

Trailing Stop Expert Advisor v1.0

I need a simple EA that will trail stops based on simple rules.

EA Name: Thrust Trail

Requirements

- 1) Needs to evaluate 'Fixed Timeframe' when it closes and see if there are open orders and check the criteria for a move of the stop loss order.
- 2) There could be multiple positions in both directions (Long and Short) and the 'Thrust Trail' EA needs to apply the rules to each open order individually.
- 3) When the 'Thrust Trail' EA is running it CANNOT be affected by changing chart timeframes in MT4 i.e. if 'Fixed Timeframe' is set to H4, when I change to H1 or M5 for example it is not assessing the new timeframe candle.
- 4) If an order is opened and has comments or magic number attached the 'Thrust Trail' EA will manage the order regardless. Example, if an order is created using another EA 'x', and I remove EA 'x' after position opened, then run 'Thrust Trail' EA it will manage the open order regardless of how the order was placed.
- 5) Needs to work on markets XAUUSD, S&P500, WTI etc so pips, points or tick to be interchangeable depending on the instrument.
- 6) Generate a debug .txt file to be save in the MT4 files folder showing the success or failure of the calculation steps.
- 7) Generate a screenshot after the SL is moved showing the basic calculation information
- 8) The EA will be left on the chart and will run regardless of orders, so only needs to perform calculation if open orders are present.

EA Settings

FixedTimeframe	H4 [Default]	(Dropdown options D1, H4, H1, M30, M15, M5, M1)
ThrustLookback	1 [Default]	(value between 0-100)
ThrustClose%	66 [Default]	(value between 0-100)
ATRperiod	20 [Default]	(value between <=1)
ThrustSizeMin	0.1& [Default]	(a number only means pips BUT if '&' used after it refers to % ATR Period)
SLlocation	3 [Default]	(value between 0-100)
Create Debug file	True [Default]	(True/False)
Create Screenshot	True [Default]	(True/False)

Description

FixedTimeframe	This is the timeframe where decisions are made by the EA. This timeframe is fixed in so far as it is unaffected by changing timeframes on the MT4 chart. Rules are assessed at the CLOSE of this timeframe (or, on the open of the next candle)
ThrustLookback	This is used to reference which previous High or Low needs to be closed past for the 'Thrust Close %' calculation. For a Buy order it must close above the HIGHEST 'ThrustLookback' candles High, for a Sell order it must close below the LOWEST 'ThrustLookback' candles Low. The number in settings refers to the number of candles PRIOR to the current closed candle being assessed on the 'FixedTimeframe'. If set to '1' it is looking at the last 1 candle before that etc.
ThrustClose%	This is used to determine the minimum close percentage of the candle (for Buy order must close in top 'x%' of candle, if Sell order must close in lower 'x%' of candle)
ATRperiod	This is the lookback period for the Daily Average True Range
ThrustSizeMin	This is used to calculate the minimum range of the candle being assessed. If too small, it is ignored and SL remains in previous position. Where '&' is called it means % of 'ATRperiod' e.g. 0.2& means 20% of ATRperiod. If '&' not present it simply means 'pips'.
SLlocation	This is used to determine how many pips above the high or below the low of the 'FixedTimeframe' the Stop loss is moved to when it needs to move.

Rules for BUY orders

For the 'Thrust Trail' EA to move a stop UP for an open BUY order it performs the following calculations:

- 1) Calculations begin on the close of the 'FixedTimeframe' (actually the Open of the next candle called Candle 0 for clarity)
- 2) Is the 'FixedTimeframe' candle \geq 'ThrustSizeMin' if so next
- 3) Has 'FixedTimeframe' candle closed \geq 'ThrustClose%' if so next
- 4) Has 'FixedTimeframe' candle closed \geq 'ThrustLookback' if so next
- 5) If steps 2,3 & 4 are valid then
- 6) Move the Stop Loss to the Low of 'Candle 1' – 'SLlocation'

Note:

The SL can NEVER move Lower, this is unlikely BUT could happen if a large range outside bar occurs so please add this final check before Step 6.

