FAQ

Get real OHLC price on a Heikin Ashi chart

Suppose, we have a Heikin Ashi chart (or Renko, Kagi, PriceBreak etc) and we've added a pine script on it:

```
//@version=5
indicator("Visible OHLC", overlay=true)
c = close
plot(c)
```

You may see that variable `c` is a Heikin Ashi *close* price which is not the same as real OHLC price. Because `close` built-in variable is always a value that corresponds to a visible bar (or candle) on the chart.

So, how do we get the real OHLC prices in Pine Script™ code, if current chart type is non-standard? We should use `request.security` function in combination with `ticker.new` function. Here is an example:

```
//@version=5
indicator("Real OHLC", overlay = true)
t = ticker.new(syminfo.prefix, syminfo.ticker)
realC = request.security(t, timeframe.period, close)
plot(realC)
```

In a similar way we may get other OHLC prices: *open*, *high* and *low*.

Get non-standard OHLC values on a standard chart

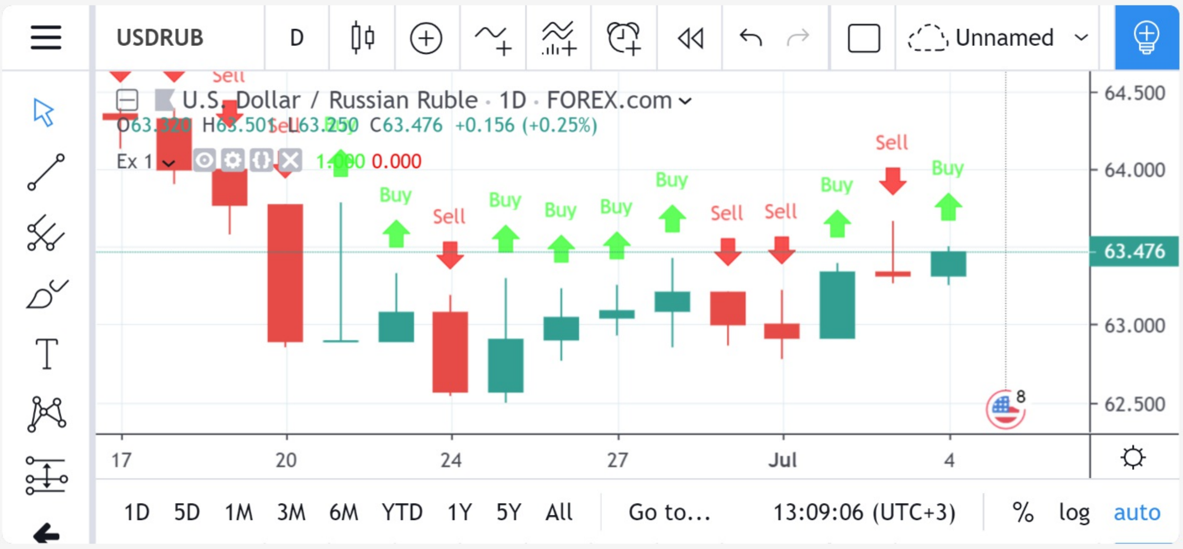
Backtesting on non-standard chart types (e.g. Heikin Ashi or Renko) is not recommended because the bars on these kinds of charts do not represent real price movement that you would encounter while trading. If you want your strategy to enter and exit on real prices but still use Heikin Ashi-based signals, you can use the same method to get Heikin Ashi values on a regular candlestick chart:

```
//@version=5
strategy("BarUpDn Strategy", overlay = true, default_qty_type = strategy.percent_of_equ
maxIdLossPcntInput = input.float(1, "Max Intraday Loss(%)")
strategy.risk.max_intraday_loss(maxIdLossPcntInput, strategy.percent_of_equity)
needTrade() => close > open and open > close[1] ? 1 : close < open and open < close[1]
trade = request.security(ticker.heikinashi(syminfo.tickerid), timeframe.period, needTra
if trade == 1
    strategy.entry("BarUp", strategy.long)
if trade == -1
    strategy.entry("BarDn", strategy.short)
```

