

**fcast graph** — Graph forecasts after fcast compute[Description](#)  
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## Description

`fcast graph` graphs dynamic forecasts of the endogenous variables from a vector autoregressive (VAR) model or a vector error-correction (VEC) model that has already been obtained from `fcast compute`; see [TS] [fcast compute](#).

## Quick start

Graph forecasts in `f_y1` after `fcast compute`

```
fcast graph f_y1
```

Same as above, and include observed values of the predicted variable

```
fcast graph f_y1, observed
```

Same as above, but suppress confidence bands

```
fcast graph f_y1, observed noci
```

## Menu

Statistics > Multivariate time series > VEC/VAR forecasts > Graph forecasts

## Syntax

```
fcast graph varlist [if] [in] [, options]
```

where *varlist* contains one or more forecasted variables generated by `fcast compute`.

<i>options</i>	Description
Main	
<u>d</u> ifferences	graph forecasts of the first-differenced variables ( <i>vec</i> only)
<u>n</u> oci	suppress confidence bands
<u>o</u> bserved	include observed values of the predicted variables
Forecast plot	
<i>cline_options</i>	affect rendition of the forecast lines
CI plot	
<u>ci</u> opts( <i>area_options</i> )	affect rendition of the confidence bands
Observed plot	
<u>ob</u> opts( <i>cline_options</i> )	affect rendition of the observed values
Y axis, Time axis, Titles, Legend, Overall	
<i>twoway_options</i>	any options other than <code>by()</code> documented in [G-3] <i>twoway_options</i>
<u>by</u> opts( <i>by_option</i> )	affect appearance of the combined graph; see [G-3] <i>by_option</i>

## Options

### Main

`differences` specifies that the forecasts of the first-differenced variables be graphed. This option is available only with forecasts computed by `fcast compute` after `vec`. The `differences` option implies `noci`.

`noci` specifies that the confidence intervals be suppressed. By default, the confidence intervals are included.

`observed` specifies that observed values of the predicted variables be included in the graph. By default, observed values are not graphed.

### Forecast plot

*cline\_options* affect the rendition of the plotted lines corresponding to the forecast; see [G-3] *cline\_options*.

### CI plot

`ciopts(area_options)` affects the rendition of the confidence bands for the forecasts; see [G-3] *area\_options*.

### Observed plot

`obopts(cline_options)` affects the rendition of the observed values of the predicted variables; see [G-3] *cline\_options*. This option implies the `observed` option.

Y axis, Time axis, Titles, Legend, Overall

`tway_options` are any of the options documented in [G-3] `tway_options`, excluding `by()`.

`byopts(by_option)` are documented in [G-3] `by_option`. These options affect the appearance of the combined graph.

## Remarks and examples

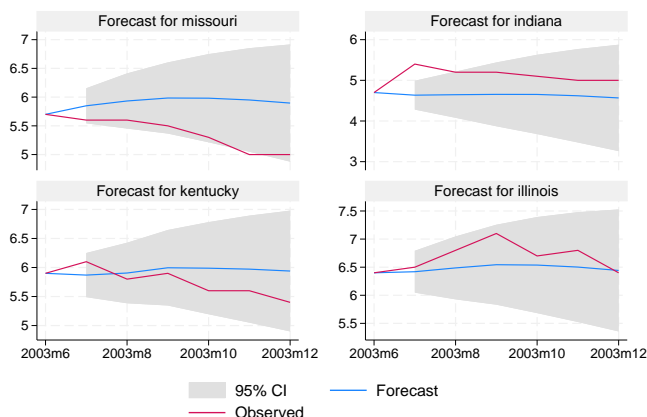
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`fcast graph` graphs dynamic forecasts created by `fcast compute`.

### ► Example 1

In this example, we use a cointegrating VEC model to model the state-level unemployment rates in Missouri, Indiana, Kentucky, and Illinois, and we graph the forecasts against a 6-month holdout sample.

```
. use https://www.stata-press.com/data/r18/urates
. vec missouri indiana kentucky illinois if t < tm(2003m7), trend(rconstant)
> rank(2) lags(4)
(output omitted)
. fcast compute m1_, step(6)
. fcast graph m1_missouri m1_indiana m1_kentucky m1_illinois, observed
```



Because the 95% confidence bands for the predicted unemployment rates in Missouri and Indiana do not contain all their observed values, the model does not reliably predict these unemployment rates.

◀

## Also see

[TS] [fcast compute](#) — Compute dynamic forecasts

[TS] [var intro](#) — Introduction to vector autoregressive models

[TS] [vec intro](#) — Introduction to vector error-correction models

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