Rules for SELL orders

For the 'Thrust Trail' EA to move a stop DOWN for an open SELL order it performs the following calculations:

- 1) Calculations begin on the close of the 'FixedTimeframe' (actually the Open of the next candle called Candle 0 for clarity)
- 2) Is the 'FixedTimeframe' candle \geq 'ThrustSizeMin' if so next
- 3) Has 'FixedTimeframe' candle closed \leq 'ThrustClose%' if so next
- 4) Has 'FixedTimeframe' candle closed \leq 'ThrustLookback' if so next
- 5) If steps 2,3 & 4 are valid then
- 6) Move the Stop Loss to the High of 'Candle 1' + 'SLlocation'

Note:

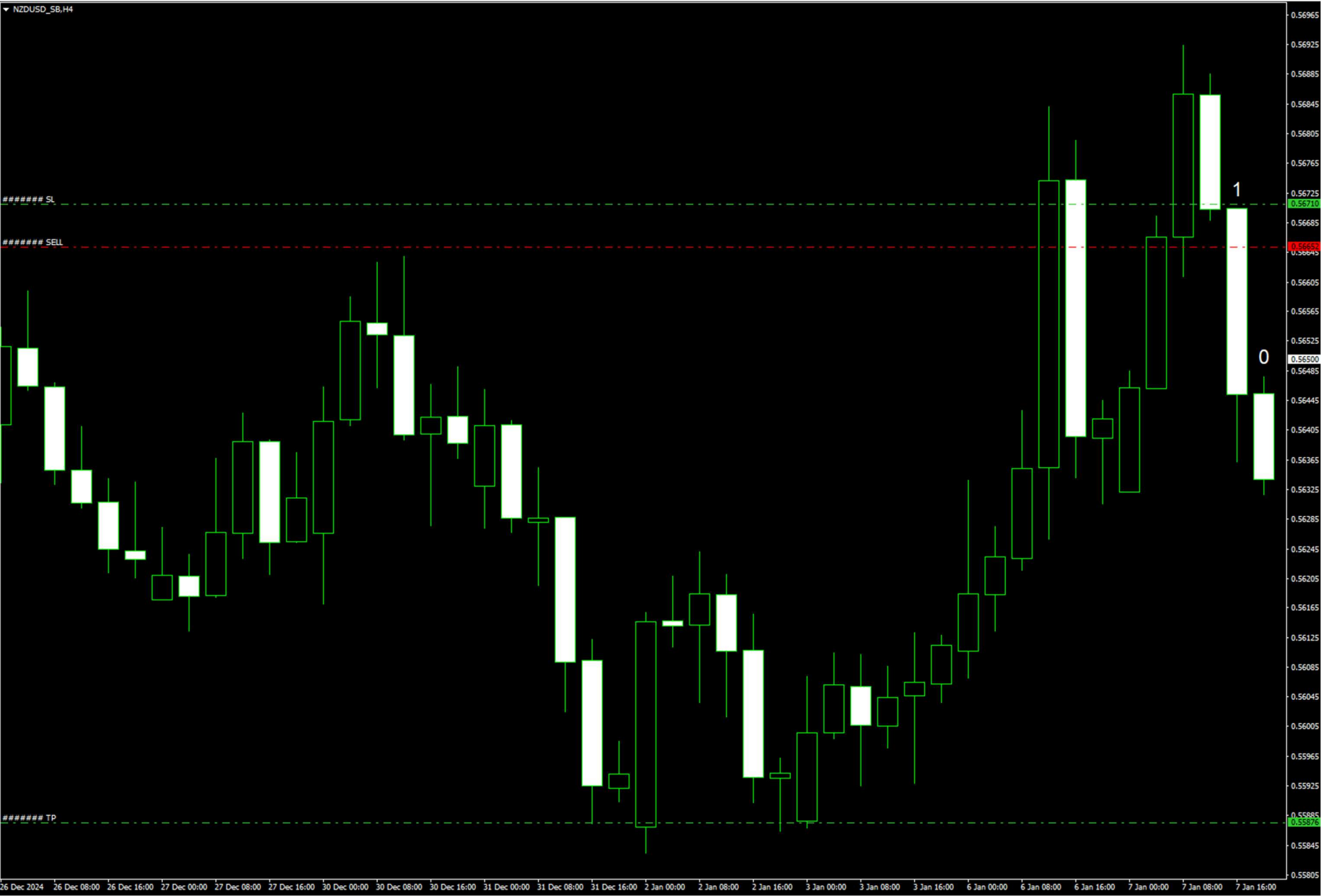
- a) The SL can NEVER move Higher, this is unlikely BUT could happen if a large range outside bar occurs so please add this final check before executing Step 6.
- b) The EA is always assessing the most recent closed bar 'FixedTimeframe' for moving the Stop Loss around.

