Title

> **graph twoway rbar** — Range plot with bars

Description

A range plot has two y variables, such as high and low daily stock prices or upper and lower 95% confidence limits.

twoway rbar plots a range, using bars to connect the high and low values.

Also see [G-2] **graph bar** for more traditional bar charts.

Quick start

Range plot with bars

```
twoway rbar y1 y2 x
```

As above, but with horizontal bars

```
twoway rbar y1 y2 x, horizontal
```

Specify bars to be 0.75 times the default width to create space between bars

```
twoway rbar y1 y2 x, barwidth(.75)
```

Overlay a line plot of y3 versus x

```
twoway rbar y1 y2 x || line y3 x
```

As above, but with light gray bars

```
twoway rbar y1 y2 x, color(gs10) || line y3 x
```

Add the title "My Title" to the graph

```
twoway rbar y1 y2 x, color(gs10) || line y3 x, title("My Title")
```

Menu

Graphics > Twoway graph (scatter, line, etc.)

Syntax

> <u>tw</u>oway rbar *y1var* *y2var* *xvar* $\big[$ *if* $\big]$ $\big[$ *in* $\big]$ $\big[$, *options* $\big]$

options	Description
<u>v</u>ertical	vertical bars; the default
<u>horizontal</u>	horizontal bars
<u>barw</u>idth(*#*)	width of bar in *xvar* units
mwidth	use msize() rather than barwidth()
<u>msiz</u>e(*markersizestyle*)	width of bar in relative size units
barlook_options	change look of bars
axis_choice_options	associate plot with alternative axis
twoway_options	titles, legends, axes, added lines and text, by, regions, name, aspect ratio, etc.

Options barwidth(), mwidth, and msize() are *rightmost*, and vertical and horizontal are *unique*; see [G-4] **concept: repeated options**.

Options

vertical and horizontal specify whether the high and low y values are to be presented vertically (the default) or horizontally.

> In the default vertical case, *y1var* and *y2var* record the minimum and maximum (or maximum and minimum) y values to be graphed against each *xvar* value.

> If horizontal is specified, the values recorded in *y1var* and *y2var* are plotted in the x direction and *xvar* is treated as the y value.

barwidth(*#*) specifies the width of the bar in *xvar* units. The default is barwidth(1). When a bar is plotted, it is centered at x, so half the width extends below x and half above.

mwidth and msize(*markersizestyle*) change how the width of the bars is specified. Usually, the width of the bars is determined by the barwidth() option documented below. If mwidth is specified, barwidth() becomes irrelevant and the bar width switches to being determined by msize(). This all has to do with the units in which the width of the bar is specified.

> By default, bar widths are specified in the units of *xvar*, and if option barwidth() is not specified, the default width is 1 *xvar* unit.

> mwidth specifies that you wish bar widths to be measured in relative size units; see [G-4] *relativesize*. When you specify mwidth, the default changes from being 1 *xvar* unit to the default width of a marker symbol.

> If you also specify msize(), the width of the bar is modified to be the relative size specified.

barlook_options set the look of the bars. The most important of these options is color(*colorstyle*), which specifies the color of the bars; see [G-4] *colorstyle* for a list of color choices. See [G-3] *barlook_options* for information on the other *barlook_options*.

axis_choice_options associate the plot with a particular y or x axis on the graph; see [G-3] *axis_choice_options*.

twoway_options are a set of common options supported by all `twoway` graphs. These options allow you to title graphs, name graphs, control axes and legends, add lines and text, set aspect ratios, create graphs over `by()` groups, and change some advanced settings. See [G-3] *twoway_options*.

