

// This Pine Script® code is subject to the terms of the Mozilla Public License 2.0 at
<https://mozilla.org/MPL/2.0/>

//@version=6

indicator('MFB - Footprints', overlay = true, max_labels_count = 500, max_boxes_count = 500, max_lines_count = 500)

// --- Colors ---

COLOR_BULL = #089981

COLOR_BEAR = #f23645

COLOR_ENTRY = #5b9cf6

COLOR_FLOW = #00bcd4 // Cyan/Light Blue for arrows

// --- Static Alert Declaration ---

// Placing this at the top ensures it is the first custom option in the alert dropdown list

var bool global_alert_triggered = false

alertcondition(global_alert_triggered, title = "Footprints - Flow/Sweep", message = "A high-probability Flow or Sweep footprint signal has been confirmed.")

// --- Inputs ---

grpHTF = ' 🌐 HTF Filter Settings'

use_15m = input.bool(true, 'Include 15m FVG', group = grpHTF)

use_1h = input.bool(true, 'Include 1h FVG', group = grpHTF)

use_4h = input.bool(true, 'Include 4h FVG', group = grpHTF)

grpLiq = ' ⚡ Liquidity Filter'

touch_lookback = input.int(50, 'Liquidity Touch Lookback (Bars)', minval = 1, group = grpLiq)

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grpVisual = ' 🎨 Visual Settings'

show_levels = input.bool(true, 'Show Session H/L Levels', group = grpVisual)

lookback_hrs = input.int(48, 'Show Trades from Last (Hours)', minval = 1, group = grpVisual)

line_len = input.int(15, 'Management Line Length', minval = 5, group = grpVisual)

// --- HTF Data & Levels ---

pdh = request.security(syminfo.tickerid, 'D', high[1], lookahead = barmerge.lookahead_on)
pdl = request.security(syminfo.tickerid, 'D', low[1], lookahead = barmerge.lookahead_on)
pwh = request.security(syminfo.tickerid, 'W', high[1], lookahead = barmerge.lookahead_on)
pwl = request.security(syminfo.tickerid, 'W', low[1], lookahead = barmerge.lookahead_on)

f_session_hl(sess) =>

    in_sess = not na(time(timeframe.period, sess, "America/New_York"))

    var float h = na
    var float l = na

    if in_sess

        h := (na(h) or not in_sess[1]) ? high : math.max(high, h)
        l := (na(l) or not in_sess[1]) ? low : math.min(low, l)

    [h, l]

// Colors match Momentum Flow: Asia Blue, London Yellow

[asiaH, asiaL] = f_session_hl("1900-0000")
[lonH, lonL] = f_session_hl("0000-0600")
[orH, orL] = f_session_hl("0930-0945")

// --- Liquidity Logic ---

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```
var float lastHighLiq = na
```

```
var float lastLowLiq = na
```

```
if high >= pdh or high >= pwh or high >= asiaH or high >= lonH or high >= orH
```

```
    lastHighLiq := high >= pdh ? pdh : high >= pwh ? pwh : high >= asiaH ? asiaH : high >= lonH  
    ? lonH : orH
```

```
if low <= pdl or low <= pwl or low <= asiaL or low <= lonL or low <= orL
```

```
    lastLowLiq := low <= pdl ? pdl : low <= pwl ? pwl : low <= asiaL ? asiaL : low <= lonL ? lonL  
    : orL
```

```
touched_low = ta.barssince(low <= pdl or low <= pwl or low <= asiaL or low <= lonL or low  
<= orL) <= touch_lookback
```

```
touched_high = ta.barssince(high >= pdh or high >= pwh or high >= asiaH or high >= lonH or  
high >= orH) <= touch_lookback
```

```
// --- HTF Context ---
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f_get_htf_context() =>
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```
    var float f_t = na, var float f_b = na, var int is_b = 0, var int st = 0
```

```
    bull = low > high[2], bear = high < low[2]
```

```
    if bull
```

```
        f_t := low, f_b := high[2], is_b := 1, st := 1
```

```
    else if bear
```

```
        f_t := low[2], f_b := high, is_b := -1, st := 1
```

```
    if st == 1 and ((is_b == 1 and low <= f_t) or (is_b == -1 and high >= f_b))
```

```
        st := 2
```

```
    if st == 2 and ((is_b == 1 and close > f_t) or (is_b == -1 and close < f_b))
```

st := 3

active = (close <= f_t and close >= f_b) or st == 3

[active, is_b]

[ctx15, dir15] = request.security(syminfo.tickerid, '15', f_get_htf_context())

[ctx1h, dir1h] = request.security(syminfo.tickerid, '60', f_get_htf_context())

[ctx4h, dir4h] = request.security(syminfo.tickerid, '240', f_get_htf_context())

htf_bull = (use_15m and ctx15 and dir15 == 1) or (use_1h and ctx1h and dir1h == 1) or
(use_4h and ctx4h and dir4h == 1)

htf_bear = (use_15m and ctx15 and dir15 == -1) or (use_1h and ctx1h and dir1h == -1) or
(use_4h and ctx4h and dir4h == -1)

// --- Signal Logic ---

var float[] f_top = array.new_float()

var float[] f_bot = array.new_float()

var bool[] f_bul = array.new_bool()

var int[] f_sta = array.new_int()

var int[] f_idx = array.new_int()

var trade_boxes_tp = array.new_box()

var trade_boxes_sl = array.new_box()

var trade_lines_ep = array.new_line()

var trade_lines_sl = array.new_line()

var trade_lines_tp = array.new_line()

var trade_times = array.new_int()

