forecast describe — Describe features of the forecast model

Description

`forecast describe` displays information about the forecast model currently in memory. For example, you can obtain information regarding all the endogenous or exogenous variables in the model, the adjustments used for alternative scenarios, or the solution method used. Typing `forecast describe` without specifying a particular aspect of the model is equivalent to typing `forecast describe` for every available aspect and can result in more output than you want, particularly if you also request a detailed description.

Quick start

Display information about the estimates in the current forecast

```
forecast describe estimates
```

Display information about coefficient vectors

```
forecast describe coefvector
```

Display endogenous variables defined by identities

```
forecast describe identity
```

Display names of declared exogenous variables

```
forecast describe exogenous
```

Display information about the solution method used

```
forecast describe solve
```

Display information about endogenous variables

```
forecast describe endogenous
```

All the above

```
forecast describe
```

Menu

Statistics > Time series > Forecasting

Syntax

Describe the current forecast model

```
forecast describe [ , options ]
```

Describe particular aspects of the current forecast model

```
forecast describe aspect [ , options ]
```

aspect	Description
estimates	estimation results
coefvector	coefficient vectors
identity	identities
exogenous	declared exogenous variables
adjust	adjustments to endogenous variables
solve	forecast solution information
endogenous	all endogenous variables

options	Description
brief	provide a one-line summary
* detail	provide more-detailed information

* Specifying `detail` provides no additional information with *aspect*s `exogenous`, `endogenous`, and `solve`.
`collect` is allowed; see **[U] 11.1.10 Prefix commands**.

Options

`brief` requests that `forecast describe` produce a one-sentence summary of the aspect specified. For example, `forecast describe exogenous, brief` will tell you just the current forecast model's name and the number of exogenous variables in the model.

`detail` requests a more-detailed description of the aspect specified. For example, typing `forecast describe estimates` lists all the estimation results added to the model using `forecast estimates`, the estimation commands used, and the number of left-hand-side variables in each estimation result. When you specify `forecast describe estimates, detail`, the output includes a list of all the left-hand-side variables entered with `forecast estimates`.

Remarks and examples

For an overview of the `forecast` commands, see [TS] **forecast**. This manual entry assumes you have already read that manual entry. `forecast describe` displays information about the forecast model currently in memory. You can obtain either all the information at once or information about individual aspects of your model, whereby we use the word "aspect" to refer to, for example, just the estimation results, identities, or solution information.

Example 1

In example 1 of [TS] **forecast**, we created and forecasted Klein's (1950) model of the US economy. Here we obtain information about all the endogenous variables in the model:

```
. forecast describe endogenous
Forecast model kleinmodel contains 7 endogenous variables:
```

Variable	Source	# adjustments
1. c	estimates	0
2. i	estimates	0
3. wp	estimates	0
4. y	identity	0
5. p	identity	0
6. k	identity	0
7. w	identity	0

As we mentioned in [TS] **forecast**, there are seven endogenous variables in this model. Three of those variables (`c`, `i`, and `wp`) were left-hand-side variables in equations we fitted and added to our forecast model with `forecast estimates`. The other four variables were defined by identities added with `forecast identity`. The right-hand column of the table indicates that none of our endogenous variables contains adjustments specified using `forecast adjust`.

We can obtain more information about the estimated equations in our model using `forecast describe estimates`:

```
. forecast describe estimates, detail
Forecast model kleinmodel contains 1 estimation result:
```

Estimation result	Command	LHS variables
1. klein	reg3	c i wp

Our model has one estimation result, `klein`, containing results produced by the `reg3` command. If we had not specified the `detail` option, `forecast describe estimates` would have simply stated the number of left-hand-side variables (3) rather than listing them.

At the end of example 1 in [TS] **forecast**, we obtained dynamic forecasts beginning in 1936. Here we obtain information about the solution:

```
. forecast describe solve
Forecast model kleinmodel has been solved:
------------------------------------------------------------------------------
Forecast horizon
   Begin                          1936
   End                            1941
   Number of periods              6
Forecast variables
   Prefix                         d_
   Number of variables            7
   Storage type                   float
Type of forecast                  Dynamic
Solution
   Technique                      Damped Gauss-Seidel (0.200)
   Maximum iterations             500
   Tolerance for function values  1.0e-09
   Tolerance for function zero    (not applicable)
------------------------------------------------------------------------------
```

We obtain information about the forecast horizon, how the variables holding our forecasts were created and stored, and the solution technique used. If we had used the `simulate()` option with `forecast solve`, we would have obtained information about the types of simulations performed and the variables used to hold the results.

