SpecEval add-in

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What is SpecEval

`SpecEval` is Eviews add-in $\Leftrightarrow$ user-created command.

`SpecEval` performs evaluation of (forecasting properties of) equation/VAR/identity object(s) and prepares report summarizing the results.

- Focus on forecasting performance.

In what situation I should want to use SpecEval?

1. If you have equation and you want to know how good it is in forecasting your variable.
2. If you have multiple specifications and want to know which one is best.

Key building principles of SpecEval

SpecEval was built with three principles in mind

1. It should be super **easy** to use
2. It should provide **comprehensive** information about given model
3. It should be **flexible** to allow user to customize what the report will include

How to use SpecEval?

SpecEval can be used in two ways:

1. By clicking buttons, i.e. from graphical user interface
   - Equation ¿ Proc ¿ Add-ins ¿ Specification(s) evaluation

2. By writing commands, i.e. from command prompt or from program file
   - equation.speceval(options)

No further actions needed if default settings are used

Changing settings relatively easy

What does SpecEval do?

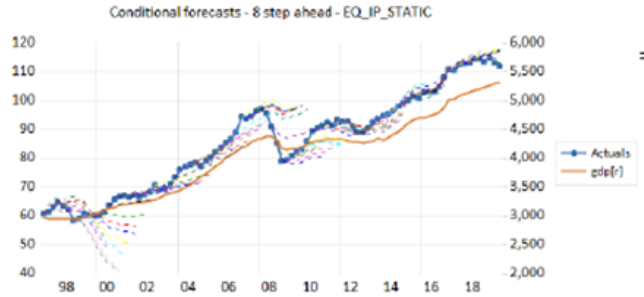
SpecEval produces many different outputs.

- The report includes all relevant information for evaluating particular specification.

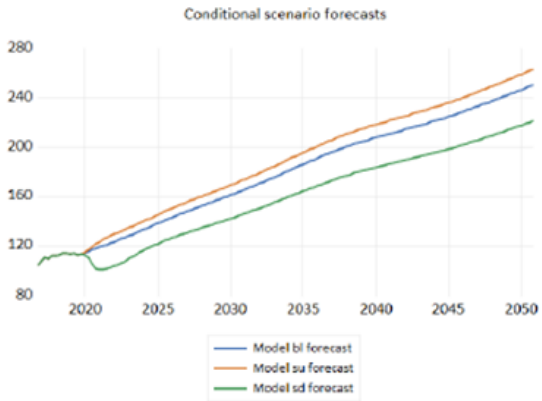
Object name	Description
Regression output table	Adjusted regression output table
Coefficient stability graph	Graph with recursive equation coefficients
Model stability graph	Graph with recursive lag orders
Performance metrics tables	Table with values of forecast performance metrics
Performance metrics tables (multiple specifications)	Table with values of forecast performance metrics for given metric for all specifications
Forecast summary graph	Graph with all recursive forecasts with given horizons
Sub-sample forecast graph	Graph with forecast for given sub-sample
Subsample forecast decomposition graph	Graph with decomposition of sub-sample forecast
Forecast bias graph	Scatter plot of forecast and actual values for given forecast horizon (Minzer-Zarnowitz plot)
Individual conditional scenario forecast graph (level)	Graph with forecast for single scenario and specification
Individual conditional scenario forecast graph (transformation)	Graph with transformation of forecast for single scenario and specification
All conditional scenario forecast graph	Graph with forecasts for all scenarios for single specification
Multiple specification conditional scenario forecast graph	Graph with forecasts for single scenario for multiple specifications

Key focus of SpecEval

The key focus of SpecEval is creating, visualizing and comparing precision of forecasts.



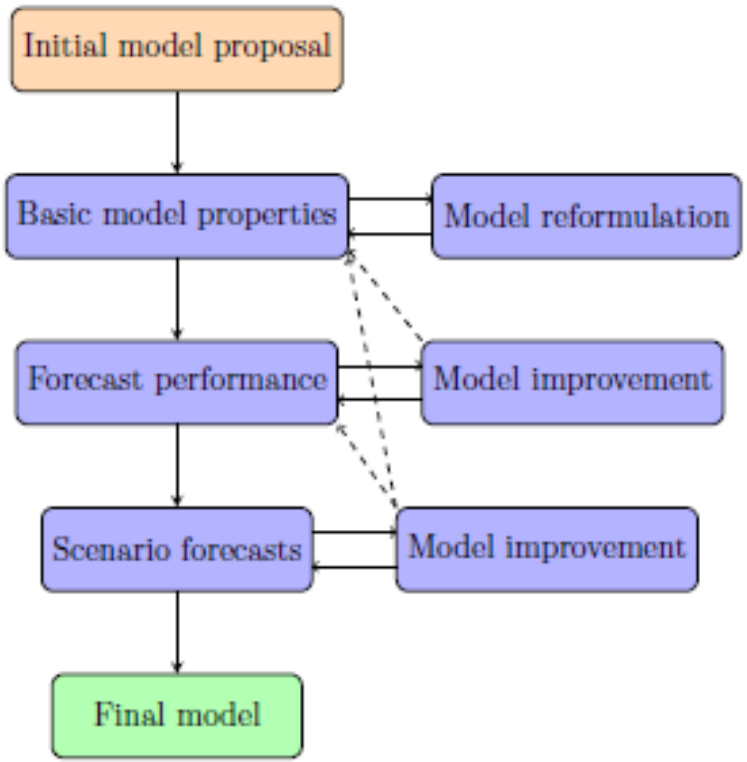
Specification	Forecast horizons (# of steps ahead) 2	4	8	Avg.
1	3.05	4.94	7.52	5.17
2	2.95	4.95	7.41	5.10
3	3.36	5.59	8.45	5.80
4	2.64	4.32	6.94	4.63
5	2.49	3.94	6.17	4.20
6	5.29	9.32	13.8	9.47
7	3.13	5.54	8.88	5.85
8	4.20	7.74	11.7	7.88



How to use SpecEval in developing models?

SpecEval is designed to be used in interactive and iterative model development process.

- Iterative: Start from initial model and improve in steps.
- Interactive: Improvements based on information about shortcoming of current model.



Documentation

SpecEval has very extensive documentation.

- Basic documentation = option reference
- Document describing all outputs = output object reference
- Document describing model development process = SpecEval illustrated
- Background slides for model building