```

// Reset the trigger each bar

global_alert_triggered := false


if timeframe.isintraday and timeframe.multiplier == 5

    if low > high[2]

        array.push(f_top, low), array.push(f_bot, high[2]), array.push(f_bul, true),
array.push(f_sta, 0), array.push(f_idx, bar_index)

    if high < low[2]

        array.push(f_top, low[2]), array.push(f_bot, high), array.push(f_bul, false),
array.push(f_sta, 0), array.push(f_idx, bar_index)


int i = array.size(f_top) - 1

while i >= 0

    float ft = array.get(f_top, i), fb = array.get(f_bot, i), fl = array.get(f_bul, i), fs =
array.get(f_sta, i), fc = array.get(f_idx, i)

    if (fl and low < fb) or (not fl and high > ft)

        array.remove(f_top, i), array.remove(f_bot, i), array.remove(f_bul, i),
array.remove(f_idx, i), array.remove(f_sta, i)

        i := i - 1

        continue

    if fs == 0 and bar_index > fc and ((fl and low <= ft) or (not fl and high >= fb))

        array.set(f_sta, i, 1)

    if fs == 1 and bar_index > fc

        bool breakout = fl ? close > ft : close < fb

        bool bias    = fl ? htf_bull : htf_bear

        bool liq     = fl ? touched_low : touched_high

```

```

if breakout and bias and liq

    float ep = close, sl = fl ? fb : ft, risk = math.abs(ep - sl), tp = fl ? ep + risk * 2 : ep - risk
* 2

    if fl

        tp := pdh > ep and tp > pdh ? pdh : (pwh > ep and tp > pwh ? pwh : tp)

    else

        tp := pdl < ep and tp < pdl ? pdl : (pwl < ep and tp < pwl ? pwl : tp)

    bool is_flow = fl ? (close < lastLowLiq) : (close > lastHighLiq)

    bool is_sweep = fl ? (close > lastLowLiq) : (close < lastHighLiq)

    label.new(bar_index, fl ? low : high, fl ? "L" : "S", style = fl ? label.style_label_up :
label.style_label_down, color = fl ? COLOR_BULL : COLOR_BEAR, textcolor = color.white,
size = size.small)

    if is_flow or is_sweep

        label.new(bar_index, fl ? low : high, fl ? "▲" : "▼", style = label.style_label_center,
color = #00000000, textcolor = COLOR_FLOW, size = size.large, yloc = fl ? yloc.belowbar :
yloc.abovebar)

    array.push(trade_boxes_tp, box.new(bar_index, fl ? tp : ep, bar_index + line_len, fl ?
ep : tp, bgcolor = color.new(COLOR_BULL, 85), border_color = color.new(COLOR_BULL,
100)))

    array.push(trade_boxes_sl, box.new(bar_index, fl ? ep : sl, bar_index + line_len, fl ?
sl : ep, bgcolor = color.new(COLOR_BEAR, 85), border_color = color.new(COLOR_BEAR,
100)))

    array.push(trade_lines_ep, line.new(bar_index, ep, bar_index + line_len, ep, color =
COLOR_ENTRY, style = line.style_dotted, width = 2))

```

```

        array.push(trade_lines_sl, line.new(bar_index, sl, bar_index + line_len, sl, color =
COLOR_BEAR, style = line.style_dotted, width = 2))

        array.push(trade_lines_tp, line.new(bar_index, tp, bar_index + line_len, tp, color =
COLOR_BULL, style = line.style_dotted, width = 2))

        array.push(trade_times, time)

global_alert_triggered := true

alert("Footprints - Flow/Sweep ready on " + syminfo.ticker, alert.freq_once_per_bar)

array.remove(f_top, i), array.remove(f_bot, i), array.remove(f_bul, i),
array.remove(f_idx, i), array.remove(f_sta, i)

i := i - 1

int k = array.size(trade_times) - 1

while k >= 0

    if (time - array.get(trade_times, k)) > (lookback_hrs * 3600000)

        box.delete(array.remove(trade_boxes_tp, k)),
box.delete(array.remove(trade_boxes_sl, k))

        line.delete(array.remove(trade_lines_ep, k)), line.delete(array.remove(trade_lines_sl,
k)), line.delete(array.remove(trade_lines_tp, k))

        array.remove(trade_times, k)

        k := k - 1

// --- Visuals ---

plot(show_levels ? asiaH : na, "Asia H", color.new(#00bcd4, 50), style = plot.style_linebr)
plot(show_levels ? asiaL : na, "Asia L", color.new(#00bcd4, 50), style = plot.style_linebr)
plot(show_levels ? lonH : na, "London H", color.new(#ffeb3b, 50), style = plot.style_linebr)
plot(show_levels ? lonL : na, "London L", color.new(#ffeb3b, 50), style = plot.style_linebr)

```

```
plot(show_levels ? orH : na, "OR High", color.new(color.purple, 50), style =  
plot.style_linebr)
```

```
plot(show_levels ? orL : na, "OR Low", color.new(color.purple, 50), style = plot.style_linebr)
```