

I am going to compare 3 different ways to manage the trades. I assume that all 3 traders are using the same strategy to generate their signals and start with the same equity, using the same basic lot size.

One trader which I'm going to call **CSL** is using the **classical stop loss** method. He has a RR ratio of 1:1 for each and every trade, and his lot size and placement of SL and TP leads to a gain of 1% if the TP is hit or a loss of 1% if the SL is hit. The distance from the order to the SL is "**p**" pips, same as the distance from the order to the TP.

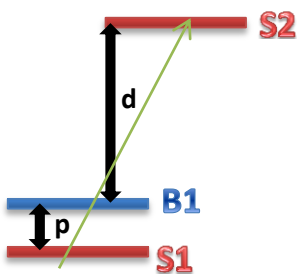
The second trader, **ISL**, is also using a 1:1 RR for each trade and also starts with the same lot size taking the same signals. If his previous trade was a win, the current trade has the usual lot size. If the previous trade was a loss, for the current trade he will add another lot to the position size. If the first trade was a loss, that was a 1% loss. Then the second trade can be either a 2% loss or a 2% win. If this second trade wins 2% he goes back to a 1% risk per trade. If the second trade is a loss, then for the third trade he will risk 3% (and a win would give him 3% as well). This trader is using a **stop loss**, but increasing his lot size when he loses.

The third trader, **LU**, is using a particular kind of hedging strategy which some refer to as **lock-unlock**. The first trade can be a 1% similar to the traders above. However if the position gets to a level where the above traders would take a loss, the LU trader instead opens a position with the same size in the opposite direction. At this point he has locked a 1% loss no matter how the price moves. That is a floating 1% loss since he hasn't closed any position yet. When he gets the next signal, the position that is in profit (either the short or the long) is closed, and a second position is opened, leading to 2 positions being left (both short or both long). If the market moves in the desired direction the fresh short is closed for a 1% gain. If the market moves in the opposite direction a new lock is generated using 2 lots to hedge the 2 lots already open.

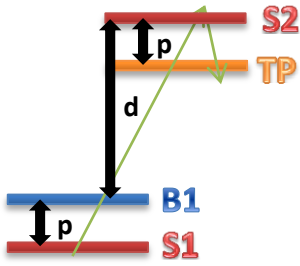
In the following diagram the price generates a sell signal at the level marked as S1. If the price drops a number of **p** pips as expected all 3 traders would close that position for a 1% gain. If the price moves up by a distance of **p** pips, reaching the B1 level, the CSL and ISL traders take a loss of 1% when their stop loss is hit. The LU trader would instead open a buy position to hedge his sell. His balance is the same as before, but his equity shows -1% because he has a short with a floating loss of 1%. At this point all 3 traders have the same equity, -1%.



Let's say the price keeps moving up for a while, going a number of **d** pips above the B1 level when a new sell signal is generated by the system. At this point the 3 traders react differently. The CSL trader (currently -1% equity) opens a short position with the usual size and fixed TP and SL of **p** pips that will translate either into a 1% loss or a 1% win. The ISL trader (currently -1% equity) opens his short with twice the usual size and with fixed SL and TP of **p** pips. He can either win 2% or lose 2% on this trade. The LU trader (currently -1% equity) would close his long position for a gain of **d** pips and open a fresh short position. On his balance he added whatever **d** pips means, but he has a floating loss of **p+d** generated by the short opened at S1. So the net pip position is **d-(d+p)**, **-p** pips, in other words he's still at -1% just like the other 2 traders. When this new sell is opened, all 3 traders have -1% equity. The difference is that the CSL and ISL have it as realized loss and LU has it as floating loss; also CSL is just 1 lot short whereas ISL and LU are 2 lots short.

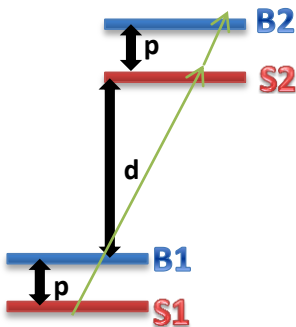


Now let's assume that after the S2 trade was opened the price does indeed go down reaching the desired distance of **p** and let's see what happens to the 3 traders.

