

Requirements Specifications for EA + Indicator – Secrets of a Pivot Boss

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I. Trading Idea

Then intent of this project would be to automatize the concepts explained and described in the book **Secrets of a Pivot Boss** from *Franklin O. Ochoa, Jr* (and more). 4 main outcomes are expected:

- 1) A Roadmap or also called Flight Plan, which would give the Trader information related to the directional bias of the market. The roadmap is to be displayed as a Table in a separate Window and needs to cover 3 different Time Frames : daily, weekly and Monthly. The outcome/advice of this roadmap rely mainly on the 2 days/weeks/months correlations of Technical Indicators such as CPR, Camarilla Equation and Money Zone (in price and volume).
- 2) A set of indicators automatically displayed on the Graph of selected instrument: Pivot Points (standard and Camarilla), Money Zone, CPR, Reversal Patterns, Golden Pivot Points, Multi Time Frame Hot Zones and Dual Pivots (as defined in the book **Secrets of a Pivot Boss**).
- 3) A Ranging/Trending analysis displayed in a separate Window. It needs to provide a summary of several technical indicators conclusions on several time frames : short/medium/long terms. The indicators used are ADX, DMI lines and the 3 Alligator lines as defined by *Bill Williams*.
- 4) An EA, that follows the conclusions of the strategy inherited from the 3 points above. Typically the EA needs to understand first if the market is moving in a range or in a trend (based on 3)), then to integrate the daily bias (based on 1)) and time Entry/Exit points as per the Resistance/Support levels and Reversal patterns (based on 2)).

This could be treated as several projects, and I have no issue with that, however it is important to me that the same Developer codes the entire solution described above. Indeed all points are correlated. I am happy to discuss the split in several projects (if it helps), price and timing. I rather value the quality and support than the fast execution.

In the subsequent sections I am detailing each point.

II. The Roadmap or Flight Plan

i. Layout

This roadmap needs to be displayed in a separate Window and contain 3 tabs:

- Day
- Week
- Month

Top left corner must contain the name of the Instrument and the time frame. So, in the tab “Day”, must appear the current date (example “02/10/2023”); in the tab “Week” must appear the current week (example associated “Week 40”), in the tab “Month” must appear the current month (example associated “October 2023”). This means that the tabs are refreshed/recalculated as per below:

- “Day” is refreshed every day at the beginning of the trading session (display of the first candle)
- “Week” is refreshed every Monday at the beginning of the trading session (display of the first tick)
- “Month” is refreshed every first trading day of the Month at the beginning of the trading session (display of the first tick)

The top center must contain the Summary of the Roadmap as:

- Money Zone Summary: “...”
- CPR Summary: “...”
- Camarilla Summary: “...”

The main table below should look like this: (this is the view for “Day”, but same logic can be applied for “Week” and “Month”)

Date : 01/09/2023 Instrument : CAC40 Futures	Parameter	Value	Expected Bias	Comments
Money Zone	Previous Day Closure in relationship with MZ	Below VAL		
	2 days relationship Money Zone	Overlapping Lower Value	Moderately Bearish	Can happen at the beginning/middle/end of a downtrendCan suggest a change of trend
	Money Zone Width	Wide	Typical / Trading Range / Sideways day	
	Virgin POC			
	# days back for virgin POC			
	Opening in relationship with MZ	Below VAL	Acceptance	
	Any MZ Trend ?	None	No trend	
CPR	MZ Summary		Daily Bias : Moderately Bearish Acceptance ; Expected day : Typical / Trading Range / Sideways day ; Strategy : No trend	
	Previous Day Closure in relationship with CPR	Below BC		
	2 days relationship CPR	Lower Value	Bearish	0
	CPR Width	0.2<=0.5	Possible trending	
	Opening in relationship with CPR	Above the BC	Acceptance	
	Any CPR Trend ?	None	No trend	
	CPR Summary		Daily Bias : Bearish Acceptance ; Expected day : Possible trending ; Strategy : No trend	
Camarilla	Previous Day Closure in relationship with Camarilla	Below L3		
	2 days relationship R3/S3 Camarilla	Overlapping Lower Value	Moderately Bearish	Can happen at the beginning/middle/end of a downtrendCan suggest a change of trend
	R3/S3 Camarilla Width	Wide	Typical / Trading Range / Sideways day	
	Opening in relationship with R3/S3 Camarilla	Above L3	Acceptance	
	Any Camarilla Trend ?	None	No trend	
	Camarilla Summary		Daily Bias : Moderately Bearish Acceptance ; Expected day : Typical / Trading Range / Sideways day ; Strategy : No trend	
	Any DP2 ?	1	DPOC=DR1	Target at 7384 ?
Hot Zones	Any GP2 ?	1	DTC=DH3=DVAL	Strong resistance at 7354 - wait for reversal ?
	Any MT2 ?	1	WR1=DP	Pivot at 7345 ?
	Hot Zones Summary			
Price Range	Opening in Relationship to Previous Day Range	Inside Range		

ii. Definitions of the columns

The first columns is only an indication of the group of indicator in use, namely:

- The Money Zone
- The CPR
- The Camarilla Equation
- The Hot Zones (also known as Multiple Time Frame zones)
- The price range (of previous period)

For each group a set of parameters needs to be analyzed. This is the second column: (replace “period” by Day/Week/Month and “Group” by Money Zone, CPR, Camarilla Equation)

- Previous “Period” Closure in relationship to “Group”
- 2 “periods” relationship “Group”
- “Group” width
- Opening in relationship with “Group”
- Any “Group” Trend?
- Opening in relationship with previous “Period” Range

Each of these parameters are defined in Appendix 1.1

For each Group/Parameter a **value** needs to be identified from the Instrument graph and be displayed in the third column “Value”. These values are defined in *Appendix 1.2*.



Example for 2 days CPR relationship

In this example, the blue lines represent the CPR for a given day. Looking at the day 29th of October 2023, the 2 days CPR relationship is “Higher value” since the 3 lines on the day 29th are all above the 3 lines of the day 28th.

Finally depending on the combinations of these values the **columns “Expected Bias” and “Comments”** are populated. The Matrixes associated are defined in *Appendix 1.3*.

III. Set of Indicators

The set of Indicators needs to have several functionalities:

- Possibility to **select which Indicator to display** on the graph
- Possibility to **select the time frame** (daily/weekly/monthly)
- For each indicator, **possibility to select an “automatic display” button** → the aim is to display only the levels of each indicator that seems reasonable for the trading day (so relatively close to the price – specific example given below)
- **Automatic display of the Hot Zones and Multi time frame Hot Zones**

i. Standard Pivot points or Floor pivots

Each indicator is described in Appendix 1 – Set of parameters

As well, these are very classic technical indicators and commonly adopted.

ii. Camarilla Pivot points

Each indicator is described in Appendix 1 – Set of parameters

As well, these are very classic technical indicators and commonly adopted.

iii. CPR

Each indicator is described in Appendix 1 – Set of parameters

As well, these are very classic technical indicators and commonly adopted.

iv. Money Zone or Market profile

Each indicator is described in Appendix 1 – Set of parameters

As well, these are very classic technical indicators and commonly adopted.

v. Reversal patterns

These reversal patterns are candlestick formations. The ones selected are the ones explained in the Book **Secret of Pivot Boss**, for which the code is provided in Appendix 2.

I am also providing the open source coming from Trading View Platform.

vi. Hot Zones and automatic display

Automatic display button for each indicator

Most of the time it is not necessary to display all the levels of the Pivots as they might be too far from the price level and though never reached during the trading day. Therefore, it is required to get this functionality that will automatically filter the right levels to display. I have no preference on the logic of filtering: it can be based on price levels, based on previous day range, based on % of total price variation. We can discuss the details of the logic later. I am displaying a few examples :



In this example R3/R2 and market profile are “too far away” from price level. Their display only disrupts the reading of the candles as the scale is too big...

From the same graph, the right levels to display should be:



Automatic display button for Hot Zones

The Hot Zones are defined in Appendix 1.

It can be laborious to identify them as it requires to analysis/display the pivot levels from weekly or monthly time frames on top of the daily ones. This is why this functionality is required:

- if a weekly or monthly pivot is close to a daily one, it needs to be displayed: **multi time frame analysis**.
- If several daily pivots are close to each other's they need to be displayed: **dual pivot zone**.
- If any pivot is within CPR, it needs to be displayed: **Golden Pivot zone**.

- Here the S4 level from the Weekly Camarilla equation is close to Daily Standard Pivot S1 → Weekly S4 needs to be added to the daily graph: **multi time frame analysis**
- Daily R3 is within daily CPR → it needs to be display, **this is a Golden Pivot Zone**
- Daily S3 (Camarilla) and Daily S1 (Standard floor pivot) are very close → they need to be display as **this is a Dual Pivot Zone**

IV. Ranging/Trending Analysis

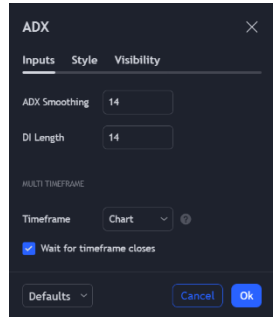
This analysis needs to be performed on a separate Window with 4 different sheets:

- Summary
- Short term
- Mid term
- Long term

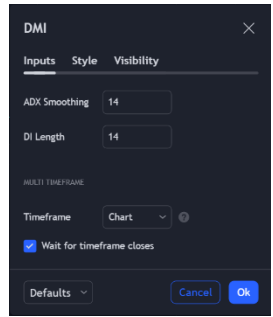
The analysis should conclude on whether the market is **Trending or Ranging**. The 3 indicators are ADX ; DMI lines and Williams Alligator.

i. Indicators settings

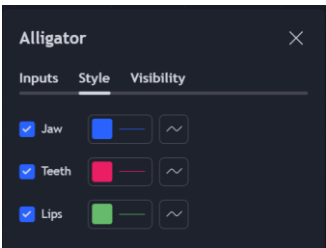
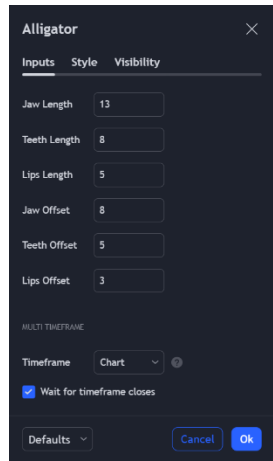
Here are the settings for each indicator: **important to note that each time the time frame is the one of the chart so in our case it can be 15min; 1H or 1D.**



ADX line to be drawn in red



+DI in blue and -DI in orange



	Short term	Mid term	Long term
Period to display (chart)	current day + last 4 trading days	current week + last 5 weeks	current + last 12 months
Time frame (candle)	15min	1h	1d
Type of Analysis	Daily (day trading)	Weekly	Monthly

The table above summarizes the parameters to build the indicators and graphs of the different tabs.

ii. Summary tab

<u>Name of instrument</u>	Short term	Mid term	Long term
Time Frame	15min	1H	1D
Williams Alligator value			
Williams Alligator Analysis			
ADX value			
ADX Analysis			

The rows “Analysis” can take only 1 values : **Trending or Ranging**.

The logic is explained below:

Indicator	Condition 1	Condition 2	Conclusion
Williams Alligator	From higher to lower: Green (lips) Red (teeth) Blue (jaw)	The sequence is respected for the past 4 periods	Trending
	From higher to lower: Blue (jaw) Red (teeth) Green (lips)	The sequence is respected for the past 4 periods	Trending
	From higher to lower: Green (lips) Red (teeth) Blue (jaw)	The sequence is respected for LESS than the past 4 periods	START Trending
	From higher to lower: Blue (jaw) Red (teeth) Green (lips)	The sequence is respected for LESS than the past 4 periods	START Trending
	ANY other conditions		Ranging
ADX	Value is increasing for the past 4 periods		Trending
	Value is decreasing for the past 4 periods		Ranging

iii. Short/Mid/Long term tabs



Short term Tab – day trading – 15min – 5 days displayed



Mid term Tab – 1H – 5 weeks displayed



Long term Tab – 1D – 12 months displayed

V. EA – Secret of Pivot Boss

i. Step 1: Identify Initial Conditions

In this initial step, the robot is calculating the initial set up for the day by giving the values to the following 3 variables:

- Direction
- Confirmation
- Trend-Range

The values that each variable can take are listed in the table below:

<u>Direction</u>	<u>Confirmation</u>	<u>Trend-Range</u>
Bullish	Acceptance	Trending - High probability
Bearish	Rejection	Trending - Medium probability
		Trending - Low probability
		Ranging - Low probability
		Ranging - Medium probability
		Ranging - High probability

→ This gives a total of 24 different scenarios, by combining the values of these 3 variables. For example, 1 trading day can be identified as “Bearish, Acceptance, Ranging – Low probability”.