Example for SELL order

Assume I opened a SELL and have a SL and TP as shown during the current candle. Candle #'s below are for explanation only and DO NOT relate to 'ThrustLookback' in the settings of the EA. Example below is for H4 timeframe (the EA must update after every H4 bar and grab the latest OHLC for calcs). This information should also be posted to the Debug file for visual assessment if needed.



Now on the open of Candle 0 the EA performs **SUCCESSFUL** calculations against Candle 1 and now trails the SL down to above Candle 1 as below:



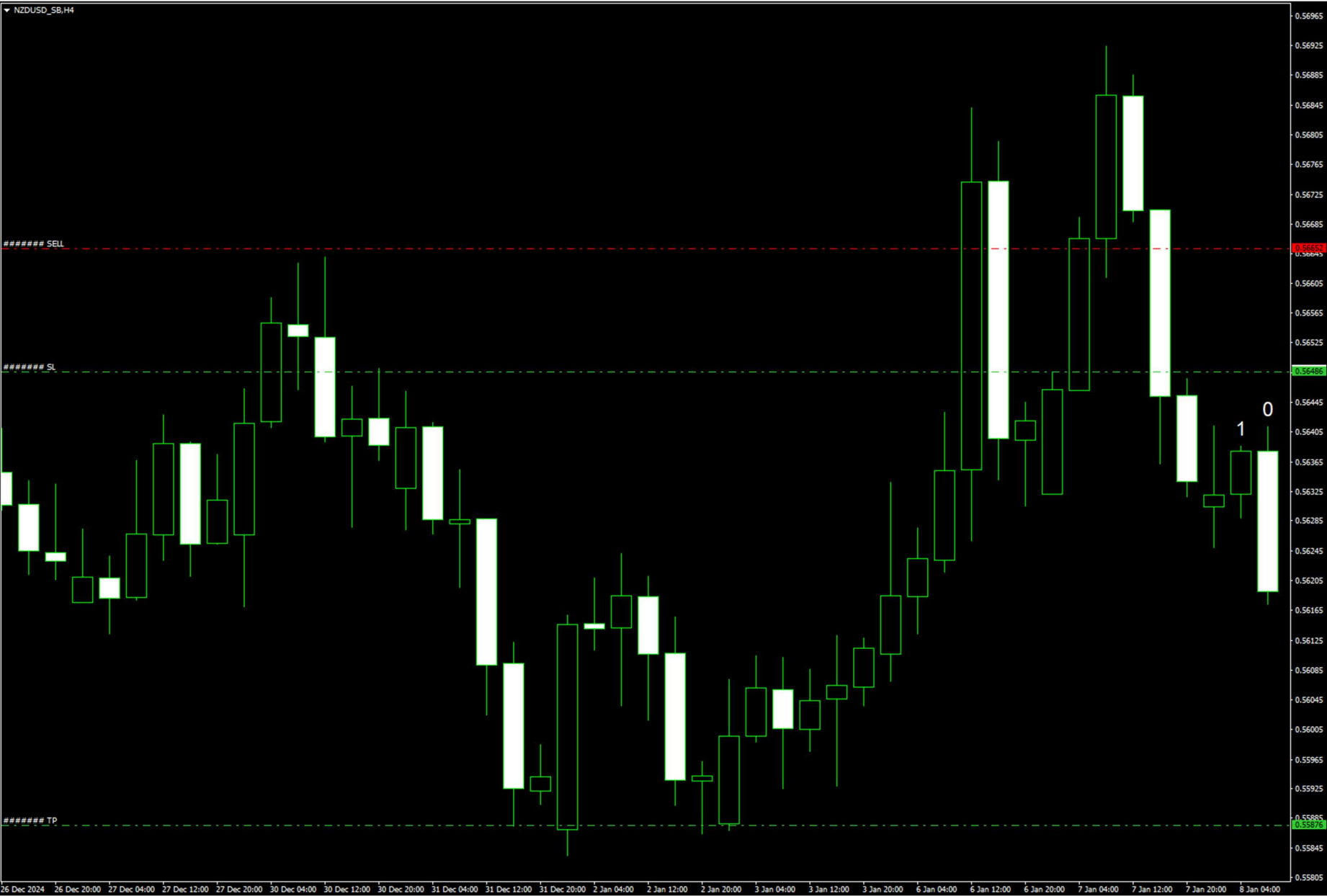
Now on the open of Candle 0 the EA performs **SUCCESSFUL** calculations against Candle 1 and now trails the SL down to above Candle 1 as below:



