish to group together.
2. Right-click and select: **Open** → **as Group**.
3. If you would like to save the group, click the **Name** button. Enter the series name. Press **OK**.



Creating Groups: Examples (Part IV)

To create a group (Example 4):

1. Click on a workfile page. Type on the command window:

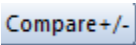
group group_name series1 series2 series3

2. Press **Enter**.
3. This instructs EViews to create the group named as ***group_name***, which includes the series ***series1***, ***series2*** and ***series3***.

Data Comparison Tools in Groups

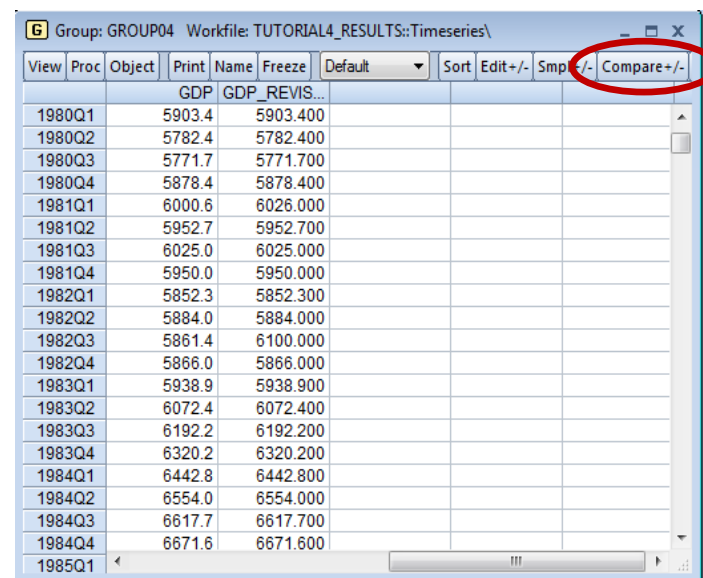
- A new feature in EViews 8 allows you to easily compare the data between the series in your group.

To compare data between series in a group:

- Click on a workfile page. Click on two series and open these series as a group.
- Click the  button located in the group menu toolbar.
- Notice that, similar to the **Adjust** mode explained earlier, the Compare+/- command adds two new columns **Delta** and **Delta%**. Note that all four columns are fully editable.

*Note: if you change the series display from Default to some other setting, EViews removes the **Delta%** column and introduces new columns showing the new transformation and a new **Delta** column showing the difference for that transformation.*

*Note: if you would like to change the default settings for the tolerance level, follow these simple steps: (i) right-hand click anywhere on the spreadsheet when in **Compare Mode**; (ii) Select **Highlighting**; (iii) the **Comparison Highlighting box** opens up. Under **Highlight if difference exceeds field**, specify your own tolerance level.*



The screenshot shows the EViews Group menu for 'GROUP04' in the workfile 'TUTORIAL4_RESULTS::Timeseries\'. The 'Compare+/-' button is circled in red. The menu contains the following data:

| | GDP | GDP_REVIS... |
|--------|--------|--------------|
| 1980Q1 | 5903.4 | 5903.400 |
| 1980Q2 | 5782.4 | 5782.400 |
| 1980Q3 | 5771.7 | 5771.700 |
| 1980Q4 | 5878.4 | 5878.400 |
| 1981Q1 | 6000.6 | 6026.000 |
| 1981Q2 | 5952.7 | 5952.700 |
| 1981Q3 | 6025.0 | 6025.000 |
| 1981Q4 | 5950.0 | 5950.000 |
| 1982Q1 | 5852.3 | 5852.300 |
| 1982Q2 | 5884.0 | 5884.000 |
| 1982Q3 | 5861.4 | 6100.000 |
| 1982Q4 | 5866.0 | 5866.000 |
| 1983Q1 | 5938.9 | 5938.900 |
| 1983Q2 | 6072.4 | 6072.400 |
| 1983Q3 | 6192.2 | 6192.200 |
| 1983Q4 | 6320.2 | 6320.200 |
| 1984Q1 | 6442.8 | 6442.800 |
| 1984Q2 | 6554.0 | 6554.000 |
| 1984Q3 | 6617.7 | 6617.700 |
| 1984Q4 | 6671.6 | 6671.600 |
| 1985Q1 | | |

If one compares more than two series, EViews will simply highlight the differences between each column.

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