Plot arrows on the chart

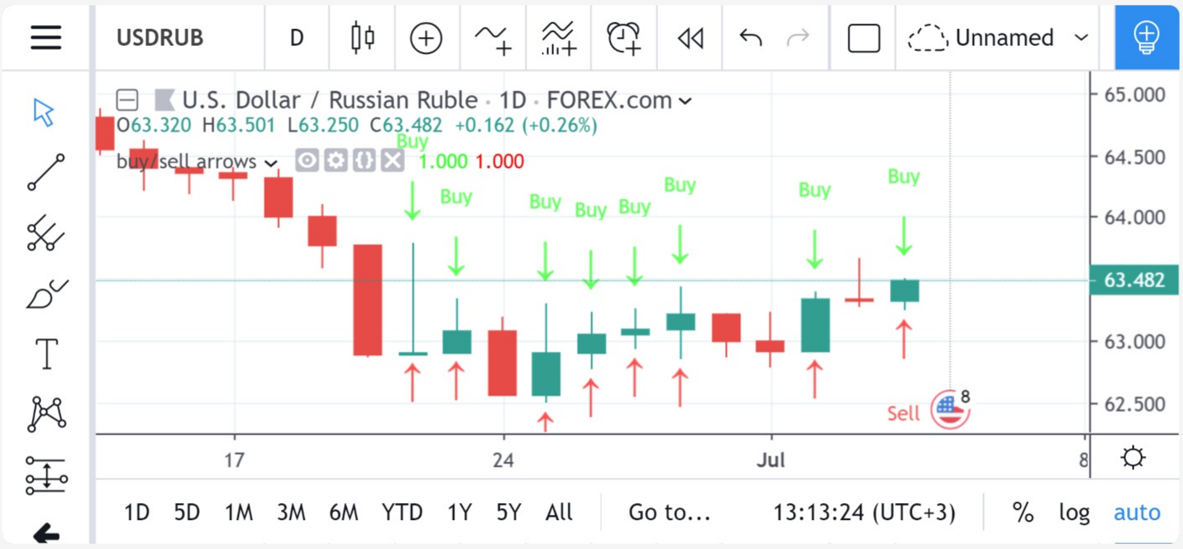
You may use plotshape with style `shape.arrowup` and `shape.arrowdown`:

```
//@version=5
indicator('Ex 1', overlay = true)
condition = close >= open
plotshape(condition, color = color.lime, style = shape.arrowup, text = "Buy")
plotshape(not condition, color = color.red, style = shape.arrowdown, text = "Sell")
```


USDRUB
D
Unnamed
U.S. Dollar / Russian Ruble · 1D · FOREX.com
O63.320 H63.505 L63.250 C63.476 +0.156 (+0.25%)
Ex 1
1.000 0.000
Buy
Sell
64.500
64.000
63.476
63.000
62.500
17
20
24
27
Jul
4
1D 5D 1M 3M 6M YTD 1Y 5Y All
Go to...
13:09:06 (UTC+3)
% log auto

You may use `plotchar` function with any unicode character:

```
//@version=5
indicator('buy/sell arrows', overlay = true)
condition = close >= open
plotchar(not condition, char='↓', color = color.lime, text = "Buy")
plotchar(condition, char='↑', location = location.belowbar, color = color.red, text = '
```



Plot a dynamic horizontal line

There is function `hline` in pine. But it is now limited to only plot constant value. Here is a Pine Script™ with workaround to plot changing hline:

```
//@version=5
indicator("Horizontal line", overlay = true)
plot(close[10], trackprice = true, offset = -9999)
// `trackprice = true` plots horizontal line on close[10]
// `offset = -9999` hides the plot
plot(close, color = #FFFFFFFF)  // forces display
```