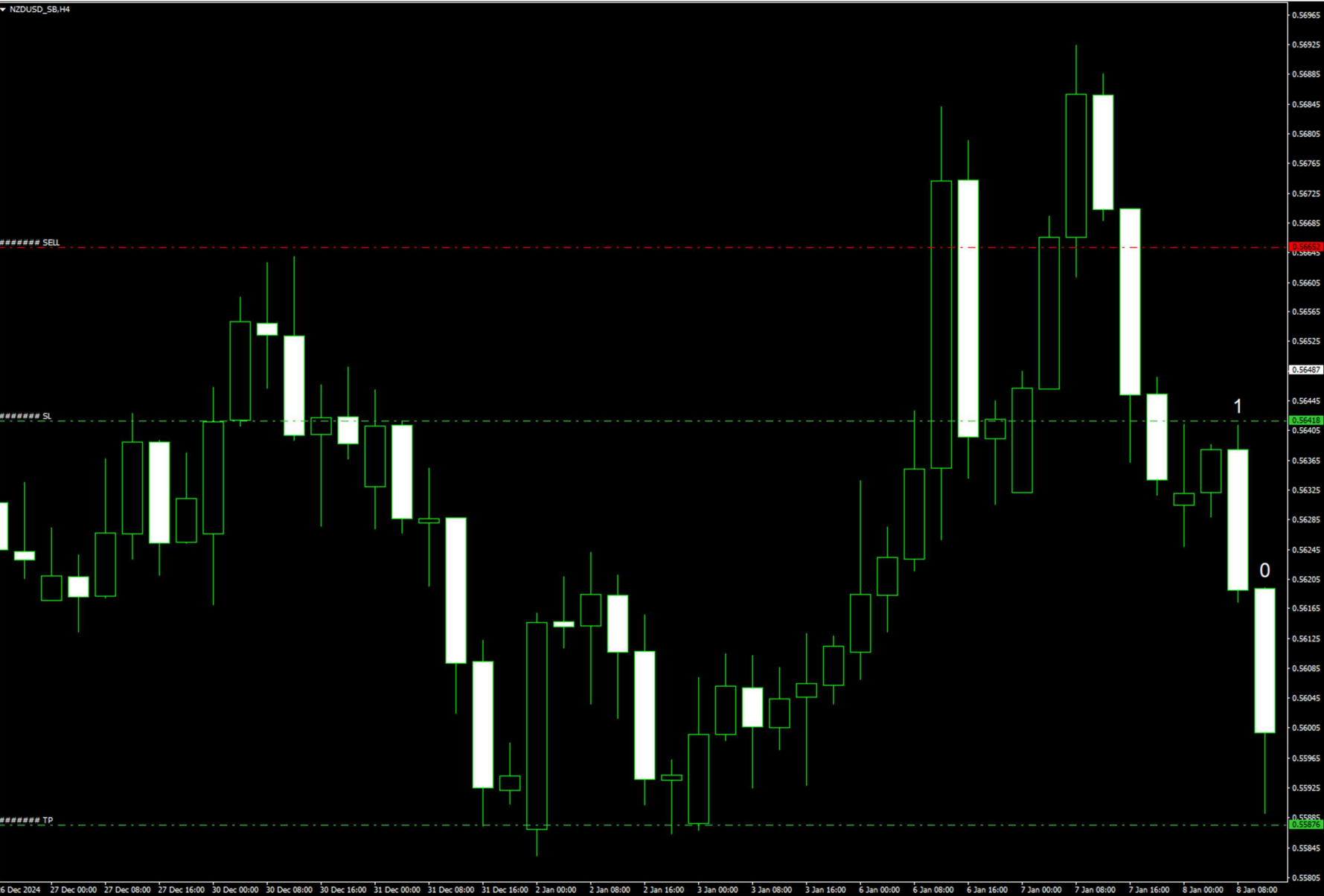
Now on the open of Candle 0 the EA performs **UNSUCCESSFUL** calculations against Candle 1 (due to 'ThrustLookback') so leaves the SL alone:



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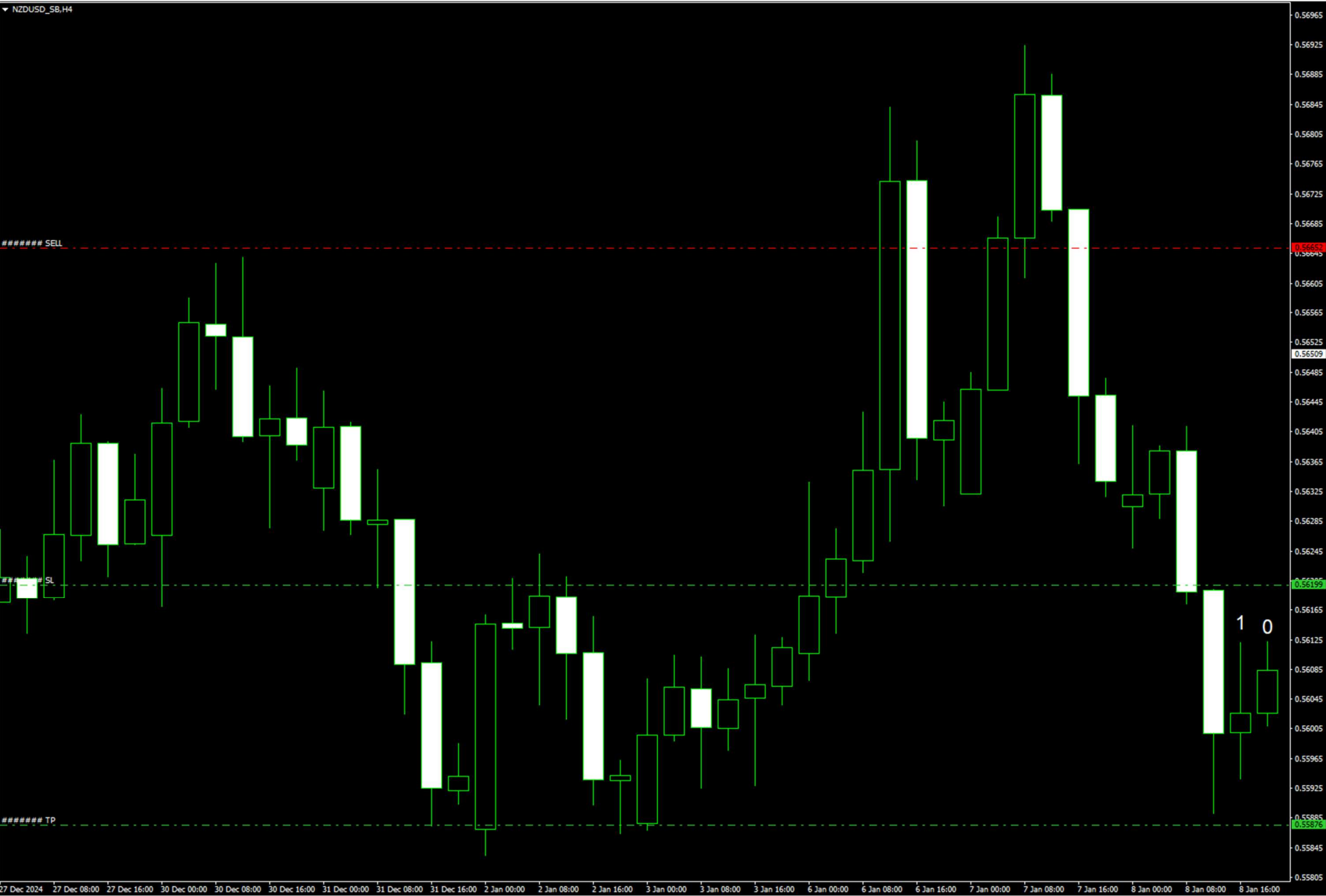
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