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

twoway rbar y1var y2var xvar [if] [in] [, options]

options Description

vertical vertical bars; the default
horizontal horizontal bars
barwidth(#) width of bar in xvar units
mwidth use msize() rather than barwidth()
msize(markersizestyle) width of bar

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 size units; see [G-4] size. 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 size specified.

barlook_options set the look of the bars. The most important of these options is color(colorstyle), which specifies the color and opacity 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

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 https://www.stata-press.com/data/r16/sp500
(S&P 500)
. list date high low close in 1/5
```

<table>
<thead>
<tr>
<th>date</th>
<th>high</th>
<th>low</th>
<th>close</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 02jan2001</td>
<td>1320.28</td>
<td>1276.05</td>
<td>1283.27</td>
</tr>
<tr>
<td>2. 03jan2001</td>
<td>1347.76</td>
<td>1274.62</td>
<td>1347.56</td>
</tr>
<tr>
<td>3. 04jan2001</td>
<td>1350.24</td>
<td>1329.14</td>
<td>1333.34</td>
</tr>
<tr>
<td>4. 05jan2001</td>
<td>1334.77</td>
<td>1294.95</td>
<td>1298.35</td>
</tr>
<tr>
<td>5. 08jan2001</td>
<td>1298.35</td>
<td>1276.29</td>
<td>1295.86</td>
</tr>
</tbody>
</table>

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.

References


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