These initial conditions are calculating as of the 1st second/1st tick of the trading day.

How to calculate the value of the variable Direction?

The value for the variable Direction is calculated based on a score:

If variable Direction has score > 0 THEN "Bullish"

If variable Direction has score < 0 THEN "Bearish"

This score is itself the SUM of 3 sub-variables that can take the following points:

Family of Variable	Type of Indicator	Parameter	Value	Points
Direction	MZ	2 days relationship	Bullish	3
Direction	MZ	2 days relationship	Moderately Bullish	2
Direction	MZ	2 days relationship	Bearish	-3
Direction	MZ	2 days relationship	Moderately Bearish	-2
Direction	CPR	2 days relationship	Bullish	3
Direction	CPR	2 days relationship	Moderately Bullish	2
Direction	CPR	2 days relationship	Bearish	-3
Direction	CPR	2 days relationship	Moderately Bearish	-2
Direction	Camarilla	2 days relationship	Bullish	3
Direction	Camarilla	2 days relationship	Moderately Bullish	2
Direction	Camarilla	2 days relationship	Bearish	-3
Direction	Camarilla	2 days relationship	Moderately Bearish	-2

MZ (or Money Zone), CPR and Camarilla are the indicators defined in the Parts “II Roadmap” and “III Set of Indicators”.

Let’s take the example when for a trading day our Roadmap or Flight Plan identified that:

- the 2 days relationship of MZ is Moderately Bullish
- the 2 days relationship of CPR is Bullish
- the 2 days relationship of Camarilla is Bearish

Then the score will be the sum of the points given to each sub-variable which is:

$$\text{Score} = 2 + 3 - 3 = 2$$

Therefore, the variable Direction is taking the value “Bullish” to respect the rule:

If variable Direction has score > 0 THEN "Bullish"

How to calculate the value of the variable Confirmation?

The value for the variable Confirmation is calculated based on a score:

If variable Confirmation has score >= 0 THEN "Acceptance"

If variable Confirmation has score < 0 THEN "Rejection"

This score is itself the SUM of 3 sub-variables that can take the following points:

Family of Variable	Type of Indicator	Parameter	Value	Points
Confirmation	MZ	Opening	Acceptance	1
Confirmation	MZ	Opening	Rejection	-1
Confirmation	CPR	Opening	Acceptance	1
Confirmation	CPR	Opening	Rejection	-1
Confirmation	Camarilla	Opening	Acceptance	1
Confirmation	Camarilla	Opening	Rejection	-1

MZ (or Money Zone), CPR and Camarilla are the indicators defined in the Parts “II Roadmap” and “III Set of Indicators”.

Let’s take the example when for a trading day our Roadmap or Flight Plan identified that:

- The Opening of MZ accepts the initial bias (Acceptance)
- The Opening of CPR accepts the initial bias (Acceptance)
- The Opening of Camarilla rejects the initial bias (Rejection)

Then the score will be the sum of the points given to each sub-variable which is:

$$\text{Score} = 1 + 1 - 1 = 1$$

Therefore, the variable Confirmation is taking the value “Acceptance” to respect the rule:

If variable Confirmation has value >= 0 THEN "Acceptance"

How to calculate the value of the variable Trend-Range?

The value for the variable Trend-Range is calculated based on a score:

If variable Trend-Range has score >= 15 THEN "Trending - High probability"

If variable Trend-Range has 6 <= score <= 14 THEN "Trending - Medium probability"

If variable Trend-Range has 0 <= score <= 5 THEN "Trending - Low probability"

If variable Trend-Range has -5 <= score <= -1 THEN "Ranging - Low probability"

If variable Trend-Range has -14 <= score <= -6 THEN "Ranging - Medium probability"

If variable Trend-Range has -22 <= score <= -15 THEN "Ranging - High probability"

This score is itself the SUM of 5 sub-variables that can take the following points:

Family of Variable	Type of Indicator	Parameter	Value	Points
Trend-Range	MZ	2 days relationship	Sideways/Breakout	1
Trend-Range	MZ	2 days relationship	Sideways	-3
Trend-Range	MZ	2 days relationship	Breakout	3
Trend-Range	CPR	2 days relationship	Sideways/Breakout	1
Trend-Range	CPR	2 days relationship	Sideways	-3
Trend-Range	CPR	2 days relationship	Breakout	3
Trend-Range	Camarilla	2 days relationship	Sideways/Breakout	1
Trend-Range	Camarilla	2 days relationship	Sideways	-3
Trend-Range	Camarilla	2 days relationship	Breakout	3

Trend-Range	MZ	Width	Typical / Trading Range / Sideways day	-2
Trend-Range	MZ	Width	Trend / Double distribution Trend / Expanded Typical Day	2
Trend-Range	CPR	Width	Strong trending	3
Trend-Range	CPR	Width	Possible trending	2
Trend-Range	CPR	Width	Possible ranging	-2
Trend-Range	CPR	Width	Strong ranging	-3
Trend-Range	Camarilla	Width	Typical / Trading Range / Sideways day	-2
Trend-Range	Camarilla	Width	Trend / Double distribution Trend / Expanded Typical Day	2
Trend-Range	Williams	Analysis	Trending	3
Trend-Range	Williams	Analysis	Start Trending	1
Trend-Range	Williams	Analysis	Ranging	-3
Trend-Range	ADX	Analysis	Trending	3
Trend-Range	ADX	Analysis	Start Trending	1
Trend-Range	ADX	Analysis	Ranging	-3

MZ (or Money Zone), CPR and Camarilla are the indicators defined in the Parts “II Roadmap” and “III Set of Indicators”, while Williams and ADX are the indicators defined in the Part “IV Ranging/Trending Analysis”.

Let’s take the example when for a trading day our Flight Plan and Ranging/Trending analysis identified that:

- The 2 days relations of MZ shows a Breakout.
- The 2 days relations of CPR shows a Sideways/Breakout.
- The 2 days relations of Camarilla shows a Breakout.
- The MZ Width shows a Trend / Double distribution Trend / Expanded Typical Day.
- The CPR Width shows a Possible trending.
- The Camarilla Width shows a Trend / Double distribution Trend / Expanded Typical Day.
- The Williams Analysis concludes to a Start Trending
- The ADX Analysis concludes to a Ranging.

Then the score will be the sum of the points given to each sub-variable which is:

$$\text{Score} = 3 + 1 + 3 + 2 + 2 + 2 + 1 - 3 = 11$$

Therefore, the variable Trend-Range is taking the value “Trending - Medium probability” to respect the rule:

If variable Trend-Range has $6 \leq \text{score} \leq 14$ THEN "Trending - Medium probability"

ii. Step 2 – Watch the live market to identify Candlesticks Reversal Patterns and Key Levels on the graph.

Once the initial set up is clear, the robot will scan the market to identify if some Candlestick Reversal Patterns are being formed at some specific Key levels.

In this step the robot is creating new Variables that can take the following values:

<u>Direction of Reversal Pattern</u>	<u>Acceptance of Reversal Pattern Direction?</u>	<u>Reversal Pattern “Close” to Key level ?</u>	<u>Key Level</u>	<u>Acceptance of Key Level?</u>
Bullish	Yes	Yes	R3	Yes
Bearish	No	No	R2	No
			R1	
			TC	
			P	
			BC	
			S1	
			S2	
			S3	

			H5	
			H4	
			H3	
			L3	
			L4	
			L5	
			POC	

Let's take the example when the robot will identify 2 hours after the beginning of the trading session that a **Bearish Reversal pattern** is being formed **close** to the **pivot point TC**. Based on a set of rules the robot will **confirm if the Direction of the reversal pattern AND Key Level are accepted or not**. I will also define what **"Close"** means for the Reversal Pattern towards the Key level.

How to identify the Direction of the Reversal Pattern?

As per the code (Trading View) provided in Appendix 2, the reversal pattern is either Bullish or Bearish. So this part is very immediate and logical.

How to decide if the Direction of the Reversal Pattern is Accepted or Not?

I coded several formulas in Excel language for a better understanding. Basically the Reversal Pattern is accepted if it is in accordance with the Initial Set up.

The Excel formula is:

=IF(AND([@Confirmation]="Acceptance",[@Direction]=[[@Direction of Reversal pattern ?]])=TRUE,"Yes",IF(AND([@Confirmation]="Rejection",[@Direction]<>[[@Direction of Reversal pattern ?]])=TRUE,"Yes","No"))

Let me show the 4 examples:

Initial Conditions		Candlestick conditions - live market					
Direction	Confirmation	Trend-Range	Direction of Reversal pattern ?	Acceptance of Reversal pattern Direction ?	Reversal pattern close to key level ?	Key level ?	Acceptance of key level ?
Bullish	Acceptance	Trending - High probability	Bullish	=IF(AND([@Confirmation]="Acceptance",[@Direction]=[[@Direction of Reversal pattern ?]])=TRUE,"Yes",IF(AND([@Confirmation]="Rejection",[@Direction]<>[[@Direction of Reversal pattern ?]])=TRUE,"Yes","No"))	Yes	R1	Yes
Bullish	Acceptance	Trending - Medium probability	Bearish	No		H5	No
Bullish	Rejection	Trending - High probability	Bearish	Yes	Yes	R1	Yes
Bullish	Rejection	Trending - Medium probability	Bullish	No			#N/A

How are the Key Levels defined?

The Key Levels are all the Pivot points defined in the III Set of Indicators: from point i. *Standard Pivot points or Floor Pivots* until iv. *Money Zone or Market profile*. Please refer to that section and to Appendix 1 – Set of parameters for definition, nomenclature and vocabulary.

Based on which definition shall we consider that the Reversal Pattern is "Close" to a Key Level?

"Close to a Key Level" is defined as:

- The candle is touching the key level itself (the body or the shadow of the candle doing an intersection with the Key level)
- One of the extreme of the candle is separated from the key level by less 25% of the average size of the past 5 candles (including the size of the Reversal pattern).

Let me illustrate with some examples:



“Close ?” = Yes → the shadow of the reversal pattern is even crossing several key levels (TC/P/BC/S3)



For the blue arrow

- “Close?” = **Yes** → the robot calculates the average size of the 5 candles (shadow included) ; takes 25% of this average size and add it to the lowest of the reversal pattern. It would create an intersection with the Pivot P

For the red arrow

- “Close?” = **No** → the robot calculates the average size of the 5 previous candles (shadow included); takes 25% of this average size and add it to the lowest of the reversal pattern (or in that case as well to the highest). It will NOT create an intersection with neither the Pivot P nor the resistance H3.

How to decide if the Key Level is Accepted or Not?

Once the Key Level is identified by the previous step, the robot needs to Accept it or Reject it. (Yes/No). First condition to Accept is to be "Close" from Key Level, if this is not the case, the Key Level is Rejected by default.

Then if the Reversal Pattern is Close to this key level then the Acceptance is defined by the table put in Appendix 3, all possible combinations have been mapped.

I am putting here a screenshot of this table as an example:

Initial Conditions			Candlestick conditions - live market	
Direction ▾	Confirmation ▾	Trend-Range ▾	Key level ? ▾	Acceptance of key level ? ▾
Bullish	Acceptance	Trending - High probability	R3	No
Bullish	Acceptance	Trending - Medium probability	R3	No
Bullish	Acceptance	Trending - Low probability	R3	No
Bullish	Acceptance	Ranging - Low probability	R3	No
Bullish	Acceptance	Ranging - Medium probability	R3	No
Bullish	Acceptance	Ranging - High probability	R3	No
Bullish	Rejection	Trending - High probability	R3	Yes
Bullish	Rejection	Trending - Medium probability	R3	Yes
Bullish	Rejection	Trending - Low probability	R3	Yes
Bullish	Rejection	Ranging - Low probability	R3	Yes
Bullish	Rejection	Ranging - Medium probability	R3	Yes
Bullish	Rejection	Ranging - High probability	R3	Yes
Bearish	Acceptance	Trending - High probability	R3	Yes
Bearish	Acceptance	Trending - Medium probability	R3	Yes
Bearish	Acceptance	Trending - Low probability	R3	Yes
Bearish	Acceptance	Ranging - Low probability	R3	Yes
Bearish	Acceptance	Ranging - Medium probability	R3	Yes
Bearish	Acceptance	Ranging - High probability	R3	Yes
Bearish	Rejection	Trending - High probability	R3	No
Bearish	Rejection	Trending - Medium probability	R3	No
Bearish	Rejection	Trending - Low probability	R3	No
Bearish	Rejection	Ranging - Low probability	R3	No
Bearish	Rejection	Ranging - Medium probability	R3	No
Bearish	Rejection	Ranging - High probability	R3	No
Bullish	Acceptance	Trending - High probability	R2	Yes

iii. Step 3: Decision to enter the Trade

Ultimately if both Reversal Pattern and Key level are accepted, then the robot needs to enter the trade.