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Stored results

When you specify option `brief`, only a limited number of results are stored. In the tables below, a superscript B indicates results that are available even after `brief` is specified. `forecast coefvector` saves certain results only if `detail` is specified; these are indicated by superscript D. Typing `forecast describe` without specifying an aspect does not return any results.

`forecast describe estimates` stores the following in `r()`:

Scalars

`r(n_estimates)`^{B}	number of estimation results
`r(n_lhs)`	number of left-hand-side variables defined by estimation results

Macros

`r(model)`^{B}	name of forecast model, if named
`r(lhs)`	left-hand-side variables
`r(estimates)`	names of estimation results

`forecast describe identity` stores the following in `r()`:

Scalars

`r(n_identities)`^{B}	number of identities

Macros

`r(model)`^{B}	name of forecast model, if named
`r(lhs)`	left-hand-side variables
`r(identities)`	list of identities

`forecast describe coefvector` stores the following in `r()`:

Scalars

`r(n_coefvectors)` [B]	number of coefficient vectors
`r(n_lhs)` [B]	number of left-hand-side variables defined by coefficient vectors

Macros

`r(model)` [B]	name of forecast model, if named
`r(lhs)`	left-hand-side variables
`r(rhs)` [D]	right-hand-side variables
`r(names)`	names of coefficient vectors
`r(Vnames)` [D]	names of variance matrices (“`.`” if not specified)
`r(Enames)` [D]	names of error variance matrices (“`.`” if not specified)

`forecast describe exogenous` stores the following in `r()`:

Scalars

`r(n_exogenous)` [B]	number of declared exogenous variables

Macros

`r(model)` [B]	name of forecast model, if named
`r(exogenous)`	declared exogenous variables

`forecast describe endogenous` stores the following in `r()`:

Scalars

`r(n_endogenous)` [B]	number of endogenous variables

Macros

`r(model)` [B]	name of forecast model, if named
`r(varlist)`	endogenous variables
`r(source_list)`	sources of endogenous variables (`estimates`, `identity`, `coefvector`)
`r(adjust_cnt)`	number of adjustments per endogenous variable

`forecast describe solve` stores the following in `r()`:

Scalars

`r(periods)`	number of periods forecast per panel
`r(Npanels)`	number of panels forecast
`r(Nvar)`	number of forecast variables
`r(damping)`	damping parameter for damped Gauss–Seidel
`r(maxiter)`	maximum number of iterations
`r(vtolerance)`	tolerance for forecast values
`r(ztolerance)`	tolerance for function zero
`r(sim_nreps)`	number of simulations

Macros

`r(solved)` [B]	`solved`, if the model has been solved
`r(model)` [B]	name of forecast model, if named
`r(actuals)`	`actuals`, if specified with `forecast solve`
`r(double)`	`double`, if specified with `forecast solve`
`r(static)`	`static`, if specified with `forecast solve`
`r(begin)`	first period in forecast horizon
`r(end)`	last period in forecast horizon
`r(technique)`	solver technique
`r(sim_technique)`	specified *sim_technique*
`r(prefix)`	forecast variable prefix
`r(suffix)`	forecast variable suffix
`r(sim_prefix_`*i*`)`	*i*th simulation statistic prefix
`r(sim_suffix_`*i*`)`	*i*th simulation statistic suffix
`r(sim_stat_`*i*`)`	*i*th simulation statistic

`forecast describe adjust` stores the following in `r()`:

Scalars

`r(n_adjustments)` ^{B}	total number of adjustments
`r(n_adjust_vars)` ^{B}	number of variables with adjustments

Macros

`r(model)` ^{B}	name of forecast model, if named
`r(varlist)`	variables with adjustments
`r(adjust_cnt)`	number of adjustments per endogenous variable
`r(adjust_list)`	list of adjustments

Reference

Klein, L. R. 1950. *Economic Fluctuations in the United States 1921–1941*. New York: Wiley.

Also see

[TS] **forecast** — Econometric model forecasting

[TS] **forecast list** — List forecast commands composing current model