Plot a vertical line on condition

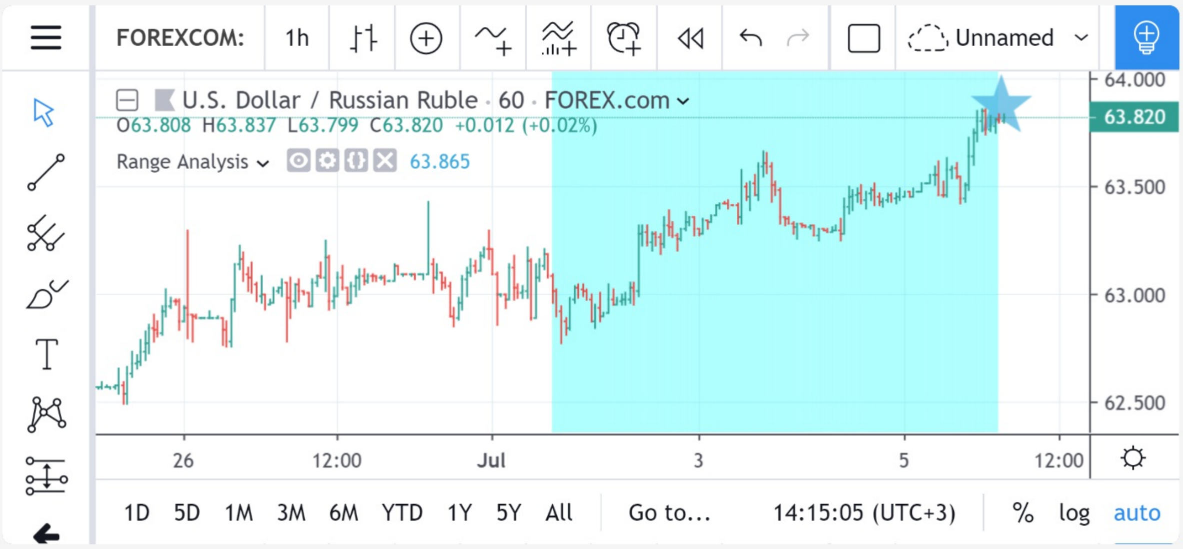
```
//@version=5
indicator("Vertical line", overlay = true, scale = scale.none)
// scale.none means do not resize the chart to fit this plot
// if the bar being evaluated is the last baron the chart (the most recent bar), then c
cond = barstate.islast
// when cond is true, plot a histogram with a line with height value of 100,000,000,000
// (10 to the power of 20)
// when cond is false, plot no numeric value (nothing is plotted)
// use the style of histogram, a vertical bar
plot(cond ? 10e20 : na, style = plot.style_histogram)
```

Access the previous value

```
//@version=5
//...
s = 0.0
s := nz(s[1]) // Accessing previous values
if (condition)
    s := s + 1
```

Get a 5-days high

Lookback 5 days from the current bar, find the highest bar, plot a star character at that price level above the current bar


FOREXCOM:
1h
Unnamed
U.S. Dollar / Russian Ruble · 60 · FOREX.com
O63.808 H63.837 L63.799 C63.820 +0.012 (+0.02%)
Range Analysis
63.865
64.000
63.820
63.500
63.000
62.500
26
12:00
Jul
3
5
12:00
1D 5D 1M 3M 6M YTD 1Y 5Y All
Go to...
14:15:05 (UTC+3)
% log auto

```
//@version=5
indicator("High of last 5 days", overlay = true)

// Milliseconds in 5 days: millisecs * secs * mins * hours * days
MS_IN_5DAYS = 1000 * 60 * 60 * 24 * 5

// The range check begins 5 days from the current time.
leftBorder = timenow - time < MS_IN_5DAYS
// The range ends on the last bar of the chart.
rightBorder = barstate.islast

// ————— Keep track of highest `high` during the range.
// Intialize `maxHi` with `var` on bar zero only.
// This way, its value is preserved, bar to bar.
var float maxHi = na
if leftBorder
    if not leftBorder[1]
        // Range's first bar.
        maxHi := high
    else if not rightBorder
        // On other bars in the range, track highest `high`.
        maxHi := math.max(maxHi, high)

// Plot level of the highest `high` on the last bar.
plotchar(rightBorder ? maxHi : na, "Level", "—", location.absolute, size = size.normal
// When in range, color the background.
bgcolor(leftBorder and not rightBorder ? color.new(color.aqua, 70) : na)
```

Count bars in a dataset

Get a count of all the bars in the loaded dataset. Might be useful for calculating flexible lookback periods based on number of bars.

```
//@version=5
indicator("Bar Count", overlay = true, scale = scale.none)
plot(bar_index + 1, style = plot.style_histogram)
```

Enumerate bars in a day

```
//@version=5
indicator("My Script", overlay = true, scale = scale.none)

isNewDay() =>
    d = dayofweek
    na(d[1]) or d != d[1]

plot(ta.barssince(isNewDay()), style = plot.style_cross)
```

Find the highest and lowest values for the entire dataset

```
//@version=5
indicator("", "", true)

allTimetHi(source) =>
    var atHi = source
    atHi := math.max(atHi, source)

allTimetLo(source) =>
    var atLo = source
    atLo := math.min(atLo, source)

plot(allTimetHi(close), "ATH", color.green)
plot(allTimetLo(close), "ATL", color.red)
```

Query the last non-na value

You can use the script below to avoid gaps in a series:

```
//@version=5
indicator("")
series = close >= open ? close : na
vw = fixnan(series)
plot(series, style = plot.style_linebr, color = color.red)  // series has na values
plot(vw)  // all na values are replaced with the last non-empty value
```

Limitations

Error messages