In Excel language:

=IF(AND([@[Acceptance of Reversal pattern Direction ?]]= "Yes", [@[Acceptance of key level ?]]= "Yes")=TRUE, "Yes", "No")

D		E		F		G		H		I		J	Param
Conditions		Direction of Reversal pattern ?		Acceptance of Reversal pattern Direction ?		Reversal pattern close to key level ?		Key level ?		Acceptance of key level ?		Decision	Param
1	Trend-Range	Bullish		Yes		Yes		R1		Yes		Enter Trade ?	Ris
2	Trending - High probability	Bearish		No				H5		No		No	Ve
3	Trending - Medium probability			No				TC		Yes		No	M
4	Trending - Low probability			No				R3		No		No	
5	Ranging - Low probability			No						#N/A		#N/A	Ve
6	Ranging - Medium probability			No						#N/A		#N/A	
7	Ranging - High probability			No						#N/A		#N/A	
8	Trending - High probability	Bearish		Yes		Yes		R1		Yes		Yes	

iv. Introduction of the parameter Risk Profile

This parameter needs to be available for the end user to decide between 5 different values of risk. We create a new variable that can take the following values:

Risk level ?
Very Low
Low
Medium
High
Very High

This parameter will influence the decision tree of the robot for the volume when opening trade, and for the placement of the stop loss:

Parameter of Bot	Opening Trade	Stop Loss
Risk level ? ▾	Volume ▾	X % ▾
Very Low	3%	10%
Low	6%	20%
Medium	10%	30%
High	20%	40%
Very High	30%	50%

v. Step 4 – Opening the Trade

In this step the robot is creating new Variables that can take the following values:

<u>Direction of the trade</u>	<u>Volume</u>	<u>Timing</u>	<u>Type of order</u>
Bullish	3%	Opening 1st candle after Reversal Pattern	Market Execution
Bearish	6%		
No Trade	10%		
	20%		
	30%		

Direction of the trade

If Decision to enter the trade, then the trade is opened in the direction of the reversal pattern:

Bullish pattern = buy

Bearish pattern = sell

Excel language:

=IF([@[Enter Trade ?]]="No","No Trade",[@[Direction of Reversal pattern ?]])

Volume

The volume is defined based on the Risk level parameter (see iv. Introduction of the parameter Risk Profile).

The percentage represents the part of total Balance account to utilize.

With a “Low” Risk level, each trade represents 6% of the total account balance.

Timing

Each Trade is ALWAYS opened/placed at the opening of the candle FOLOWING the reversal pattern.



The blue arrow points out the entry of the trade.

Type of order

These orders need to be created immediately after the formation and acceptance of reversal pattern → they cannot be pending orders. They must be executed as “Market Execution”.

vi. Step 5 – Generating the Target Profit and Stop Loss pending orders

Target Profit

The Target Profit is defined by the table put in Appendix 3, all possible combinations have been mapped. A fixed pending order is placed at that level.

Direction of the trade “Target Profit” is defined by below table, depending on the direction of the running trade:

Opening Trade	Target Profit
Direction of the trade	Type of order Targeted Profit
No Trade	No Trade
Bullish	Sell Limit
Bearish	Buy Limit

Each time, the Target Profit trade, should close ENTIRELY the position.

Stop Loss

At the same time, EA generates the fixed Target Profit, a fixed Stop Loss is also created.

The fixed Stop Loss is placed (below or above) the Candle of the reversal Pattern.

Opening Trade	Target Profit	Stop Loss	
Direction of the trade	Type of order Targeted Profit	Timing/Level Stop Loss	Type of order Stop Loss
No Trade	No Trade	No Trade	No Trade
Bullish	Sell Limit	X% LOWER than the lowest point of the Reversal pattern candle*	Sell Stop
Bearish	Buy Limit	X% HIGHER than the lowest point of the Reversal pattern candle*	Buy Stop

The distance between Stop Loss and Extremity of the Candle of the reversal pattern is defined by the variable X% which itself is linked to the risk profile. The values that X% can take are described below:

Parameter of Bot	Opening Trade	Stop Loss
Risk level ?	Volume	X %
Very Low	3%	10%
Low	6%	20%
Medium	10%	30%
High	20%	40%
Very High	30%	50%

vii. Step 6 – Converting the fixed Stop Loss into Trailing Stop Loss

If the trade moves in the right direction and becomes profitable, then the Fixed Stop Loss needs to be converted into a trailing Stop Loss to secure the profit.

For this, we are introducing 2 new Variables that can take the following Values:

<u>Profit trigger to start Trailing SL</u>	<u>% of Trailing SL</u>
3%	1%
4%	2%
4%	3%
5%	4%
6%	5%

These values are dependent from the risk level:

Parameter of Bot	Opening Trade	Stop Loss		
Risk level ?	Volume	X %	Profit trigger to start Trailing SL	% of Trailing SL
Very Low	3%	10%	3%	1%
Low	6%	20%	4%	2%
Medium	10%	30%	4%	3%
High	20%	40%	5%	4%
Very High	30%	50%	6%	5%

viii. Additional rules

We had not defined yet the total number of positions that can be opened simultaneously. This is explained by the below table and is linked to the Risk level. As well, we need to define when to close the Profitable Trades (if not closed by reaching Target Profit nor trailing Stop Loss. For this we introduce additional variables that can take the following values:

Parameter of Bot	Parameter of Bot	
Risk level ?	<u>% MAX of initial balance committed</u>	<u>Close Profitable Trade 'X' min before end of session</u>
Very Low	10%	15
Low	20%	15
Medium	30%	15
High	40%	15
Very High	50%	15

ix. Additional requirements to allow testing.

List of variables to consider parameters

We introduce a lot of variables that are impacting significantly the logic of the EA and the potential Profit/Loss. In order to find the most optimum solution, many of these variables needs to be parameters that can be either modified by :

- End User – highlighted in Green
- Developer/Owner – highlighted in Red

I am listing below the list of variables that below to which category:

Parameter of Bot	Opening Trade	Stop Loss			Parameter of Bot	
Risk level ?	Volume	X %	Profit trigger to start Trailing SL	% of Trailing SL	% MAX of initial balance committed	Close Profitable Trade 'X' min before end of session
Very Low	3%	10 %	3%	1%	10%	15
Low	6%	20 %	4%	2%	20%	15
Medium	10%	30 %	4%	3%	30%	15
High	20%	40 %	5%	4%	40%	15
Very High	30%	50 %	6%	5%	50%	15

As well from that passage, when defining “How Close” the Reversal Pattern is from a Key Level ; a fixed value at 25% was set. We need this to be a parameter for Developer/Owner named “Distance to Key Level %”

- Based on which definition shall we consider that the Reversal Pattern is “Close” to a Key Level?

“Close to a Key Level” is defined as:

- → The candle is touching the key level itself (the body or the shadow of the candle doing an intersection with the Key level)
- → One of the extreme of the candle is separated from the key level by less 25% of the average size of the past 5 candles (including the size of the Reversal pattern).

Let me illustrate with some examples:

Displays on the chart

The following needs to be displayed on the Chart:

- All pending orders (Target Profit – blue and Stop Loss Fixed/Trailing – red)
- Entry points of the trade
- Exit points of the trade

Journal of actions from the EA

We need the possibility to track every single action the EA is taking, as well as its decision tree. So basically, we need to see the evolution of the algorithm.

For this purpose, a table like the one below needs to be populated:

Scenario	Direction	Initial Conditions		Gradient conditions - 1st market			Parameter of belief		Opening trade		Trading profits		Stop loss
		Trend Range	Confidence	Direction of Reversal (p < 0.05)	Assumption of Reversal (p < 0.05)	Reversal gain to May level	May level	Reversal gain to May level	May level	Volume of 1st trade	Volume of 2nd trade	Volume of 3rd trade	
1	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
2	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
3	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
4	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
5	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
6	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
7	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
8	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
9	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
10	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
11	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
12	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
13	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
14	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
15	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
16	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
17	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
18	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
19	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
20	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
21	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
22	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
23	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
24	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
25	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
26	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
27	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
28	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
29	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
30	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
31	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
32	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
33	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
34	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
35	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
36	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
37	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
38	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
39	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
40	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
41	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
42	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
43	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
44	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
45	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
46	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
47	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
48	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
49	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
50	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
51	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
52	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
53	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
54	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
55	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
56	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
57	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
58	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
59	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
60	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
61	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
62	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
63	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
64	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
65	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
66	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
67	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
68	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
69	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
70	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
71	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
72	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
73	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
74	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
75	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
76	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
77	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
78	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
79	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
80	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
81	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
82	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
83	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
84	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
85	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
86	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
87	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
88	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
89	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
90	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
91	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
92	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
93	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
94	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
95	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
96	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
97	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
98	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
99	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
100	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
101	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
102	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
103	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
104	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
105	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
106	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
107	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
108	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
109	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
110	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
111	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
112	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
113	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
114	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
115	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
116	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
117	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
118	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
119	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
120	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
121	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
122	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
123	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
124	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
125	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
126	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
127	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
128	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
129	Up	Transferring / High probability	High	Yes	Yes	High	High	High	High	High	High	High	High
130	Up												

More visuals can be found in the Excel file attached – Name *Algorithm*, Tab *Algorithm*

VI. Appendix 1 : Roadmap/Flight plan

All the references below are coming from the book : **Secrets of a Pivot Boss**

i. Set of parameters

The Money Zone, also called Market profile:

The Money Zone Levels		
1100.00	B	VAH
1099.75	B	
1099.50	ABM	
1099.25	ABCM	
1099.00	ABCLMN	
1098.75	ABCDLMN	POC
1098.50	ABCDJKLMN	
1098.25	ABCDEJKLMN	
1098.00	ABCDEFJKLMN	
1097.75	ABCDEFJK	
1097.50	ABCDEFGHIJ	VAL
1097.50	ADEFGHI	
1097.25	DEFGHI	
1097.00	DEFGHI	
1096.75	DEFGHI	
1096.50	EFGH	
1096.25	EH	
1096.00	H	

3 levels are important:

VAH : Value Area High

VAL : Value Area Low

POC : Point of control

FIGURE 3.2: Diagram of the Money Zone levels



Example in Trading View of 4 Money Zones displayed (4 different days in 15min chart)

The blue area represents the Value area, with the upper limit = VAH and the lower limit = VAL. Yellow line is the Point of Control (POC).

The CPR: Central Pivot Range

Expanded Floor Pivots Formula
$R4 = R3 + (R2 - R1)$
$R3 = R1 + (\text{High} - \text{Low})$
$R2 = \text{Pivot} + (\text{High} - \text{Low})$
$R1 = 2 \times \text{Pivot} - \text{Low}$
$TC = (\text{Pivot} - BC) + \text{Pivot}$
$\text{Pivot} = (\text{High} + \text{Low} + \text{Close})/3$
$BC = (\text{High} + \text{Low})/2$
$S1 = 2 \times \text{Pivot} - \text{High}$
$S2 = \text{Pivot} - (\text{High} + \text{Low})$
$S3 = S1 - (\text{High} - \text{Low})$
$S4 = S3 - (S1 - S2)$

TABLE 5.2: Expanded Formula

Expanded Floor Pivots	
R4	_____
R3	_____
R2	_____
R1	_____
TC	_____
PIVOT	_____
BC	_____
S1	_____
S2	_____
S3	_____
S4	_____

FIGURE 5.2: Expanded version of the Floor Pivots

“High ; Low ; Close” are the price values of the instrument from the previous trading day.

CPR is defined by the 3 lines TC/Pivot/BC.

Important levels are : TC/Pivot (P)/BC

The CPR Width is also quantified in the book **Secrets of Pivot Boss** thanks to the Pivot Range Histogram:

Pivot Range Histogram File Name: iPivotRangeHIST

```
#Indicator

#PARAM "UpperMarker", .75
#PARAM "LowerMarker", .25

Dim fPivotRange As Single

fPivotRange = ((FLOOR_PIV(1) - FLOOR_PIV(-1))/FLOOR_PIV(0)) * 100

PlotHIST("PRHIST", fPivotRange, .5, red, 3)
PlotLabel(UpperMarker)
PlotLabel(LowerMarker)

SetScales(0, 1)

Return 0
```

Code from book Secrets of Pivot Boss



Example of Histogram from Trading View

The Camarilla Equation:

Expanded Camarilla Pivot Formula
$H5 = (\text{High}/\text{Low}) \times \text{Close}$
$H4 = \text{Close} + \text{RANGE} \times 1.1/2$
$H3 = \text{Close} + \text{RANGE} \times 1.1/4$
$H2 = \text{Close} + \text{RANGE} \times 1.1/6$
$H1 = \text{Close} + \text{RANGE} \times 1.1/12$
$L1 = \text{Close} - \text{RANGE} \times 1.1/12$
$L2 = \text{Close} - \text{RANGE} \times 1.1/6$
$L3 = \text{Close} - \text{RANGE} \times 1.1/4$
$L4 = \text{Close} - \text{RANGE} \times 1.1/2$
$L5 = \text{Close} - (H5 - \text{Close})$

TABLE 7.2: Expanded Formula

Expanded Camarilla Levels		
Breakout Target	H5	_____
Bullish Breakout	H4	_____
Sell Reversal	H3	_____
Buy Reversal	L3	_____
Bearish Breakout	L4	_____
Breakout Target	L5	_____

FIGURE 7.2: The Expanded Camarilla levels, with first and second layers ignored

“High ; Low ; Close” are the price values of the instrument from the previous trading day.