Remarks and examples   **stata.com**

Remarks are presented under the following headings:

> Typical use
> Advanced use

Typical use

We have daily data recording the values for the S&P 500 in 2001:

```
. use http://www.stata-press.com/data/r14/sp500
(S&P 500)

. list date high low close in 1/5
```

	date	high	low	close
1.	02jan2001	1320.28	1276.05	1283.27
2.	03jan2001	1347.76	1274.62	1347.56
3.	04jan2001	1350.24	1329.14	1333.34
4.	05jan2001	1334.77	1294.95	1298.35
5.	08jan2001	1298.35	1276.29	1295.86

We will use the first 57 observations from these data:

```
. twoway rbar high low date in 1/57, barwidth(.6)
```
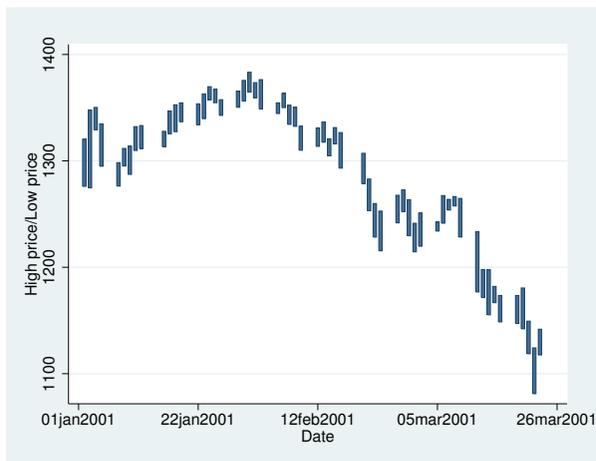

We specified `barwidth(.6)` to reduce the width of the bars. By default, bars are 1 x unit wide (meaning 1 day in our data). That default resulted in the bars touching. `barwidth(.6)` reduced the width of the bars to .6 days.

Advanced use

The useful thing about `twoway rbar` is that it can be combined with other `twoway` plottypes (see [G-2] **graph twoway**):

```
. twoway rbar high low date, barwidth(.6) color(gs7) ||
        line close date || in 1/57
```
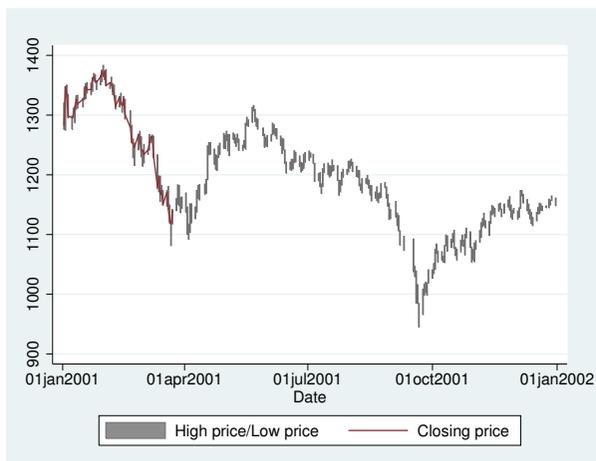

There are two things to note in the example above: our specification of `color(gs7)` and that we specified that the range bars be drawn first, followed by the line. We specified `color(gs7)` to tone down the bars: By default, the bars were too bright, making the line plot of close versus date all but invisible. Concerning the ordering, we typed

```
. twoway rbar high low date, barwidth(.6) color(gs7) ||
        line close date || in 1/57
```

so that the bars would be drawn first and then the line drawn over them. Had we specified

```
. twoway line close date ||
        rbar high low date, barwidth(.6) color(gs7) || in 1/57
```

the bars would have been placed on top of the line and thus would have occulted the line.

Reference

Kohler, U., and C. Brzinsky-Fay. 2005. Stata tip 25: Sequence index plots. *Stata Journal* 5: 601–602.

Also see

[G-2] **graph twoway bar** — Twoway bar plots

[G-2] **graph twoway rarea** — Range plot with area shading

[G-2] **graph twoway rcap** — Range plot with capped spikes

[G-2] **graph twoway rcapsym** — Range plot with spikes capped with marker symbols

[G-2] **graph twoway rconnected** — Range plot with connected lines

[G-2] **graph twoway rline** — Range plot with lines

[G-2] **graph twoway rscatter** — Range plot with markers

[G-2] **graph twoway rspike** — Range plot with spikes