Package Name: RollReg

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Description: This add-in performs rolling regression, storing various statistics from the rolling regression. Two types of rolling regressions are available, a "simple" rolling regression and a more advanced one.
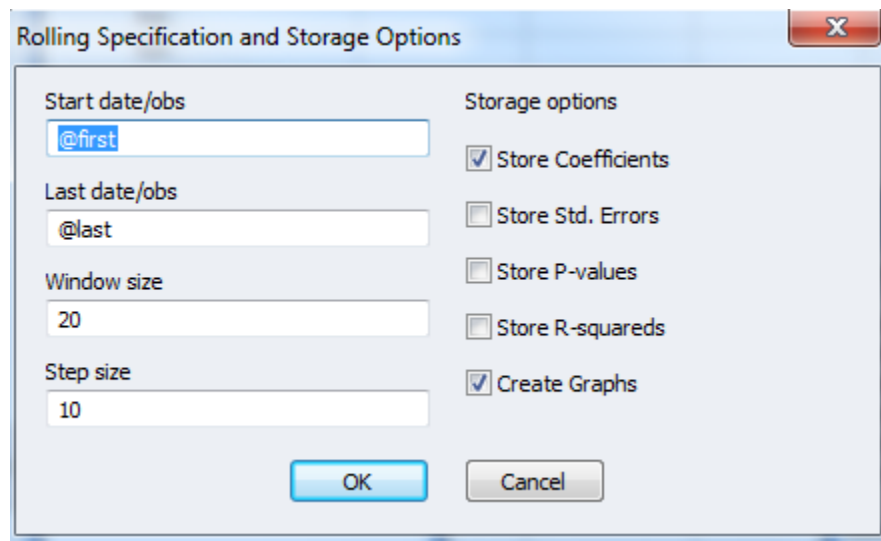
Add-in Name: Roll

Add-in Type: Equation
Default Proc Name: roll
Default Menu Text: Simple rolling regression
Interface: Dialog and command line.

This add-in can only be run from an existing equation object. It will take the specification of the existing equation and then perform a moving window rolling regression of that equation over a sample period. A dialog will show, asking you to specify the starting point of the roll, the ending point of the roll, the window size, and the step size, as well as to choose which statistics to store from the rolls, and whether to create graphs of the statistics:

The starting point of the rolling regression should be entered in the box "Start date/obs". It should be a valid date (or observation number in un-dated workfiles), or a valid EViews sample expression, such as @first (which signifies the first observation in the workfile).

The ending point of the rolling regression should be entered in the box "Last date/obs". It should be a valid date (or observation number in un-dated workfiles), or a valid EViews sample expression, such as @last (which signifies the last observation in the workfile).

The Window size should be an integer, specifying how many observations to include in each iteration of the roll. For example, if you specify "20" as the Window size, each estimation will be performed on 20 observations.

The Step size should also be an integer, specifying how many observations to step over between each iteration of the roll. For example, if you specify "10" as the Step size, each iteration will have a starting point 10 observations further than the previous iteration.

Note that if you specify a combination of starting point, Window size and Step size that would lead to an end point that is not exactly the same as the given end point, the program will adjust the end point to match the closest valid date/obs.

As an example, if you have a monthly workfile starting in January 1990 and running to December 1995. Setting a start point of "@first", and end point of "@last" and a Window size of "20" with a Step size of "10", you would have the following 20 month rolls, with a starting point 10 months apart:

$$
\begin{aligned}
1990{:}01 &- 1991{:}08 \\
1990{:}10 &- 1992{:}06 \\
1991{:}08 &- 1993{:}04 \\
1992{:}06 &- 1994{:}02 \\
1993{:}04 &- 1994{:}12 \\
1994{:}02 &- 1995{:}10
\end{aligned}
$$