“Range = High – Low” of previous day.

2 important levels : H3/L3

Hot Zones:

Hot Zone	Description	Characteristics	Example

DPZ	Dual Pivot Zone	Confluence of 2 Pivots from Floor Pivots/Camarilla equation/Money Zone (from the same time frame)	R / H / VAH / virgin POC S / L / VAL / virgin POC
GPZ	Golden Pivot Zone	1 Pivot from Camarilla or Money Zone lies within CPR (from the same time frame)	H3 / VAL / VAH / POC / vPOC within CPR --> Bearish GPZ L3 / VAL / VAH / POC / vPOC within CPR --> Bullish GPZ
MTZ	Multiple Time Frame Hot Zone	Confluence of several Pivots from Floor Pivots/Camarilla equation/Money Zone with different time frame	S2 Monthly Floor Pivot + L3 weekly

ii. Values of parameters

The values that each parameter can take are listed below:

Previous Day Closure in relationship with MZ
Above VAH
Within Value
Below VAL

Previous Day Closure in relationship with CPR
Above TC
Within CPR
Below BC

Previous Day Closure in relationship with Camarilla
Above H3
Within H3/L3 range
Below L3

2 days relationship
Higher Value
Overlapping Higher Value
Lower Value
Overlapping Lower Value
Unchanged Value
Outside Value
Inside Value

MZ/Camarilla Width
Wide
Narrow

CPR histogram
<0.2
0.2<x<0.5
0.5<x<0.7
>0.7

Trend
Bullish
Bearish
None

Opening in relationship with MZ
Above VAL
Below VAH
Outside Value and/or Outside Range
Below VAL
Above VAH
Inside Value

Opening in relationship with CPR
Above the BC
Below the TC
Outside Range
Below BC
Above TC
Inside CPR

Opening in relationship with Camarilla
Above L3
Below H3
Outside Range
Below L3
Below L4
Above H3
Above H4
Inside Value

Opening in Relationship to Previous Day Range
Inside Range
Outside Range

iii. Values based Matrix to define Bias and Comments

2 Periods relationship	Consequences	Comments
Higher Value	Bullish	
Overlapping Higher Value	Moderately Bullish	Can happen at the beginning/middle/end of an uptrend Can suggest a change of trend
Lower Value	Bearish	
Overlapping Lower Value	Moderately Bearish	Can happen at the beginning/middle/end of a downtrend Can suggest a change of trend
Unchanged Value	Sideways/Breakout	2 possible outcomes: - market will trade quietly - market is on the verge of a big breakout
Outside Value	Sideways	Trading Range / Typical or Sideways Day
Inside Value	Breakout	Opening will give the directional bias for the day

MZ/Camarilla Width	Consequences
Wide	Typical / Trading Range / Sideways day
Narrow	Trend / Double distribution Trend / Expanded Typical Day

CPR histogram	Consequences
<0.2	Strong trending
0.2<x<0.5	Possible trending
0.5<x<0.7	Possible ranging
>0.7	Strong ranging

2 Periods relationship	Opening	Acceptance/Rejection of Initial Bias
Higher Value	Above VAL	Acceptance
Higher Value	Below VAH	Acceptance
Higher Value	Outside Value and/or Outside Range	Rejection
Higher Value	Below VAL	Rejection
Higher Value	Above VAH	Acceptance

Higher Value	Inside Value	Acceptance
Overlapping Higher Value	Above VAL	Acceptance
Overlapping Higher Value	Below VAH	Acceptance
Overlapping Higher Value	Outside Value and/or Outside Range	Rejection
Overlapping Higher Value	Below VAL	Rejection
Overlapping Higher Value	Above VAH	Acceptance
Overlapping Higher Value	Inside Value	Acceptance
Lower Value	Above VAL	Acceptance
Lower Value	Below VAH	Acceptance
Lower Value	Outside Value and/or Outside Range	Rejection
Lower Value	Below VAL	Acceptance
Lower Value	Above VAH	Rejection
Lower Value	Inside Value	Acceptance
Overlapping Lower Value	Above VAL	Acceptance
Overlapping Lower Value	Below VAH	Acceptance
Overlapping Lower Value	Outside Value and/or Outside Range	Rejection
Overlapping Lower Value	Below VAL	Acceptance
Overlapping Lower Value	Above VAH	Rejection
Overlapping Lower Value	Inside Value	Acceptance
Unchanged Value	Above VAL	?
Unchanged Value	Below VAH	?
Unchanged Value	Outside Value and/or Outside Range	?
Unchanged Value	Below VAL	?
Unchanged Value	Above VAH	?
Unchanged Value	Inside Value	?
Outside Value	Above VAL	Trading Range expected
Outside Value	Below VAH	Trading Range expected
Outside Value	Outside Value and/or Outside Range	Trading Range expected
Outside Value	Below VAL	Trading Range expected
Outside Value	Above VAH	Trading Range expected
Outside Value	Inside Value	Trading Range expected
Inside Value	Above VAL	Acceptance
Inside Value	Below VAH	Acceptance
Inside Value	Outside Value and/or Outside Range	Acceptance
Inside Value	Below VAL	Acceptance
Inside Value	Above VAH	Acceptance
Inside Value	Inside Value	Rejection
Higher Value	Above the BC	Acceptance
Higher Value	Below the TC	Acceptance
Higher Value	Outside Range	Rejection
Higher Value	Below BC	Rejection
Higher Value	Above TC	Acceptance
Higher Value	Inside CPR	Acceptance
Overlapping Higher Value	Above the BC	Acceptance
Overlapping Higher Value	Below the TC	Acceptance
Overlapping Higher Value	Outside Range	Rejection
Overlapping Higher Value	Below BC	Rejection
Overlapping Higher Value	Above TC	Acceptance

Overlapping Higher Value	Inside CPR	Acceptance
Lower Value	Above the BC	Acceptance
Lower Value	Below the TC	Acceptance
Lower Value	Outside Range	Rejection
Lower Value	Below BC	Acceptance
Lower Value	Above TC	Rejection
Lower Value	Inside CPR	Acceptance
Overlapping Lower Value	Above the BC	Acceptance
Overlapping Lower Value	Below the TC	Acceptance
Overlapping Lower Value	Outside Range	Rejection
Overlapping Lower Value	Below BC	Acceptance
Overlapping Lower Value	Above TC	Rejection
Overlapping Lower Value	Inside CPR	Acceptance
Unchanged Value	Above the BC	?
Unchanged Value	Below the TC	?
Unchanged Value	Outside Range	?
Unchanged Value	Below BC	?
Unchanged Value	Above TC	?
Unchanged Value	Inside CPR	?
Outside Value	Above the BC	Trading Range expected
Outside Value	Below the TC	Trading Range expected
Outside Value	Outside Range	Trading Range expected
Outside Value	Below BC	Trading Range expected
Outside Value	Above TC	Trading Range expected
Outside Value	Inside CPR	Trading Range expected
Inside Value	Above the BC	Acceptance
Inside Value	Below the TC	Acceptance
Inside Value	Outside Range	Acceptance
Inside Value	Below BC	Acceptance
Inside Value	Above TC	Acceptance
Inside Value	Inside CPR	Rejection
Higher Value	Above L3	Acceptance
Higher Value	Below H3	Acceptance
Higher Value	Outside Range	Rejection
Higher Value	Below L3	Rejection
Higher Value	Below L4	Rejection - strong
Higher Value	Above H3	Acceptance
Higher Value	Above H4	Acceptance - but too high - buy the dip ?
Higher Value	Inside Value	Acceptance
Overlapping Higher Value	Above L3	Acceptance
Overlapping Higher Value	Below H3	Acceptance
Overlapping Higher Value	Below L4	Rejection - strong
Overlapping Higher Value	Outside Range	Rejection
Overlapping Higher Value	Below L3	Rejection
Overlapping Higher Value	Above H3	Acceptance
Overlapping Higher Value	Above H4	Acceptance - but too high - buy the dip ?
Overlapping Higher Value	Inside Value	Acceptance
Lower Value	Above L3	Acceptance

Lower Value	Below H3	Acceptance
Lower Value	Below L4	Acceptance - but too low - sell the rip ?
Lower Value	Outside Range	Rejection
Lower Value	Below L3	Acceptance
Lower Value	Above H3	Rejection
Lower Value	Above H4	Rejection - strong
Lower Value	Inside Value	Acceptance
Overlapping Lower Value	Above L3	Acceptance
Overlapping Lower Value	Below H3	Acceptance
Overlapping Lower Value	Outside Range	Rejection
Overlapping Lower Value	Below L3	Acceptance
Overlapping Lower Value	Below L4	Acceptance - but too low - sell the rip ?
Overlapping Lower Value	Above H3	Rejection
Overlapping Lower Value	Above H4	Rejection - strong
Overlapping Lower Value	Inside Value	Acceptance
Unchanged Value	Above L3	?
Unchanged Value	Below H3	?
Unchanged Value	Below L4	?
Unchanged Value	Outside Range	?
Unchanged Value	Below L3	?
Unchanged Value	Above H3	?
Unchanged Value	Above H4	?
Unchanged Value	Inside Value	?
Outside Value	Above L3	Trading Range expected
Outside Value	Below H3	Trading Range expected
Outside Value	Outside Range	Trading Range expected
Outside Value	Below L3	Trading Range expected
Outside Value	Below L4	Trading Range expected
Outside Value	Above H3	Trading Range expected
Outside Value	Above H4	Trading Range expected
Outside Value	Inside Value	Trading Range expected
Inside Value	Above L3	Acceptance
Inside Value	Below H3	Acceptance
Inside Value	Outside Range	Acceptance
Inside Value	Below L3	Acceptance
Inside Value	Below L4	Acceptance
Inside Value	Above H3	Acceptance
Inside Value	Above H4	Acceptance
Inside Value	Inside Value	Rejection

Trend	Opening	Strategy
Bullish	Above VAL	Buy at POC and VAL
Bullish	Below VAH	Buy at POC and VAL
Bullish	Outside Value and/or Outside Range	?
Bullish	Below VAL	Sell at VAL and POC
Bullish	Above VAH	Buy at VAH and POC
Bullish	Inside Value	Buy at POC and VAL

Bearish	Above VAL	Sell at POC and VAH
Bearish	Below VAH	Sell at POC and VAH
Bearish	Outside Value and/or Outside Range	?
Bearish	Below VAL	Sell at VAL and POC
Bearish	Above VAH	Buy VAH and POC
Bearish	Inside Value	Sell at POC and VAH
None	Above VAL	No trend
None	Below VAH	No trend
None	Outside Value and/or Outside Range	No trend
None	Below VAL	No trend
None	Above VAH	No trend
None	Inside Value	No trend
Bullish	CPR	Buy at TC, Pivot and BC If day closed below BC - liquidate
Bearish	CPR	Sell at TC, Pivot and BC If day closed above TC - liquidate
None	CPR	No trend
Bullish	Above L3	Buy at L3
Bullish	Below H3	Buy at L3
Bullish	Outside Range	?
Bullish	Below L3	?
Bullish	Below L4	Sell at L4
Bullish	Above H3	Buy at H3
Bullish	Above H4	Buy at H4/H3 - too high - ?
Bullish	Inside Value	Buy at L3
Bearish	Above L3	Sell at H3
Bearish	Below H3	Sell at H3
Bearish	Outside Range	?
Bearish	Below L3	Sell at L3
Bearish	Below L4	Sell at L4/L3 - too low - ?
Bearish	Above H3	?
Bearish	Above H4	Buy at H4
Bearish	Inside Value	Sell at H3
None	Above L3	No trend
None	Below H3	No trend
None	Outside Range	No trend
None	Below L3	No trend
None	Below L4	No trend
None	Above H3	No trend
None	Above H4	No trend
None	Inside Value	No trend

