Description

twoway dropline displays numeric (y,x) data as dropped lines capped with a marker. twoway dropline is useful for drawing plots in which the numbers vary around zero.

Quick start

Graph of (y, x) pairs displayed as a marker with lines extending to the x axis

    twoway dropline y x

Specify lines that extend to 20 instead of 0

    twoway dropline y x, base(20)

Same as above, but add a horizontal line at $y = 20$

    twoway dropline y x, base(20) yline(20)

Menu

Graphics > Two-way graph (scatter, line, etc.)

Syntax

> <ins>two</ins>way dropline *yvar xvar* [*if*] [*in*] [, *options*]

options	Description
<ins>vertical</ins>	vertical dropped-line plot; the default
<ins>hor</ins>izontal	horizontal dropped-line plot
base(*#*)	value to drop to; default is 0
marker_options	change look of markers (color, size, etc.)
marker_label_options	add marker labels; change look or position
line_options	change look of dropped lines
colorvar_options	change color of dropped lines and markers based on values of a variable
axis_choice_options	associate plot with alternative axis
twoway_options	titles, legends, axes, added lines and text, by, regions, name, aspect ratio, etc.

All explicit options are *rightmost*, except vertical and horizontal, which are *unique*; see
[G-4] **Concept: repeated options**.

Options

vertical and horizontal specify either a vertical or a horizontal dropped-line plot. vertical is the
default. If horizontal is specified, the values recorded in *yvar* are treated as x values, and the values
recorded in *xvar* are treated as y values. That is, to make horizontal plots, do not switch the order of
the two variables specified.

In the vertical case, dropped lines are drawn at the specified *xvar* values and extend up or down
from 0 according to the corresponding *yvar* values. If 0 is not in the range of the y axis, lines extend
up or down to the x axis.

In the horizontal case, dropped lines are drawn at the specified *xvar* values and extend left or right
from 0 according to the corresponding *yvar* values. If 0 is not in the range of the x axis, lines extend
left or right to the y axis.

base(*#*) specifies the value from which the lines should extend. The default is base(0), and in the
above description of options vertical and horizontal, this default was assumed.

marker_options specify the look of markers plotted at the data points. This look includes the marker
symbol and its size, color, and outline; see [G-3] *marker_options*.

marker_label_options specify if and how the markers are to be labeled; see [G-3] *marker_label_options*.

line_options specify the look of the dropped lines, including pattern, width, and color; see
[G-3] *line_options*.

colorvar_options specify that the color of the dropped lines and markers be determined by the levels of
the numeric variable *colorvar*; see [G-3] *colorvar_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*
> *Cautions*

Typical use

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

```
. use https://www.stata-press.com/data/r19/sp500
(S&P 500)

. list date close change in 1/5
```

	date	close	change
1.	02jan2001	1283.27	.
2.	03jan2001	1347.56	64.29004
3.	04jan2001	1333.34	-14.22009
4.	05jan2001	1298.35	-34.98999
5.	08jan2001	1295.86	-2.48999

In [G-2] **graph twoway bar**, we graphed the first 57 observations of these data by using bars. Here is the same graph presented as dropped lines:

```
. twoway dropline change date in 1/57, yline(0, lstyle(foreground))
```
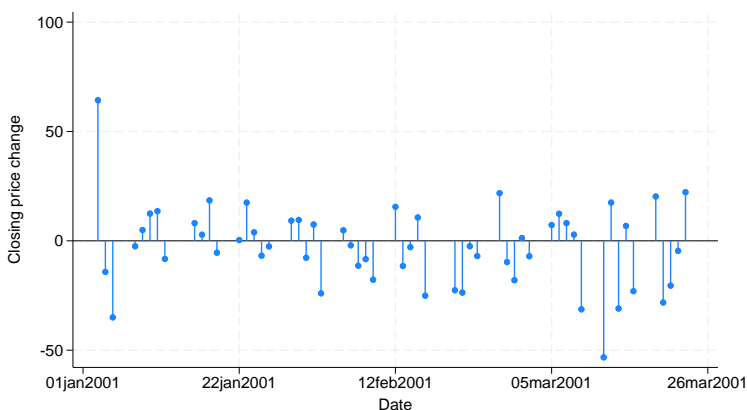

In the above, we specified yline(0) to add a line across the graph at 0, and then we specified yline(, lstyle(foreground)) so that the line would have the same color as the foreground. We could have instead specified yline(, lcolor()). For an explanation of why we chose lstyle() over foreground(), see *Advanced use: Overlaying* in [G-2] **graph twoway bar**.

Advanced use

Dropped-line plots work especially well when the points are labeled. For instance,

```
. use https://www.stata-press.com/data/r19/lifeexp, clear
(Life expectancy, 1998)

. keep if region==3
(58 observations deleted)

. generate lngnp = ln(gnppc)

. quietly regress le lngnp

. predict r, resid

. twoway dropline r gnp,
        yline(0, lstyle(foreground)) mlabel(country) mlabpos(9)
        ylab(-6(1)6)
        subtitle("Regression of life expectancy on ln(gnp)", pos(11))
        note("Residuals in years; positive values indicate"
             "longer than predicted life expectancy")
```
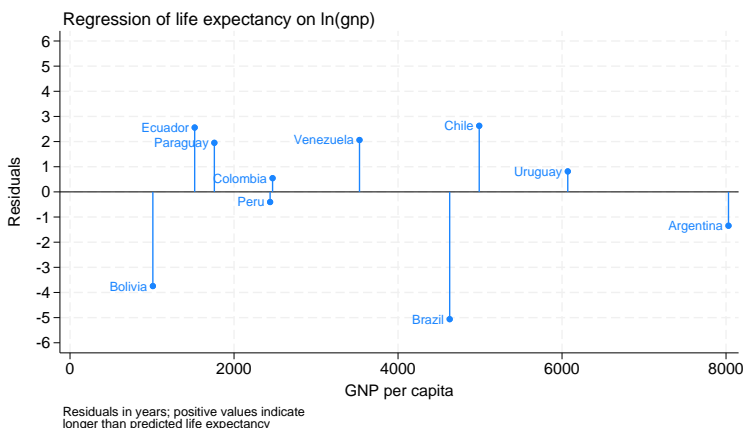

Cautions

See *Cautions* in [G-2] **graph twoway bar**, which applies equally to `twoway dropline`.

Also see

[G-2] **graph twoway scatter** — Two-way scatterplots

[G-2] **graph twoway spike** — Two-way spike plots