Note that the program would have warned you that the specified end point (@last, which corresponds to 1995:12) is not a valid end point, so it was adjusting the end point to 1995:10.
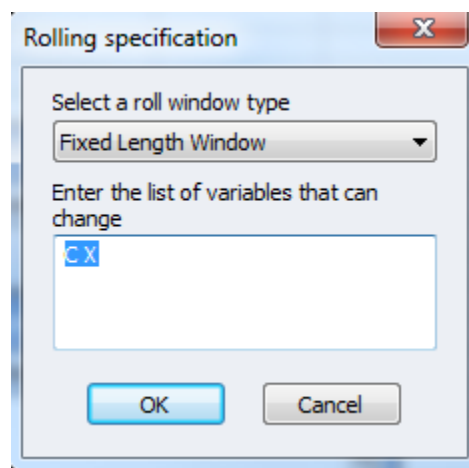
Command line

Syntax: equation.*roll*(options)

Options:

start=*date/obs*	Set the starting point of the roll process
end=date/obs	Set the ending point of the roll process
w=*int*	Set the window length
s=*int*	Set the step size
coef	Store coefficient values
se	Store standard errors
pval	Store p-values
r2	Store R-squareds
g	Create graphs of the stored statistics
prompt	Force dialogs to show.

Add-in Name: AdvRoll

Add-in Type: Equation
Default Proc Name: advroll
Default Menu Text: Advanced rolling regression
Interface: Dialog.

This add-in can only be run from an existing equation object, which has been specified by list (i.e. not by expression). It will take the specification of the existing equation and then perform a rolling regression of that equation over a sample period. Two dialogs will appear. The first lets you specify the type of rolling regression to perform, and to specify which of the original equation's regressors to all to change over the rolls:

If you choose to remove some variables from "the list of variables that can change", those "fixed" variables will have their coefficients fixed at values from an estimation over the entire sample period. The remaining variables will be re-estimated at each iteration of the roll.
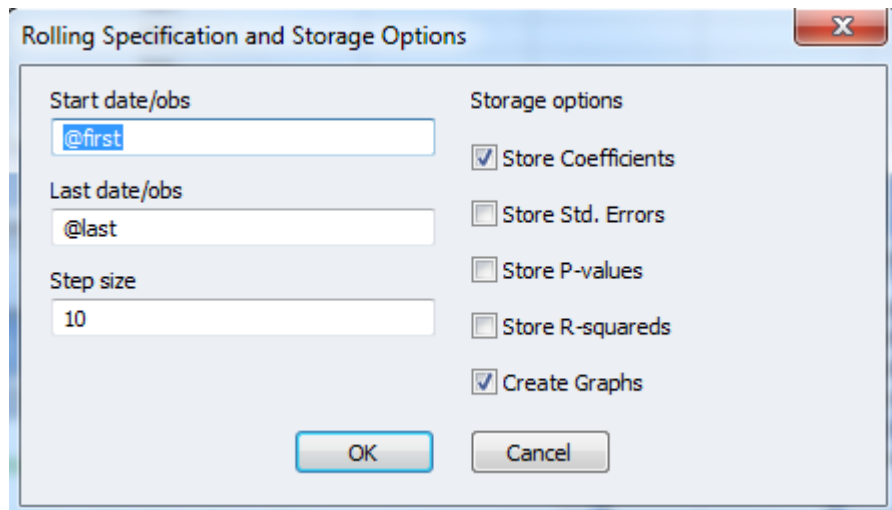
The available rolling regression types are "Fixed Length Window", "Anchored at Start", and "Anchored at End".

Fixed Length Window
This type works in the same way as the Simple Rolling Regression detailed above – i.e. each iteration of the roll performs an estimation with the same number of pre-specified observations used. If you select this type, you will see a second dialog exactly the same as the one shown above in the Simple Rolling Regression, which should be filled out in the same way as above.

Anchored at Start/End

These rolling regression types have a fixed start/end point for each iteration and not a fixed window size. If you choose a "Anchored at Start" type, each iteration of the roll will include the same start point for the estimation sample, but the end point will move onwards with each iteration, thus as the iterations move on, the estimations have more observations. For "Anchored at End", each iteration has the same end point, but the start point moves onwards with each iteration, thus as the iterations move on, the estimations have fewer observations. The second dialog that will appear with these types is slightly different from the "Fixed Window" type, since they do not require a window size to be specified:

Note that with the anchored types, the "Step size" indicates how many observations the non-anchored point should move in each iteration.