VII. Appendix 2 – Reversal patterns

SYSTEMS Wick Reversal System File Name: sysWickRev

```
#System

#PARAM "Wick_Multiplier", 2.5, .5, 20
#PARAM "Body_Percentage", .25, .1, 1

If C > O
AND (O - L) >= ((C - O) * Wick_Multiplier) _
AND (H - C) <= ((H - L) * Body_Percentage) _
OR C < O
AND (C - L) >= ((O - C) * Wick_Multiplier) _
AND (H - C) <= ((H - L) * Body_Percentage) _
OR C = O AND NOT C = H
AND (H - L) >= ((H - C) * Wick_Multiplier) _
AND (H - C) <= ((H - L) * Body_Percentage) _
OR O = H AND C = H
AND H - L >= AVG(H-L, 50) Then
    Signal = LongSignal

ElseIf C < O
AND (H - O) >= ((O - C) * Wick_Multiplier) _
AND (C - L) <= ((H - L) * Body_Percentage) _
OR C > O
AND (H - C) >= ((C - O) * Wick_Multiplier) _
AND (C - L) <= ((H - L) * Body_Percentage) _
OR C = O AND NOT C = L
AND (H - L) >= ((C - L) * Wick_Multiplier) _
AND (C - L) <= ((H - L) * Body_Percentage) _
OR O = L AND C = L
AND H - L >= AVG(H-L, 50) Then
    Signal = ShortSignal

End If
```

Extreme Reversal System File Name: sysExtremeRev

```
#System

#PARAM "BodySize", .525, .05, 1
#PARAM "BarsBack", 50, 1, 50
#PARAM "BodyMultiplier", 2, .25, 5

Dim AverageBody As Single
Dim myBodySize As Single
Dim myCandleSize As Single
Dim AverageCandle As Single

myBodySize = ABS(C - O)
AverageBody = Average(myBodySize, BarsBack)
myCandleSize = (H - L)
AverageCandle = Average(myCandleSize, BarsBack)

If ((O[1] - C[1]) >= (BodySize * (H[1] - L[1]))) AND _
((H[1] - L[1]) > (AverageCandle * BodyMultiplier)) AND _
((O[1] - C[1]) > AverageBody) AND _
(C > O) Then
    Signal = LongSignal

ElseIf ((C[1] - O[1]) >= BodySize * (H[1] - L[1])) AND _
((H[1] - L[1]) > (AverageCandle * BodyMultiplier)) AND _
((C[1] - O[1]) > AverageBody) AND _
(O > C) Then
    Signal = ShortSignal

End If
```

Outside Reversal System

File Name: sysOutsideRev

```
#System

#PARAM "BarMultiplier", 1.25, .05, 3.5
#PARAM "BarsBack", 50, 1, 250

Dim AverageCandle      As Single
Dim myCandleSize       As Single

myCandleSize = (H - L)
AverageCandle = Average(myCandleSize, BarsBack)

If L < L[1] AND C > H[1] AND _
((H - L) >= (AverageCandle * BarMultiplier)) Then
    Signal = LongSignal

ElseIf H > H[1] AND C < L[1] AND _
((H - L) >= (AverageCandle * BarMultiplier)) Then
    Signal = ShortSignal

End If
```

Doji Reversal System

File Name: sysDojiRev

```
#System

#PARAM "Percentage", .10

Dim fRangeHL As Single
Dim fRangeCO As Single

fRangeHL = H[1] - L[1]
fRangeCO = ABS(C[1] - O[1])

If fRangeCO <= fRangeHL * Percentage _
AND C < L[1] _
AND L[1] > SMA(10) _
AND C < O _
OR C < L[2] AND NOT C[1] < L[2] _
AND fRangeCO[1] <= fRangeHL[1] * Percentage _
AND C < O _
AND L[2] > SMA(10) Then
    Signal = ShortSignal

ElseIf fRangeCO <= fRangeHL * Percentage _
AND C > H[1] _
AND H[1] < SMA(10) _
AND C > O _
OR C > H[2] AND NOT C[1] > H[2] _
AND fRangeCO[1] <= fRangeHL[1] * Percentage _
AND C > O _
AND H[2] < SMA(10) Then
    Signal = LongSignal

End If
```

Code from Trading View Platform— open source

```

// This source code is subject to the terms of the Mozilla Public License 2.0 at
https://mozilla.org/MPL/2.0/
// © pranjalchaubey

//Structural Pivots
study(title="[CP]Pivot Boss Candlestick Scanner", shorttitle="[CP]Pivot Boss Candlesticks",
overlay=true, max_labels_count=500)

// Hack to Prevent Indicator Repainting
//=====
current_high    = high[barstate.isrealtime ? 1 : 0]
current_low     = low[barstate.isrealtime ? 1 : 0]
current_open    = open[barstate.isrealtime ? 1 : 0]
current_close   = close[barstate.isrealtime ? 1 : 0]
current_x       = barstate.isrealtime ? bar_index-1 : bar_index

// General User Inputs
//=====
// Set the date range
startDate  = input(title="Start Date",      type=input.integer,
defval=1,   minval=1,      maxval=31,      group="General User Inputs")
startMonth = input(title="Start Month",     type=input.integer,
defval=1,   minval=1,      maxval=12,      group="General User Inputs")
startYear  = input(title="Start Year",      type=input.integer,
defval=2010, minval=1970,  maxval=2100,    group="General User Inputs")

endDate    = input(title="End Date",       type=input.integer,
defval=31,  minval=1,      maxval=31,      group="General User Inputs")
endMonth    = input(title="End Month",     type=input.integer,
defval=12,  minval=1,      maxval=12,      group="General User Inputs")
endYear     = input(title="End Year",      type=input.integer,
defval=2012, minval=1970,  maxval=2100,    group="General User Inputs")
// Look if the current_close time of the current bar falls inside the date range
inDateRange = (time >= timestamp(syminfo.timezone, startYear, startMonth, startDate, 0, 0)) and
(time < timestamp(syminfo.timezone, endYear, endMonth, endDate, 0, 0))
date_range  = input(false, title="Use the date range above to mark the Candlestick
Setups?", group="General User Inputs")
mid_enable  = input(true, title="Mark Candle Mid-Range on the signal
candles?", group="General User Inputs")

// Candle Mid-range Calculation
//=====
mid_range = current_low + (current_high - current_low) / 2

// EXTREME REVERSAL SETUP
//=====
// Inputs

```

```

enable_extreme_reversal_setup =
input(true, type=input.bool, title="Enable Extreme Reversal
Setup", group="Extreme Reversal Setup")
lookback_period =
input(3, type=input.integer, title="Lookback
Bars", group="Extreme Reversal Setup")
trigger_bar_size =
input(2.0, type=input.float, title="Trigger Bar Size compared to avg
Lookback Bar Sizes", group="Extreme Reversal Setup")
trigger_bar_min_percent_cover = input(50, type=input.integer,
maxval=80, title="Trigger Bar Minimum Body Coverage
Percentage", group="Extreme Reversal Setup")
trigger_bar_max_percent_cover = input(85, type=input.integer, minval=50,
maxval=95, title="Trigger Bar Maximum Body Coverage Percentage", group="Extreme
Reversal Setup")
extreme_reversal_shape = input("Cross", options=["Circle", "Triangle", "Cross",
"Diamond"], title="Extreme Reversal Marker", group="Extreme Reversal Setup")
bullish_extreme_marker_color = input(color.blue, type =
input.color, title="Bullish Extreme Reversal Marker
Color", group="Extreme Reversal Setup")
bearish_extreme_marker_color = input(color.blue, type =
input.color, title="Bearish Extreme Reversal Marker
Color", group="Extreme Reversal Setup")

// Extreme Reversal Setup Markers
bullish_extreme_reversal_marker = label.style_circle
bearish_extreme_reversal_marker = label.style_circle
if extreme_reversal_shape == "Triangle"
    bullish_extreme_reversal_marker := label.style_triangleup
    bearish_extreme_reversal_marker := label.style_triangledown
else if extreme_reversal_shape == "Cross"
    bullish_extreme_reversal_marker := label.style_xcross
    bearish_extreme_reversal_marker := label.style_xcross
else if extreme_reversal_shape == "Diamond"
    bullish_extreme_reversal_marker := label.style_diamond
    bearish_extreme_reversal_marker := label.style_diamond

// Calculations - We assume that we are standing on the second bar of this pattern
lookback_period_avg_range = sum(high - low, lookback_period)[2]/lookback_period // [2] as we
will compare the avg range with the candle BEFORE the current candle
norepaint_lookback_period_avg_range = barstate.isrealtime ? lookback_period_avg_range[1] :
lookback_period_avg_range // Fix Repainting
trigger_bar_body = abs(current_open[1] - current_close[1])
actual_bar_body_coverage = (trigger_bar_body/(current_high[1] - current_low[1])) * 100

// Logic
size_condition = trigger_bar_body > trigger_bar_size * norepaint_lookback_period_avg_range
bar_body_coverage_condition = actual_bar_body_coverage > trigger_bar_min_percent_cover and
actual_bar_body_coverage < trigger_bar_max_percent_cover

```

```

bullish_bar_after_trigger_bar_condition = (current_close[1] < current_open[1]) and (current_close
> current_open)
bearish_bar_after_trigger_bar_condition = (current_close[1] > current_open[1]) and (current_close
< current_open)
bullish_extreme_reversal = size_condition and bar_body_coverage_condition and
bullish_bar_after_trigger_bar_condition
bearish_extreme_reversal = size_condition and bar_body_coverage_condition and
bearish_bar_after_trigger_bar_condition

// Plots
if not(date_range == true and inDateRange == false) // Plot only if the bar is in date range,
or the feature has been turned off
    if enable_extreme_reversal_setup == true // Plot only if the user wants to plot the
Extreme Reversal Setups on the chart
        if bullish_extreme_reversal == true // A bullish extreme reversal was found
            label.new(x=current_x, y=low, yloc=yloc.belowbar, color=bullish_extreme_marker_color,
style=bullish_extreme_reversal_marker, size=size.auto, tooltip="Bullish Extreme Reversal Setup")
            if mid_enable == true // Plot the Signal Candle Mid-range
                label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bullish_extreme_marker_color, style= label.style_xcross, size=size.auto, tooltip="Signal
Candle Mid-Range")
            else if bearish_extreme_reversal == true // A bearish extreme reversal was found
                label.new(x=current_x, y=high, yloc=yloc.abovebar, color=bearish_extreme_marker_color,
style=bearish_extreme_reversal_marker, size=size.auto, tooltip="Bearish Extreme Reversal Setup")
                if mid_enable == true // Plot the Signal Candle Mid-range
                    label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bearish_extreme_marker_color, style= label.style_xcross, size=size.auto, tooltip="Signal
Candle Mid-Range")

// Debugging
//=====
// plotchar(lookback_period_avg_range, "Avg Range", "", location = location.top, size=size.tiny,
color=color.lime)

// OUTSIDE REVERSAL SETUP
//=====
// Inputs
enable_outside_reversal_setup =
input(true, type=input.bool, title="Enable Outside
Reversal Setup", group="Outside Reversal Setup")
outside_lookback_period =
input(12, type=input.integer, title="Lookback
Bars", group="Outside Reversal Setup")
engulfing_bar_size_factor = input(1.25, type=input.float,
minval=1, title="Engulfing Bar Size compared to Average Bar
Size", group="Outside Reversal Setup")
outside_reversal_shape = input("Diamond", options=["Circle", "Triangle", "Cross",
"Diamond"], title="Outside Reversal Marker", group="Outside Reversal
Setup")

```

```

bullish_outside_marker_color    = input(color.yellow,      type =
input.color,                    title="Bullish Outside Reversal Marker
Color",                        group="Outside Reversal Setup")
bearish_outside_marker_color    = input(color.yellow,      type =
input.color,                    title="Bearish Outside Reversal Marker
Color",                        group="Outside Reversal Setup")

// Outside Reversal Setup Markers
bullish_outside_reversal_marker = label.style_circle
bearish_outside_reversal_marker = label.style_circle
if outside_reversal_shape == "Triangle"
    bullish_outside_reversal_marker := label.style_triangleup
    bearish_outside_reversal_marker := label.style_triangledown
else if outside_reversal_shape == "Cross"
    bullish_outside_reversal_marker := label.style_xcross
    bearish_outside_reversal_marker := label.style_xcross
else if outside_reversal_shape == "Diamond"
    bullish_outside_reversal_marker := label.style_diamond
    bearish_outside_reversal_marker := label.style_diamond

// Calculations - We assume that we are standing on the engulfing bar of this pattern
outside_lookback_period_avg_range = sum(high - low,
outside_lookback_period)[1]/outside_lookback_period    // [1] as we will compare the avg range
BEFORE the current candle
norepaint_outside_lookback_period_avg_range = barstate.isrealtime ?
outside_lookback_period_avg_range[1] : outside_lookback_period_avg_range    // Fix Repainting
engulfing_bar_body = current_high - current_low

// Logic
outside_size_condition = engulfing_bar_body >= engulfing_bar_size_factor *
norepaint_outside_lookback_period_avg_range
bullish_outside_reversal = outside_size_condition and (current_low < current_low[1]) and
(current_close > current_high[1])
bearish_outside_reversal = outside_size_condition and (current_high > current_high[1]) and
(current_close < current_low[1])

// Plots
if not(date_range == true and inDateRange == false)    // Plot only if the bar is in date range,
or the feature has been turned off
    if enable_outside_reversal_setup == true            // Plot only if the user wants to plot the
Outside Reversal Setups on the chart
        if bullish_outside_reversal == true            // A bullish outside reversal was found
            label.new(x=current_x, y=low, yloc=yloc.belowbar, color=bullish_outside_marker_color,
style=bullish_outside_reversal_marker, size=size.auto, tooltip="Bullish Outside Reversal Setup")
            if mid_enable == true                        // Plot the Signal Candle Mid-range
                label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bullish_outside_marker_color, style=label.style_xcross, size=size.auto, tooltip="Signal
Candle Mid-Range")
            else if bearish_outside_reversal == true    // A bearish outside reversal was found