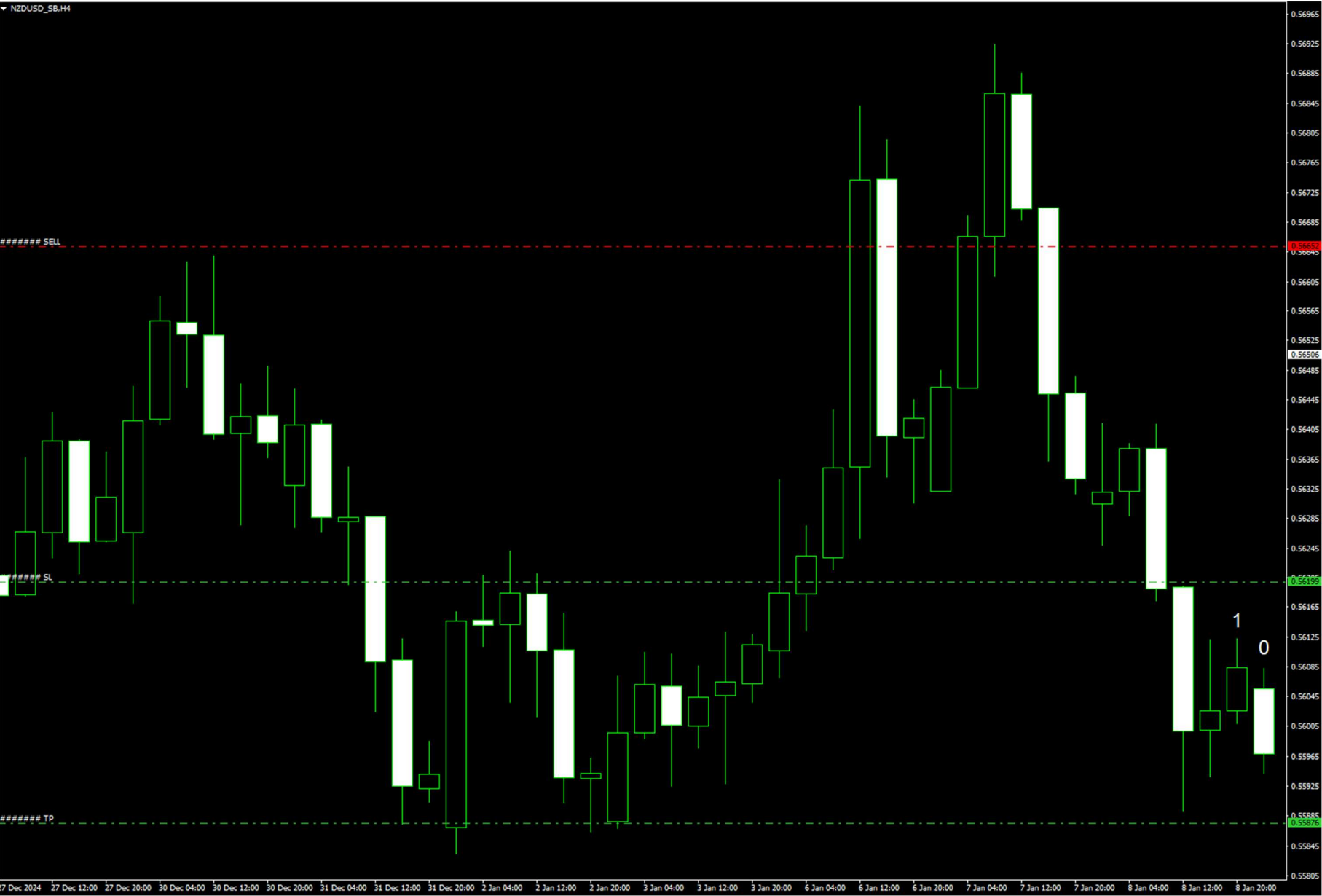
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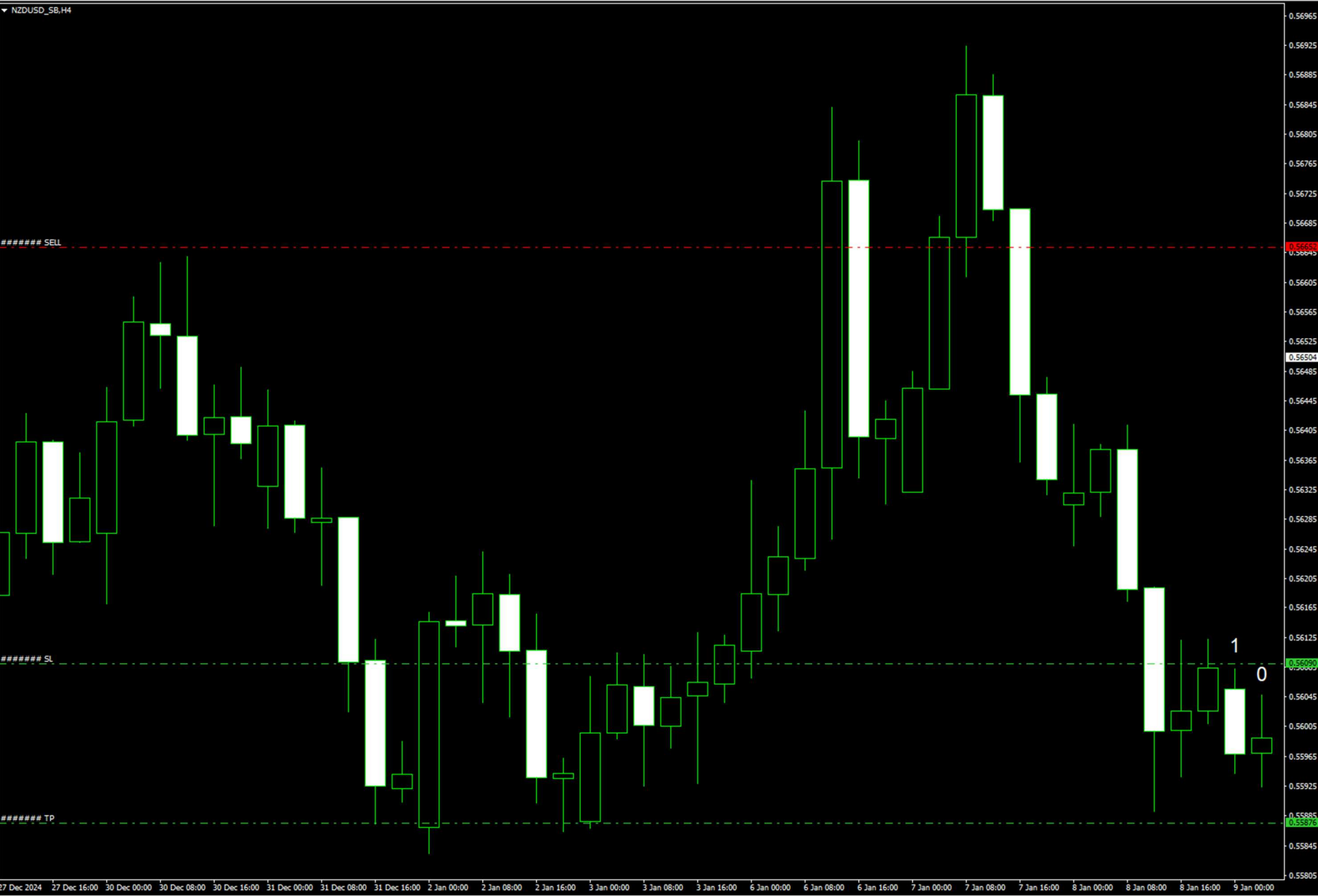
Now on the open of Candle 0 the EA performs **UNSUCCESSFUL** calculations against Candle 1 (due to 'ThrustLookback') so leaves the SL alone:



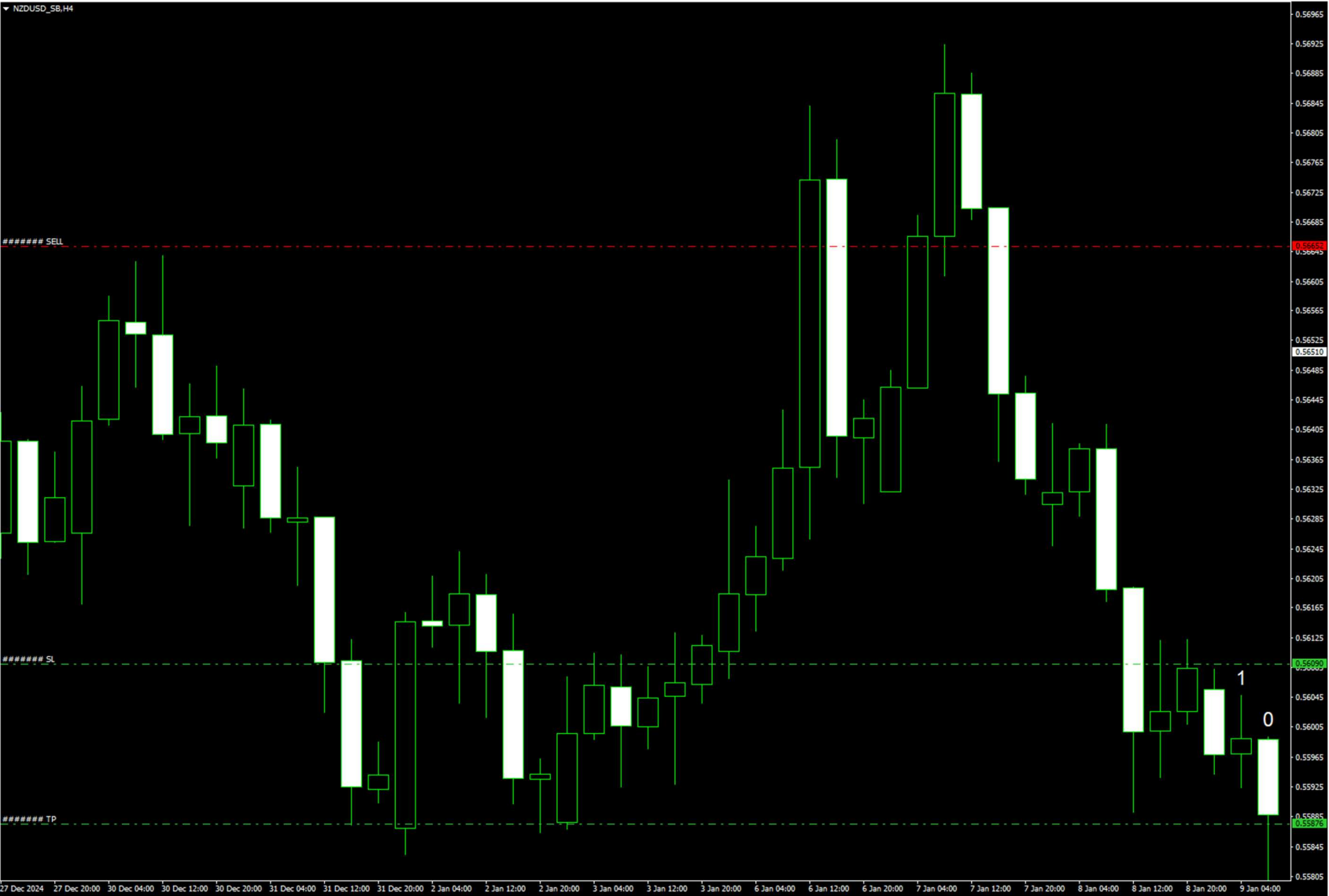
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During Candle 0 the TP is hit so the EA has no more orders to assess. Position is closed with the SL in the last position shown.

Debug File & Screenshot Outputs

For the exporting of both the Debug File and Screenshots I would like to see the follow basic info:

- Candle Date & Time
 - 'FixedTimeframe' Candle - Open, High, Low, Close
 - 'ThrustLookBack' used and calculated
 - 'ThrustClose%' used and calculated
 - 'ATRperiod' used and calculated
 - 'ThrustSizeMin' used and calculated
 - 'SLlocation' used and calculated
 - The final Stop Loss location
- 1) For the .txt file it can be a single .txt file that gets added to after each calculation is made
 - 2) The above info can be added to the top left of the Screenshot for reference also
 - 3) The screenshot should also show the whole chart with info on the 'FixedTimeframe' Timeframe ideally.

When info is posted to the screenshot it should look a bit like below:

