

Updates to EA

I have attached a very rough visual representation of how the first two updates would work.

PDL SL Improvement:

These settings are calculated for every trade independently, as they all have different potential gains, however, the same master settings could be applied to all trades for their individually calculations.

Part 1:

- New inputs:
 - **Realistic gain %:** Any %
 - **PDL SL % of gain:** Any %
- Upon open of the trade:
 - Record the potential pip gain (PPG) (distance to mean from PDL opening position).
 - E.g. if trade is opened when PDL = 2100 and mean = 2000, then potential pip gain = $2100 - 2000 = 100$
 - Multiply the PPG by the inputted value for “Realistic gain %”, which is basically what % of the PPG we expect to profit when the PDL eventually returns to the mean.
 - E.g. if 90% was inputted for “Realistic gain %”, then $100 \times 0.9 = 90$. This is the realistic potential pip gain (RPPG).
 - Now the EA automatically sets the *PDL pips SL* according to the value inputted for “PDL SL % of gain” multiplied by the RPPG.
 - E.g. We have RPPG = 90, and if 50% was inputted for “PDL SL % of gain”. Then, $90 \times 0.5 = 45$. Therefore, the *PDL pips SL* is automatically set to 45.
 - So basically, with these inputted settings it would be a risk to reward ratio of 1:2.
 - The value for “PDL SL % of gain” can be from 0 to infinity. So, values inputted like 200% are okay. This would allow us to risk more for our potential gain. E.g. if 200% was inputted then *PDL pips SL* would be 180, giving a 2:1 risk reward ratio.

Part 2:

- New input:
 - **Live SL adjustment:** True/False
- If the mean line moves, this reduces the PPG, which is calculated using the PDL value on trade open.
 - Therefore, the *PDL pips SL* needs to be updated.
 - E.g. At the open point, PDL = 2100 and mean = 2000. “Realistic gain %” = 90% and “PDL SL % of gain” = 50%.
 - So originally, *PDL SL pips* is 45, meaning that the trade will close when PDL hits 2145.
 - The mean line moves to 2050, while PDL is at 2120.
 - PPG is now $2100 - 2050 = 50$. So, RPPG = $0.9 \times 50 = 45$. (note here, original PDL value was used, not the new one)
 - *PDL pips SL* now becomes $45 \times 0.5 = 22.5$, meaning that the trade will close when PDL hits 2122.5.

- The above process is calculated for all changes in values for the PDL and mean. So, the *PDL pips SL* is forever updated until the trade closes.

Profit Protection Implementation

These settings are calculated for every trade independently, as they all have different potential gains, however, the same master settings could be applied to all trades for their individually calculations.

Part 1:

- Uses one of the new inputs from above, “Realistic gain %”, and two other new inputs:
 - **PDL profit protection implementation %:** Any %
 - **PDL profit protected %:** Any %
- The EA does the exact same thing to calculate the PPG and then the RPPG.
- If the PDL goes towards the mean in our favor, and $(\text{Pips in profit})/\text{RPPG} \times 100\% = \text{“PDL profit protection implementation %”}$, it will set the SL at “PDL profit protected %” x RPPG.
 - E.g. Trade opens at PDL = 2100, mean = 2000, “Realistic gain %” = 90%
 - So, PPG = 100 pips and RPPG = 90 pips. The EA does nothing at this stage. It waits for the PDL to move in our favor by the required amount.
 - These values were inputted: “PDL profit protection implementation %” = 50%, and “PDL profit protected %” = 10%
 - Therefore, if the PDL moves in our favor by “PDL profit protection implementation %” x RPPG = 50% x 90 = 45 pips, it will set the SL at “PDL profit protected %” x RPPG = 10% x 90 = 9 pips.
 - That is, the PDL must reach 2100 – 45 = 2055, and then the SL will be set at 2100 – 9 = 2091. Thus, guaranteeing 9 pips profit, but giving 36 pips breathing room for the trade to hopefully close at the mean.

Part 2:

- New input:
 - **Live profit protection adjustment:** True/False
- If the mean line moves, this reduces the PPG, which is calculated using the PDL value on trade open.
 - Therefore, the required amount to initiate the profit protection should be less and updated accordingly.
 - E.g. At the open point PDL = 2100, mean = 2000, “Realistic gain %” = 90%, “PDL profit protection implementation %” = 50% and “PDL profit protected %” = 10%
 - Later, PDL = 2090 and mean = 2040.
 - Therefore, the PPG = 2100 – 2040 = 60 and RPPG = 60 x 90% = 54.
 - So, the profit will be protected if the PDL reaches 54 x 50% = 27 pips and the SL will be set to 54 x 10% = 5.4 pips.
 - This is, the PDL must now reach 2100 – 27 = 2073, and the SL will be set 2100 – 5.4 = 2094.6. Thus, guaranteeing 5.4 pips profit.
 - The visual representation for this new feature would of course include another line, which would be the new SL should the target for profit protection be reached.

New switch option to EA and PDL Indicator

Please quote a price for this part separately.

I'm thinking this switch option should be relatively easy to implement and won't have too many implications on having to modify the EA/indicator's features. It will work exactly the same, but with one small change.

Its just a simple change of the PDL formula, instead of:

$$PDL = \frac{\text{Currency Pair A}}{\text{Tick Size A}} - \frac{\text{Currency Pair B}}{\text{Tick Size B}}$$

We will have a Percentage Between Currencies (PBC) formula:

$$PBC = \frac{\frac{\text{Currency Pair A}}{\text{Tick Size A}}}{\frac{\text{Currency Pair B}}{\text{Tick Size B}}}$$

The indicators will then use this value to generate the mean and standard deviation lines. (Which I don't think would need recoding if the functions for them just looked at the value produced by the PDL formula?).

The only other thing that I can think would need to be changed is the 'PDL X-Y Entry' settings, but this can be easily fixed. We can just convert the value inputted (in pips) to a percentage, so that it corresponds with the new axis measurement. E.g, if we want lines to be drawn at a distance of 50 pips from the mean then it could be done by dividing 50 by 'Currency Pair B'/Tick Size B'.

$$X \text{ pips to } \% = \frac{X}{\frac{\text{Currency Pair B}}{\text{Tick Size B}}}$$

Very important that it is currency pair B's pip amount that it is divided by. Also note, that the value of currency pair B's pip amount should be taken from each time period (not whatever the current value is). This means that when looking at it visually, the distance you see for 50 pips from the mean will change, as you expect it to when the denominator changes.

This would just be a switch option on the indicator and EA. With input:

- **Mode:** PDL or PBC

The two new features above for SL and TP would also work with this switch, but of course use PBC values in the calculations.