```

```

        label.new(x=current_x, y=high, yloc=yloc.abovebar, color=bearish_outside_marker_color,
style=bearish_outside_reversal_marker, size=size.auto, tooltip="Bearish Outside Reversal Setup")
        if mid_enable == true // Plot the Signal Candle Mid-range
            label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bearish_outside_marker_color, style=label.style_xcross, size=size.auto, tooltip="Signal
Candle Mid-Range")

// DOJI REVERSAL SETUP
//=====
// Inputs
enable_doji_reversal_setup      =
input(true, type=input.bool, title="Enable Doji Reversal
Setup", group="Doji Reversal Setup")
doji_sma_lookback_period      =
input(10, type=input.integer, title="Doji SMA Lookback
Period", group="Doji Reversal Setup")
doji_bar_size                  = input(10, type=input.float,
minval=1, title="Doji Body Coverage Percentage", group="Doji
Reversal Setup")
doji_reversal_shape           = input("Triangle", options=["Circle", "Triangle", "Cross",
"Diamond"], title="Doji Reversal Marker", group="Doji Reversal Setup")
bullish_doji_marker_color      = input(color.aqua, type =
input.color, title="Bullish Doji Reversal Marker Color", group="Doji
Reversal Setup")
bearish_doji_marker_color      = input(color.aqua, type =
input.color, title="Bearish Doji Reversal Marker Color", group="Doji
Reversal Setup")

// Doji Reversal Setup Markers
bullish_doji_reversal_marker = label.style_circle
bearish_doji_reversal_marker = label.style_circle
if doji_reversal_shape == "Triangle"
    bullish_doji_reversal_marker := label.style_triangleup
    bearish_doji_reversal_marker := label.style_triangledown
else if doji_reversal_shape == "Cross"
    bullish_doji_reversal_marker := label.style_xcross
    bearish_doji_reversal_marker := label.style_xcross
else if doji_reversal_shape == "Diamond"
    bullish_doji_reversal_marker := label.style_diamond
    bearish_doji_reversal_marker := label.style_diamond

// Calculations
moving_average = sma(current_close, doji_sma_lookback_period)

// Logic
var bool bullish_doji_reversal = na
bullish_doji = (((abs(current_open - current_close)/(current_high - current_low)) * 100) <=
doji_bar_size) and (current_high < moving_average)
bars_since_bullish_doji = barssince(bullish_doji)

```

```

bullish_doji_reversal := (bars_since_bullish_doji > 0) and (bars_since_bullish_doji <= 2) and
(current_close > current_high[bars_since_bullish_doji == 1? 1:2]) and not bullish_doji_reversal[1]

var bool bearish_doji_reversal = na
bearish_doji = (((abs(current_open - current_close)/(current_high - current_low)) * 100) <=
doji_bar_size) and (current_low > moving_average)
bars_since_bearish_doji = barssince(bearish_doji)
bearish_doji_reversal := (bars_since_bearish_doji > 0) and (bars_since_bearish_doji <= 2) and
(current_close < current_low[bars_since_bearish_doji == 1? 1:2]) and not bearish_doji_reversal[1]

// Plots
if not(date_range == true and inDateRange == false) // Plot only if the bar is in date range,
or the feature has been turned off
    if enable_doji_reversal_setup == true // Plot only if the user wants to plot the
Doji Reversal Setups on the chart
        if bullish_doji_reversal == true // A bullish doji reversal was found
            label.new(x=current_x, y=low, yloc=yloc.belowbar, color=bullish_doji_marker_color,
style=bullish_doji_reversal_marker, size=size.auto, tooltip="Bullish Doji Reversal Setup")
            if mid_enable == true // Plot the Signal Candle Mid-range
                label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bullish_doji_marker_color, style=label.style_xcross, size=size.auto, tooltip="Signal Candle
Mid-Range")
        else if bearish_doji_reversal == true // A bearish doji reversal was found
            label.new(x=current_x, y=high, yloc=yloc.abovebar, color=bearish_doji_marker_color,
style=bearish_doji_reversal_marker, size=size.auto, tooltip="Bearish Doji Reversal Setup")
            if mid_enable == true // Plot the Signal Candle Mid-range
                label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bearish_doji_marker_color, style=label.style_xcross, size=size.auto, tooltip="Signal Candle
Mid-Range")

// Debugging
//=====
// plotchar(prev_bar_doji, "Prev Doji", "", location = location.top, size=size.tiny,
color=color.lime)
// plotchar(prev_prev_bar_doji, "Prev Prev Doji", "", location = location.top, size=size.tiny,
color=color.lime)
// plotchar(bars_since_bullish_doji, "Since Bullish", "", location = location.top, size=size.tiny,
color=color.lime)

// WICK REVERSAL SETUP
//=====
// Inputs
enable_wick_reversal_setup =
input(true, type=input.bool, title="Enable Wick
Reversal Setup", group="Wick Reversal Setup")
wick_reversal_shape = input("Circle", options=["Circle", "Triangle", "Cross",
"Diamond"], title="Wick Reversal Marker", group="Wick Reversal Setup")
bullish_wick_marker_color = input(color.white, type =
input.color, title="Bullish Wick Reversal Marker
Color", group="Wick Reversal Setup")

```



```

bearish_wick_marker_color = input(color.white, type =
input.color, title="Bearish Wick Reversal Marker
Color", group="Wick Reversal Setup")
wick2bodyRatio = input(2.5, type=input.float, minval=1,
maxval=5, title="Wick to Body Ratio", group="Wick Reversal Setup")
closePercentage = input(35, type=input.integer, minval=1,
maxval=99, title="Top and Bottom Bar Close Percentage", group="Wick Reversal Setup")

// Wick Reversal Setup Markers
bullish_wick_reversal_marker = label.style_circle
bearish_wick_reversal_marker = label.style_circle
if wick_reversal_shape == "Triangle"
    bullish_wick_reversal_marker := label.style_triangleup
    bearish_wick_reversal_marker := label.style_triangledown
else if wick_reversal_shape == "Cross"
    bullish_wick_reversal_marker := label.style_xcross
    bearish_wick_reversal_marker := label.style_xcross
else if wick_reversal_shape == "Diamond"
    bullish_wick_reversal_marker := label.style_diamond
    bearish_wick_reversal_marker := label.style_diamond

// Calculations
actual_close_percentage = closePercentage / 100
bar_body = abs(current_open - current_close)
wick_length = (current_open - current_close) <= 0 ? (current_high - current_close) + (current_open
- current_low) : (current_high - current_open) + (current_close - current_low)
actual_wick_to_body_ratio = wick_length / bar_body
bar_range = current_high - current_low
bull_close_percentage = (current_high - current_close)/bar_range
bear_close_percentage = 1 - bull_close_percentage

// Logic
close_bullish = actual_wick_to_body_ratio >= wick2bodyRatio and bull_close_percentage <=
actual_close_percentage ? true : false
close_bearish = actual_wick_to_body_ratio >= wick2bodyRatio and bear_close_percentage <=
actual_close_percentage ? true : false

// Plots
if not(date_range == true and inDateRange == false) // Plot only if the bar is in date range,
or the feature has been turned off
    if enable_wick_reversal_setup == true // Plot only if the user wants to plot the
Wick Reversal Setups on the chart
        if close_bullish == true // A bullish wick reversal was found
            label.new(x=current_x, y=low, yloc=yloc.belowbar, color=bullish_wick_marker_color,
style=bullish_wick_reversal_marker, size=size.auto, tooltip="Bullish Wick Reversal Setup")
            if mid_enable == true // Plot the Signal Candle Mid-range
                label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bullish_wick_marker_color, style=label.style_xcross, size=size.auto, tooltip="Signal Candle
Mid-Range")

```

```

        else if close_bearish == true                                     // A bearish wick reversal was found
            label.new(x=current_x, y=high, yloc=yloc.abovebar, color=bearish_wick_marker_color,
style=bearish_wick_reversal_marker, size=size.auto, tooltip="Bearish Wick Reversal Setup")
            if mid_enable == true                                       // Plot the Signal Candle Mid-range
                label.new(x=current_x, y=mid_range, yloc=yloc.price,
color=bearish_wick_marker_color, style=label.style_xcross, size=size.auto, tooltip="Signal Candle
Mid-Range")

// Debugging
//=====
// plotchar(bar_body, "Bar Body", "", location = location.top, size=size.tiny, color=color.lime)
// plotchar(wick_length, "Wick Length", "", location = location.top, size=size.tiny,
color=color.lime)
// plotchar(actual_wick_to_body_ratio, "Wick2Body", "", location = location.top, size=size.tiny,
color=color.lime)
// plotchar(bull_close_percentage, "Bull %age", "", location = location.top, size=size.tiny,
color=color.green)
// plotchar(bear_close_percentage, "Bear %age", "", location = location.top, size=size.tiny,
color=color.red)
// plotchar(close_bullish, "Bull", "", location = location.top, size=size.tiny,
color=color.yellow)
// plotchar(close_bearish, "Bear", "", location = location.top, size=size.tiny,
color=color.yellow)

```

VIII. Appendix 3 – EA

i. Table for Key Level Acceptance and Target Profit

Initial Conditions			Candlestick conditions - live market		Target Profit
Direction	Confirmation	Trend-Range	Key level ?	Acceptance of key level ?	Timing/Level Targeted Profit
Bullish	Acceptance	Trending - High probability	R3	No	No Trade
Bullish	Acceptance	Trending - Medium probability	R3	No	No Trade
Bullish	Acceptance	Trending - Low probability	R3	No	No Trade
Bullish	Acceptance	Ranging - Low probability	R3	No	No Trade
Bullish	Acceptance	Ranging - Medium probability	R3	No	No Trade
Bullish	Acceptance	Ranging - High probability	R3	No	No Trade
Bullish	Rejection	Trending - High probability	R3	Yes	R1
Bullish	Rejection	Trending - Medium probability	R3	Yes	R2
Bullish	Rejection	Trending - Low probability	R3	Yes	R2
Bullish	Rejection	Ranging - Low probability	R3	Yes	R2
Bullish	Rejection	Ranging - Medium probability	R3	Yes	R2
Bullish	Rejection	Ranging - High probability	R3	Yes	R2
Bearish	Acceptance	Trending - High probability	R3	Yes	R1
Bearish	Acceptance	Trending - Medium probability	R3	Yes	R2
Bearish	Acceptance	Trending - Low probability	R3	Yes	R2
Bearish	Acceptance	Ranging - Low probability	R3	Yes	R2
Bearish	Acceptance	Ranging - Medium probability	R3	Yes	R2
Bearish	Acceptance	Ranging - High probability	R3	Yes	R2
Bearish	Rejection	Trending - High probability	R3	No	No Trade
Bearish	Rejection	Trending - Medium probability	R3	No	No Trade
Bearish	Rejection	Trending - Low probability	R3	No	No Trade
Bearish	Rejection	Ranging - Low probability	R3	No	No Trade
Bearish	Rejection	Ranging - Medium probability	R3	No	No Trade
Bearish	Rejection	Ranging - High probability	R3	No	No Trade
Bullish	Acceptance	Trending - High probability	R2	Yes	R3
Bullish	Acceptance	Trending - Medium probability	R2	Yes	R3
Bullish	Acceptance	Trending - Low probability	R2	Yes	R3
Bullish	Acceptance	Ranging - Low probability	R2	No	No Trade
Bullish	Acceptance	Ranging - Medium probability	R2	No	No Trade
Bullish	Acceptance	Ranging - High probability	R2	No	No Trade
Bullish	Rejection	Trending - High probability	R2	Yes	P
Bullish	Rejection	Trending - Medium probability	R2	Yes	R1
Bullish	Rejection	Trending - Low probability	R2	Yes	R1
Bullish	Rejection	Ranging - Low probability	R2	Yes	R1
Bullish	Rejection	Ranging - Medium probability	R2	Yes	R1
Bullish	Rejection	Ranging - High probability	R2	Yes	R1
Bearish	Acceptance	Trending - High probability	R2	Yes	P
Bearish	Acceptance	Trending - Medium probability	R2	Yes	R1
Bearish	Acceptance	Trending - Low probability	R2	Yes	R1
Bearish	Acceptance	Ranging - Low probability	R2	Yes	R1
Bearish	Acceptance	Ranging - Medium probability	R2	Yes	R1

