

**Package Name:** CROSSVALID

**Author:** Eren Ocakverdi

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**Add-in Type:** Equation and Global

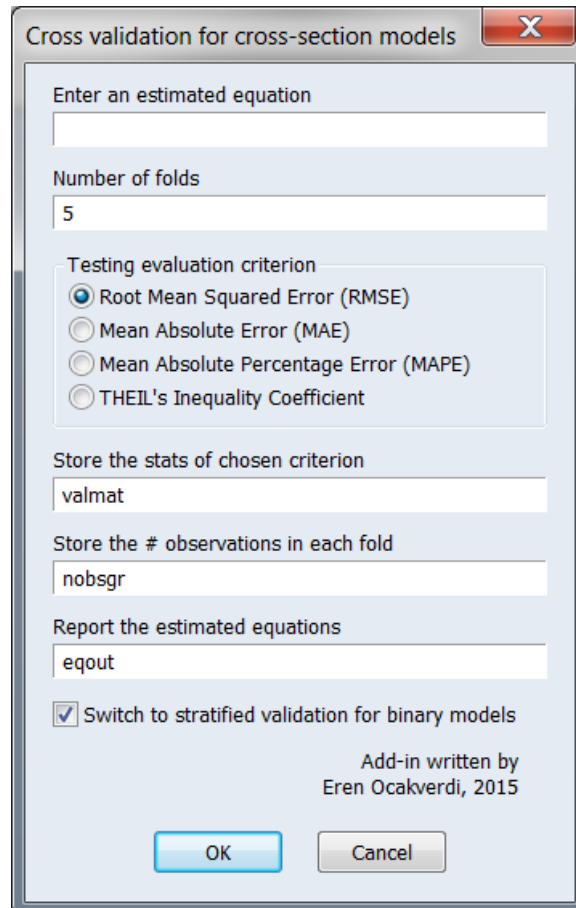
**Default Proc Name:** crossvalid

**Default Menu Text:** k-fold cross validation

**Interface:** Dialog and Command Line

**Description:** This add-in performs k-fold cross validation procedure on an already estimated equation. Since this particular approach is not appropriate for time series data, use of add-in is restricted to cross section data only. Add-in makes use of several new features of EViews introduced with the version 9.0, so will not work in older versions.

**Dialog:** Upon running the add-in from the menus or command line, a dialog will appear:

A screenshot of a Windows-style dialog box titled "Cross validation for cross-section models". The dialog has a standard title bar with a close button (X). The main area contains several input fields and options. At the top is a text box labeled "Enter an estimated equation". Below it is a text box labeled "Number of folds" with the value "5" entered. Then is a section titled "Testing evaluation criterion" with four radio button options: "Root Mean Squared Error (RMSE)" (selected), "Mean Absolute Error (MAE)", "Mean Absolute Percentage Error (MAPE)", and "THEIL's Inequality Coefficient". Below this is a text box labeled "Store the stats of chosen criterion" with the value "valmat" entered. Then is a text box labeled "Store the # observations in each fold" with the value "nobsgr" entered. Below that is a text box labeled "Report the estimated equations" with the value "eqout" entered. At the bottom left is a checked checkbox labeled "Switch to stratified validation for binary models". At the bottom right, it says "Add-in written by Eren Ocakverdi, 2015". At the very bottom are "OK" and "Cancel" buttons.

In the first box, enter the name of your equation. Enter the number of folds in the second box. Four different measures are available for further use in model comparison. The chosen decision metric is computed for each fold and is saved by default. Number of observations and the estimated equations are also available and can be saved by checking the related box. If you do not want any output, just leave these boxes blank.

Standard cross validation may not be appropriate for binary choice models, as it can be difficult to ensure that the mean response value is approximately equal in all the folds. Therefore, stratified version will be used by default, if it is a binary model estimated with Binary or GLM objects. If you like, you can uncheck the related box to obtain standard results. Moreover, the four evaluation criteria mentioned above will no longer be appropriate for binary models. Instead, an indicator of classification performance will be used regardless of the choice made for evaluation criteria. Classification table is obtained by the optimal cutoff value determined by minimizing the Euclidean distance of specificity and sensitivity from the ideal case (i.e. perfect fit).

### Command Line:

*Syntax-1:* crossvalid

*Syntax-2:* myequation.crossvalid(options)

### Options:

Argument	Type	Explanation
eq	<i>string</i>	Name of the estimated equation
kfold	<i>numeric</i>	Number of folds
eval	<i>string</i>	Evaluation criteria ("RMSE", "MAE", "MAPE" and "THEIL")
stat	<i>string</i>	Store the results of chosen criterion
nobs	<i>string</i>	Store the number of observations in each fold
report	<i>string</i>	Report the estimated equations
stratify		Default cross validation method for binary choice models
prompt		Open the GUI

### Examples:

- 1) myequation.crossvalid(stat)
- 2) myequation.crossvalid(kfold="10",eval="RMSE",stat="mymat",nobs="ngr",report="out")