Bearish	Acceptance	Ranging - High probability	R2	Yes	R1
Bearish	Rejection	Trending - High probability	R2	Yes	R3
Bearish	Rejection	Trending - Medium probability	R2	Yes	R3
Bearish	Rejection	Trending - Low probability	R2	Yes	R3
Bearish	Rejection	Ranging - Low probability	R2	No	No Trade
Bearish	Rejection	Ranging - Medium probability	R2	No	No Trade
Bearish	Rejection	Ranging - High probability	R2	No	No Trade
Bullish	Acceptance	Trending - High probability	R1	Yes	R3
Bullish	Acceptance	Trending - Medium probability	R1	Yes	R2
Bullish	Acceptance	Trending - Low probability	R1	Yes	R2
Bullish	Acceptance	Ranging - Low probability	R1	No	No Trade
Bullish	Acceptance	Ranging - Medium probability	R1	No	No Trade
Bullish	Acceptance	Ranging - High probability	R1	No	No Trade
Bullish	Rejection	Trending - High probability	R1	Yes	BC
Bullish	Rejection	Trending - Medium probability	R1	Yes	P
Bullish	Rejection	Trending - Low probability	R1	Yes	P
Bullish	Rejection	Ranging - Low probability	R1	Yes	P
Bullish	Rejection	Ranging - Medium probability	R1	Yes	P
Bullish	Rejection	Ranging - High probability	R1	Yes	P
Bearish	Acceptance	Trending - High probability	R1	Yes	BC
Bearish	Acceptance	Trending - Medium probability	R1	Yes	P
Bearish	Acceptance	Trending - Low probability	R1	Yes	P
Bearish	Acceptance	Ranging - Low probability	R1	Yes	P
Bearish	Acceptance	Ranging - Medium probability	R1	Yes	P
Bearish	Acceptance	Ranging - High probability	R1	Yes	P
Bearish	Rejection	Trending - High probability	R1	Yes	R3
Bearish	Rejection	Trending - Medium probability	R1	Yes	R2
Bearish	Rejection	Trending - Low probability	R1	Yes	R2
Bearish	Rejection	Ranging - Low probability	R1	No	No Trade
Bearish	Rejection	Ranging - Medium probability	R1	No	No Trade
Bearish	Rejection	Ranging - High probability	R1	No	No Trade
Bullish	Acceptance	Trending - High probability	TC	Yes	R2
Bullish	Acceptance	Trending - Medium probability	TC	Yes	R1
Bullish	Acceptance	Trending - Low probability	TC	Yes	R1
Bullish	Acceptance	Ranging - Low probability	TC	Yes	R1
Bullish	Acceptance	Ranging - Medium probability	TC	Yes	R1
Bullish	Acceptance	Ranging - High probability	TC	Yes	R1
Bullish	Rejection	Trending - High probability	TC	Yes	S1
Bullish	Rejection	Trending - Medium probability	TC	Yes	S1
Bullish	Rejection	Trending - Low probability	TC	Yes	S1
Bullish	Rejection	Ranging - Low probability	TC	Yes	S1
Bullish	Rejection	Ranging - Medium probability	TC	Yes	S1
Bullish	Rejection	Ranging - High probability	TC	Yes	S1
Bearish	Acceptance	Trending - High probability	TC	Yes	S1
Bearish	Acceptance	Trending - Medium probability	TC	Yes	S1
Bearish	Acceptance	Trending - Low probability	TC	Yes	S1
Bearish	Acceptance	Ranging - Low probability	TC	Yes	S1
Bearish	Acceptance	Ranging - Medium probability	TC	Yes	S1

Bearish	Acceptance	Ranging - High probability	TC	Yes	S1
Bearish	Rejection	Trending - High probability	TC	Yes	R2
Bearish	Rejection	Trending - Medium probability	TC	Yes	R1
Bearish	Rejection	Trending - Low probability	TC	Yes	R1
Bearish	Rejection	Ranging - Low probability	TC	Yes	R1
Bearish	Rejection	Ranging - Medium probability	TC	Yes	R1
Bearish	Rejection	Ranging - High probability	TC	Yes	R1
Bullish	Acceptance	Trending - High probability	P	Yes	R2
Bullish	Acceptance	Trending - Medium probability	P	Yes	R1
Bullish	Acceptance	Trending - Low probability	P	Yes	R1
Bullish	Acceptance	Ranging - Low probability	P	Yes	R1
Bullish	Acceptance	Ranging - Medium probability	P	Yes	R1
Bullish	Acceptance	Ranging - High probability	P	Yes	R1
Bullish	Rejection	Trending - High probability	P	Yes	S2
Bullish	Rejection	Trending - Medium probability	P	Yes	S1
Bullish	Rejection	Trending - Low probability	P	Yes	S1
Bullish	Rejection	Ranging - Low probability	P	Yes	S1
Bullish	Rejection	Ranging - Medium probability	P	Yes	S1
Bullish	Rejection	Ranging - High probability	P	Yes	S1
Bearish	Acceptance	Trending - High probability	P	Yes	S2
Bearish	Acceptance	Trending - Medium probability	P	Yes	S1
Bearish	Acceptance	Trending - Low probability	P	Yes	S1
Bearish	Acceptance	Ranging - Low probability	P	Yes	S1
Bearish	Acceptance	Ranging - Medium probability	P	Yes	S1
Bearish	Acceptance	Ranging - High probability	P	Yes	S1
Bearish	Rejection	Trending - High probability	P	Yes	R2
Bearish	Rejection	Trending - Medium probability	P	Yes	R1
Bearish	Rejection	Trending - Low probability	P	Yes	R1
Bearish	Rejection	Ranging - Low probability	P	Yes	R1
Bearish	Rejection	Ranging - Medium probability	P	Yes	R1
Bearish	Rejection	Ranging - High probability	P	Yes	R1
Bullish	Acceptance	Trending - High probability	BC	Yes	R1
Bullish	Acceptance	Trending - Medium probability	BC	Yes	R1
Bullish	Acceptance	Trending - Low probability	BC	Yes	R1
Bullish	Acceptance	Ranging - Low probability	BC	Yes	R1
Bullish	Acceptance	Ranging - Medium probability	BC	Yes	R1
Bullish	Acceptance	Ranging - High probability	BC	Yes	R1
Bullish	Rejection	Trending - High probability	BC	Yes	S2
Bullish	Rejection	Trending - Medium probability	BC	Yes	S1
Bullish	Rejection	Trending - Low probability	BC	Yes	S1
Bullish	Rejection	Ranging - Low probability	BC	Yes	S1
Bullish	Rejection	Ranging - Medium probability	BC	Yes	S1
Bullish	Rejection	Ranging - High probability	BC	Yes	S1
Bearish	Acceptance	Trending - High probability	BC	Yes	S2
Bearish	Acceptance	Trending - Medium probability	BC	Yes	S1
Bearish	Acceptance	Trending - Low probability	BC	Yes	S1
Bearish	Acceptance	Ranging - Low probability	BC	Yes	S1
Bearish	Acceptance	Ranging - Medium probability	BC	Yes	S1

Bearish	Acceptance	Ranging - High probability	BC	Yes	S1
Bearish	Rejection	Trending - High probability	BC	Yes	R1
Bearish	Rejection	Trending - Medium probability	BC	Yes	R1
Bearish	Rejection	Trending - Low probability	BC	Yes	R1
Bearish	Rejection	Ranging - Low probability	BC	Yes	R1
Bearish	Rejection	Ranging - Medium probability	BC	Yes	R1
Bearish	Rejection	Ranging - High probability	BC	Yes	R1
Bullish	Acceptance	Trending - High probability	S1	Yes	TC
Bullish	Acceptance	Trending - Medium probability	S1	Yes	P
Bullish	Acceptance	Trending - Low probability	S1	Yes	P
Bullish	Acceptance	Ranging - Low probability	S1	Yes	P
Bullish	Acceptance	Ranging - Medium probability	S1	Yes	P
Bullish	Acceptance	Ranging - High probability	S1	Yes	P
Bullish	Rejection	Trending - High probability	S1	Yes	S3
Bullish	Rejection	Trending - Medium probability	S1	Yes	S2
Bullish	Rejection	Trending - Low probability	S1	Yes	S2
Bullish	Rejection	Ranging - Low probability	S1	No	No Trade
Bullish	Rejection	Ranging - Medium probability	S1	No	No Trade
Bullish	Rejection	Ranging - High probability	S1	No	No Trade
Bearish	Acceptance	Trending - High probability	S1	Yes	S3
Bearish	Acceptance	Trending - Medium probability	S1	Yes	S2
Bearish	Acceptance	Trending - Low probability	S1	Yes	S2
Bearish	Acceptance	Ranging - Low probability	S1	No	No Trade
Bearish	Acceptance	Ranging - Medium probability	S1	No	No Trade
Bearish	Acceptance	Ranging - High probability	S1	No	No Trade
Bearish	Rejection	Trending - High probability	S1	Yes	TC
Bearish	Rejection	Trending - Medium probability	S1	Yes	P
Bearish	Rejection	Trending - Low probability	S1	Yes	P
Bearish	Rejection	Ranging - Low probability	S1	Yes	P
Bearish	Rejection	Ranging - Medium probability	S1	Yes	P
Bearish	Rejection	Ranging - High probability	S1	Yes	P
Bullish	Acceptance	Trending - High probability	S2	Yes	P
Bullish	Acceptance	Trending - Medium probability	S2	Yes	S1
Bullish	Acceptance	Trending - Low probability	S2	Yes	S1
Bullish	Acceptance	Ranging - Low probability	S2	Yes	S1
Bullish	Acceptance	Ranging - Medium probability	S2	Yes	S1
Bullish	Acceptance	Ranging - High probability	S2	Yes	S1
Bullish	Rejection	Trending - High probability	S2	Yes	S3
Bullish	Rejection	Trending - Medium probability	S2	Yes	S3
Bullish	Rejection	Trending - Low probability	S2	Yes	S3
Bullish	Rejection	Ranging - Low probability	S2	No	No Trade
Bullish	Rejection	Ranging - Medium probability	S2	No	No Trade
Bullish	Rejection	Ranging - High probability	S2	No	No Trade
Bearish	Acceptance	Trending - High probability	S2	Yes	S3
Bearish	Acceptance	Trending - Medium probability	S2	Yes	S3
Bearish	Acceptance	Trending - Low probability	S2	Yes	S3
Bearish	Acceptance	Ranging - Low probability	S2	No	No Trade
Bearish	Acceptance	Ranging - Medium probability	S2	No	No Trade

Bearish	Acceptance	Ranging - High probability	S2	No	No Trade
Bearish	Rejection	Trending - High probability	S2	Yes	P
Bearish	Rejection	Trending - Medium probability	S2	Yes	S1
Bearish	Rejection	Trending - Low probability	S2	Yes	S1
Bearish	Rejection	Ranging - Low probability	S2	Yes	S1
Bearish	Rejection	Ranging - Medium probability	S2	Yes	S1
Bearish	Rejection	Ranging - High probability	S2	Yes	S1
Bullish	Acceptance	Trending - High probability	S3	Yes	S1
Bullish	Acceptance	Trending - Medium probability	S3	Yes	S2
Bullish	Acceptance	Trending - Low probability	S3	Yes	S2
Bullish	Acceptance	Ranging - Low probability	S3	Yes	S2
Bullish	Acceptance	Ranging - Medium probability	S3	Yes	S2
Bullish	Acceptance	Ranging - High probability	S3	Yes	S2
Bullish	Rejection	Trending - High probability	S3	No	No Trade
Bullish	Rejection	Trending - Medium probability	S3	No	No Trade
Bullish	Rejection	Trending - Low probability	S3	No	No Trade
Bullish	Rejection	Ranging - Low probability	S3	No	No Trade
Bullish	Rejection	Ranging - Medium probability	S3	No	No Trade
Bullish	Rejection	Ranging - High probability	S3	No	No Trade
Bearish	Acceptance	Trending - High probability	S3	No	No Trade
Bearish	Acceptance	Trending - Medium probability	S3	No	No Trade
Bearish	Acceptance	Trending - Low probability	S3	No	No Trade
Bearish	Acceptance	Ranging - Low probability	S3	No	No Trade
Bearish	Acceptance	Ranging - Medium probability	S3	No	No Trade
Bearish	Acceptance	Ranging - High probability	S3	No	No Trade
Bearish	Rejection	Trending - High probability	S3	Yes	S1
Bearish	Rejection	Trending - Medium probability	S3	Yes	S2
Bearish	Rejection	Trending - Low probability	S3	Yes	S2
Bearish	Rejection	Ranging - Low probability	S3	Yes	S2
Bearish	Rejection	Ranging - Medium probability	S3	Yes	S2
Bearish	Rejection	Ranging - High probability	S3	Yes	S2
Bullish	Acceptance	Trending - High probability	H5	No	No Trade
Bullish	Acceptance	Trending - Medium probability	H5	No	No Trade
Bullish	Acceptance	Trending - Low probability	H5	No	No Trade
Bullish	Acceptance	Ranging - Low probability	H5	No	No Trade
Bullish	Acceptance	Ranging - Medium probability	H5	No	No Trade
Bullish	Acceptance	Ranging - High probability	H5	No	No Trade
Bullish	Rejection	Trending - High probability	H5	Yes	H4
Bullish	Rejection	Trending - Medium probability	H5	Yes	H4
Bullish	Rejection	Trending - Low probability	H5	Yes	H4
Bullish	Rejection	Ranging - Low probability	H5	Yes	H4
Bullish	Rejection	Ranging - Medium probability	H5	Yes	H4
Bullish	Rejection	Ranging - High probability	H5	Yes	H4
Bearish	Acceptance	Trending - High probability	H5	Yes	H4
Bearish	Acceptance	Trending - Medium probability	H5	Yes	H4
Bearish	Acceptance	Trending - Low probability	H5	Yes	H4
Bearish	Acceptance	Ranging - Low probability	H5	Yes	H4
Bearish	Acceptance	Ranging - Medium probability	H5	Yes	H4

Bearish	Acceptance	Ranging - High probability	H5	Yes	H4
Bearish	Rejection	Trending - High probability	H5	No	No Trade
Bearish	Rejection	Trending - Medium probability	H5	No	No Trade
Bearish	Rejection	Trending - Low probability	H5	No	No Trade
Bearish	Rejection	Ranging - Low probability	H5	No	No Trade
Bearish	Rejection	Ranging - Medium probability	H5	No	No Trade
Bearish	Rejection	Ranging - High probability	H5	No	No Trade
Bullish	Acceptance	Trending - High probability	H4	Yes	H5
Bullish	Acceptance	Trending - Medium probability	H4	Yes	H5
Bullish	Acceptance	Trending - Low probability	H4	Yes	H5
Bullish	Acceptance	Ranging - Low probability	H4	No	No Trade
Bullish	Acceptance	Ranging - Medium probability	H4	No	No Trade
Bullish	Acceptance	Ranging - High probability	H4	No	No Trade
Bullish	Rejection	Trending - High probability	H4	Yes	H3
Bullish	Rejection	Trending - Medium probability	H4	Yes	H3
Bullish	Rejection	Trending - Low probability	H4	Yes	H3
Bullish	Rejection	Ranging - Low probability	H4	Yes	H3
Bullish	Rejection	Ranging - Medium probability	H4	Yes	H3
Bullish	Rejection	Ranging - High probability	H4	Yes	H3
Bearish	Acceptance	Trending - High probability	H4	No	No Trade
Bearish	Acceptance	Trending - Medium probability	H4	No	No Trade
Bearish	Acceptance	Trending - Low probability	H4	No	No Trade
Bearish	Acceptance	Ranging - Low probability	H4	Yes	H3
Bearish	Acceptance	Ranging - Medium probability	H4	Yes	H3
Bearish	Acceptance	Ranging - High probability	H4	Yes	H3
Bearish	Rejection	Trending - High probability	H4	Yes	H5
Bearish	Rejection	Trending - Medium probability	H4	Yes	H5
Bearish	Rejection	Trending - Low probability	H4	Yes	H5
Bearish	Rejection	Ranging - Low probability	H4	No	No Trade
Bearish	Rejection	Ranging - Medium probability	H4	No	No Trade
Bearish	Rejection	Ranging - High probability	H4	No	No Trade
Bullish	Acceptance	Trending - High probability	H3	Yes	H5
Bullish	Acceptance	Trending - Medium probability	H3	Yes	H4
Bullish	Acceptance	Trending - Low probability	H3	Yes	H4
Bullish	Acceptance	Ranging - Low probability	H3	No	No Trade
Bullish	Acceptance	Ranging - Medium probability	H3	No	No Trade
Bullish	Acceptance	Ranging - High probability	H3	No	No Trade
Bullish	Rejection	Trending - High probability	H3	Yes	P
Bullish	Rejection	Trending - Medium probability	H3	Yes	TC
Bullish	Rejection	Trending - Low probability	H3	Yes	TC
Bullish	Rejection	Ranging - Low probability	H3	Yes	L3
Bullish	Rejection	Ranging - Medium probability	H3	Yes	L3
Bullish	Rejection	Ranging - High probability	H3	Yes	L3
Bearish	Acceptance	Trending - High probability	H3	Yes	P
Bearish	Acceptance	Trending - Medium probability	H3	Yes	TC
Bearish	Acceptance	Trending - Low probability	H3	Yes	TC
Bearish	Acceptance	Ranging - Low probability	H3	Yes	L3
Bearish	Acceptance	Ranging - Medium probability	H3	Yes	L3

Bearish	Acceptance	Ranging - High probability	H3	Yes	L3
Bearish	Rejection	Trending - High probability	H3	Yes	H5
Bearish	Rejection	Trending - Medium probability	H3	Yes	H4
Bearish	Rejection	Trending - Low probability	H3	Yes	H4
Bearish	Rejection	Ranging - Low probability	H3	No	No Trade
Bearish	Rejection	Ranging - Medium probability	H3	No	No Trade
Bearish	Rejection	Ranging - High probability	H3	No	No Trade
Bullish	Acceptance	Trending - High probability	L3	Yes	H3
Bullish	Acceptance	Trending - Medium probability	L3	Yes	BC
Bullish	Acceptance	Trending - Low probability	L3	Yes	BC
Bullish	Acceptance	Ranging - Low probability	L3	Yes	H3
Bullish	Acceptance	Ranging - Medium probability	L3	Yes	H3
Bullish	Acceptance	Ranging - High probability	L3	Yes	H3
Bullish	Rejection	Trending - High probability	L3	Yes	L5
Bullish	Rejection	Trending - Medium probability	L3	Yes	L4
Bullish	Rejection	Trending - Low probability	L3	Yes	L4
Bullish	Rejection	Ranging - Low probability	L3	No	No Trade
Bullish	Rejection	Ranging - Medium probability	L3	No	No Trade
Bullish	Rejection	Ranging - High probability	L3	No	No Trade
Bearish	Acceptance	Trending - High probability	L3	Yes	L5
Bearish	Acceptance	Trending - Medium probability	L3	Yes	L4
Bearish	Acceptance	Trending - Low probability	L3	Yes	L4
Bearish	Acceptance	Ranging - Low probability	L3	No	No Trade
Bearish	Acceptance	Ranging - Medium probability	L3	No	No Trade
Bearish	Acceptance	Ranging - High probability	L3	No	No Trade
Bearish	Rejection	Trending - High probability	L3	Yes	H3
Bearish	Rejection	Trending - Medium probability	L3	Yes	BC
Bearish	Rejection	Trending - Low probability	L3	Yes	BC
Bearish	Rejection	Ranging - Low probability	L3	Yes	H3
Bearish	Rejection	Ranging - Medium probability	L3	Yes	H3
Bearish	Rejection	Ranging - High probability	L3	Yes	H3
Bullish	Acceptance	Trending - High probability	L4	No	No Trade
Bullish	Acceptance	Trending - Medium probability	L4	No	No Trade
Bullish	Acceptance	Trending - Low probability	L4	No	No Trade
Bullish	Acceptance	Ranging - Low probability	L4	Yes	L3
Bullish	Acceptance	Ranging - Medium probability	L4	Yes	L3
Bullish	Acceptance	Ranging - High probability	L4	Yes	L3
Bullish	Rejection	Trending - High probability	L4	Yes	L5
Bullish	Rejection	Trending - Medium probability	L4	Yes	L5
Bullish	Rejection	Trending - Low probability	L4	Yes	L5
Bullish	Rejection	Ranging - Low probability	L4	No	No Trade
Bullish	Rejection	Ranging - Medium probability	L4	No	No Trade
Bullish	Rejection	Ranging - High probability	L4	No	No Trade
Bearish	Acceptance	Trending - High probability	L4	Yes	L5
Bearish	Acceptance	Trending - Medium probability	L4	Yes	L5
Bearish	Acceptance	Trending - Low probability	L4	Yes	L5
Bearish	Acceptance	Ranging - Low probability	L4	No	No Trade
Bearish	Acceptance	Ranging - Medium probability	L4	No	No Trade

Bearish	Acceptance	Ranging - High probability	L4	No	No Trade
Bearish	Rejection	Trending - High probability	L4	Yes	L3
Bearish	Rejection	Trending - Medium probability	L4	Yes	L3
Bearish	Rejection	Trending - Low probability	L4	Yes	L3
Bearish	Rejection	Ranging - Low probability	L4	Yes	L3
Bearish	Rejection	Ranging - Medium probability	L4	Yes	L3
Bearish	Rejection	Ranging - High probability	L4	Yes	L3
Bullish	Acceptance	Trending - High probability	L5	Yes	L4
Bullish	Acceptance	Trending - Medium probability	L5	Yes	L4
Bullish	Acceptance	Trending - Low probability	L5	Yes	L4
Bullish	Acceptance	Ranging - Low probability	L5	Yes	L4
Bullish	Acceptance	Ranging - Medium probability	L5	Yes	L4
Bullish	Acceptance	Ranging - High probability	L5	Yes	L4
Bullish	Rejection	Trending - High probability	L5	No	No Trade
Bullish	Rejection	Trending - Medium probability	L5	No	No Trade
Bullish	Rejection	Trending - Low probability	L5	No	No Trade
Bullish	Rejection	Ranging - Low probability	L5	No	No Trade
Bullish	Rejection	Ranging - Medium probability	L5	No	No Trade
Bullish	Rejection	Ranging - High probability	L5	No	No Trade
Bearish	Acceptance	Trending - High probability	L5	No	No Trade
Bearish	Acceptance	Trending - Medium probability	L5	No	No Trade
Bearish	Acceptance	Trending - Low probability	L5	No	No Trade
Bearish	Acceptance	Ranging - Low probability	L5	No	No Trade
Bearish	Acceptance	Ranging - Medium probability	L5	No	No Trade
Bearish	Acceptance	Ranging - High probability	L5	No	No Trade
Bearish	Rejection	Trending - High probability	L5	Yes	L4
Bearish	Rejection	Trending - Medium probability	L5	Yes	L4
Bearish	Rejection	Trending - Low probability	L5	Yes	L4
Bearish	Rejection	Ranging - Low probability	L5	Yes	L4
Bearish	Rejection	Ranging - Medium probability	L5	Yes	L4
Bearish	Rejection	Ranging - High probability	L5	Yes	L4
Bullish	Acceptance	Trending - High probability	POC	Yes	R2
Bullish	Acceptance	Trending - Medium probability	POC	Yes	R1
Bullish	Acceptance	Trending - Low probability	POC	Yes	R1
Bullish	Acceptance	Ranging - Low probability	POC	Yes	R1
Bullish	Acceptance	Ranging - Medium probability	POC	Yes	R1
Bullish	Acceptance	Ranging - High probability	POC	Yes	R1
Bullish	Rejection	Trending - High probability	POC	Yes	S2
Bullish	Rejection	Trending - Medium probability	POC	Yes	S1
Bullish	Rejection	Trending - Low probability	POC	Yes	S1
Bullish	Rejection	Ranging - Low probability	POC	Yes	S1
Bullish	Rejection	Ranging - Medium probability	POC	Yes	S1
Bullish	Rejection	Ranging - High probability	POC	Yes	S1
Bearish	Acceptance	Trending - High probability	POC	Yes	S2
Bearish	Acceptance	Trending - Medium probability	POC	Yes	S1
Bearish	Acceptance	Trending - Low probability	POC	Yes	S1
Bearish	Acceptance	Ranging - Low probability	POC	Yes	S1
Bearish	Acceptance	Ranging - Medium probability	POC	Yes	S1

Bearish	Acceptance	Ranging - High probability	POC	Yes	S1
Bearish	Rejection	Trending - High probability	POC	Yes	R2
Bearish	Rejection	Trending - Medium probability	POC	Yes	R1
Bearish	Rejection	Trending - Low probability	POC	Yes	R1
Bearish	Rejection	Ranging - Low probability	POC	Yes	R1
Bearish	Rejection	Ranging - Medium probability	POC	Yes	R1
Bearish	Rejection	Ranging - High probability	POC	Yes	R1