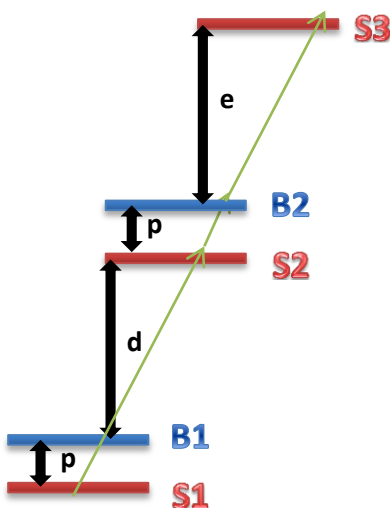


CSL gets 1% on this trade, so his new equity is 100%; he is on breakeven, with no positions open. ISL gets 2%, so his new equity is 101%, or +1%. For the LU trader, things are as follows: in terms of realized PL he has the  $d$  pips we already talked about plus the  $p$  pips he gets for closing his fresh short right now. His balance stands at  $+d+p$  in terms of pips. He has the short from S1 being still open, which is  $d$  pips below current market price, so that's a  $-d$  floating loss. Overall the equity is  $+d+p-d$ , that is  $+p$  pips translating into +1%. If the price follows this path the CSL trader is on breakeven with no positions open, whereas both the ISL and the LU traders have an equity of +1%. The ISL has it as realized PL, whereas the LU trader has a bigger balance than ISL, but also has a negative float which if he chooses to close right now it would put him exactly in the same position as ISL.

But what happens if after selling at S2 the price goes up another  $p$  pips?

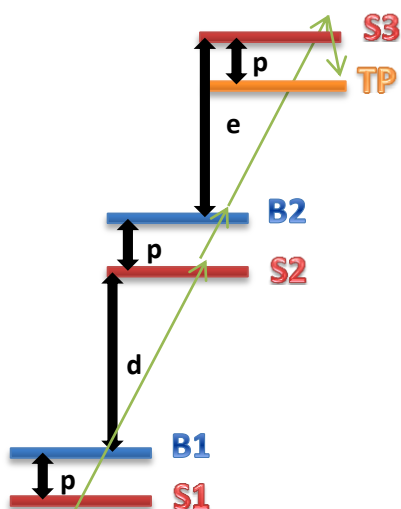


At this new level, B2, the CSL trader will suffer a loss of 1% which brings his equity to 98%, or -2%. He has no positions open. The ISL trader will also suffer his second loss, his new equity being 97%, because on his second trade he lost 2%. For the LU trader we have a realized gain of  $d$  pips (the B1 buy closed at S2) and the floating losses generated by his 2 shorts. The short opened at S1 is a negative of  $2p+d$ , and the short opened at S2 is a negative of  $p$ . The floating loss is then  $2p+d+p=3p+d$ . Overall the equity in terms of pips is  $d-(3p+d)=-3p$ . In terms of percentages that  $-3p$  means that he is at -3%, or 97%, just like the ISL trader. In this scenario we notice that the CSL player has only -2% while the others have -3%. Those -3% are already realized for the ISL trader while the LU trader has in fact a positive balance but with a big negative floating loss (when combined they still give the -3%). A pattern seems to emerge ... when the trader wins the ISL and LU lead to the same result and it's superior compared to the one the CSL trader gets. However when the trader loses, while the ISL and LU still have identical results in term of equity they both generate bigger losses than the CSL method. I will go another level up to see if the trend is the same.

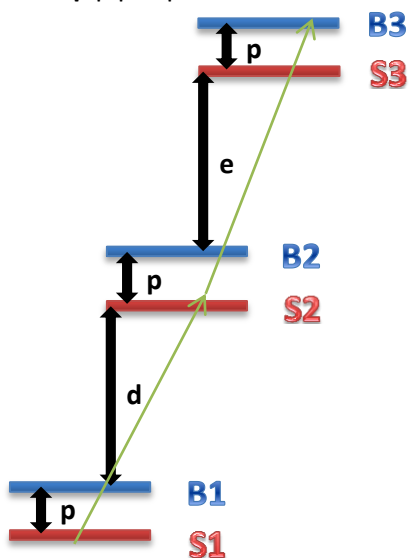


The price goes up and after a number of  $e$  pips from B2 and we have a new sell signal on the chart, at S3. The CSL trader (whose equity is 98%) will sell his usual 1 lot at that point. The ISL trader (whose equity is 97%) would sell 3 lots this time (he can either win 3% or lose 3% on this trade). The LU trader would close the 2 long positions that he had opened at B2 and open a fresh sell with 1 lot. At this point in terms of realized pips the LU trader has  $d$  (the initial buy at B1 closed at S2)  $+2e$  (the 2 buys opened at B2 and closed right now at S3). His balance shows  $d+2e$ . He has 3 shorts open at S1, S2 and the new one at S3. The floating loss for the S1 sell is at  $d+e+2p$ , and for the S2 sell is at  $e+p$ . Overall his floating loss is  $d+e+2p+e+p$ , that is  $d+2e+3p$ . Since the balance is  $d+2e$ , overall his equity would be  $-3p$ , or  $-3\%$  (no surprise, exactly the same as the ISL trader).

If the market drops  $p$  pips as the traders want, we have the following: The CSL trader wins 1% on this trade and overall he is at 99%, or  $-1\%$ . The ISL trader makes 3% on this trade, so his new equity is 100%, he is on breakeven. The LU had the old realized gains of  $d+2e$ , to which he can add another  $p$  resulted from closing his latest short from S3. So his realized profit is  $p+d+2e$ . He has 2 shorts under water, one from S1 with a  $d+p+e$  deficit, the other one from S2 with a deficit of  $e$ . His floating loss would be  $d+p+e+e=p+d+2e$ , exactly the same as his deficit (again no surprise, he follows the same path as the ISL but in a much more complicated fashion). Overall his equity is at 0, he can choose to close the 2 shorts he has open to bring everything to breakeven.



Now let's examine what happens if after opening the S3 sell the price keeps moving in the "wrong" direction, another  $p$  pips up.



When B3 is reached, the CSL trader will close his new short, for another 1% loss. His new equity is 97%. The ISL trader will lose 3% on this trade (after losing 1% and then 2% on the first trades) – so now he is at 94%, or  $-6\%$ . Let's see what happens to the LU trader, who now opens 3 longs at B3 to hedge the 3 shorts he has open. As closed positions (his longs) he has  $d+2e$  coming from his B1 to S2 (with 1 lot) and B2 to S3 (with 2 lots) – both gains. The 3 shorts he has open are all floating losses, as follows: for the one opened at S1 it is  $3p+d+e$ , the one from S2 has a

negative of  $2p+e$  and the most recent one is at  $-p$ . Overall the floating loss is  $3p+d+e+2p+e+p=6p+d+2e$ . So realized pips are  $d+2e$ , floating loss is  $6p+d+2e$ , meaning his net loss is  $6p$  – once again identical to the ISL trader. At this point they are both at -6%, compared to the CSL player who lost only 3%. We see that at this level the losses incurred by the ISL or LU trader are much bigger than the loss suffered by the CSL trader.

I don't wish to waste more time drawing the next levels. I have done a few more and I already know what happens. I want to show you a very interesting table covering the outcome up to level 12.

		1	2	3	4	5	6	7	8	9	10	11	12
CSL	W	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10
	L	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12
ISL/LU	W	1	1	0	-2	-5	-9	-14	-20	-27	-35	-44	-54
	L	-1	-3	-6	-10	-15	-21	-28	-36	-45	-55	-66	-78

First allow me to explain how to read the table. The first row (1-12) is the trade number. Any row that starts with a W shows the equity using that system assuming that all the previous trades were losers and the current one is a win. The rows starting with an L show the equity available if all the trades so far (including the current one) are losers. For example we can see that by using the ISL or LU methods (they have identical outcomes), if the first 4 trades are losses we are at -10% (I used a red font for that square). Or we can see that by using the CSL method if the first 6 trades are losses and the 7<sup>th</sup> one is a win we are at -5% (I used a bold blue font for that one). The numbers in blue show the best result for that trade. For example after just 1 trade all methods give the same outcome – that is why all those 4 numbers are blue (1 for win, -1 for loss). After 3 trades, if the first two are losses and the third one is a win the ISL/LU method is better with a score of 0% (BE), but if all 3 trades are losses the CSL method is better with a score of -3 compared to the other method giving -6 (a scenario covered in the detailed description on the previous page).

Some very interesting **conclusions** can be drawn from this table. If we have a sequence of losers the ISL/LU method is NEVER superior, the loss is always bigger compared to the CSL method. More than that, the difference grows at an alarming rate – note the numbers -1, -3, -6, -10, -15 (so called triangular numbers, they have interesting properties). Easy to see the complete ruin after a few more losses.

Even more surprising is probably that even if we have a win at some point the ISL/LU method is better only if that win occurs on the second or third trade. If it's on the 4<sup>th</sup> trade the CSL method would be just as good. And if the win occurs later (5<sup>th</sup> trade or more) the ISL/LU method is way worse. You see the same alarming drop in equity at a very fast rate.

These things have been known for a very long time. They were proven by mathematicians, they were tested by traders. It is the reason why no serious professional traders, banks or institutions use the ISL or LU methods. Those 2 methods are superior to the classical stop loss method only within a narrow range (if the second or third trade is a winner following initial losses) but they fail horribly when the good trade occurs later. These methods could be used profitably only if the trader has a system that almost never gets a string of 4 or more losses. For a system using a 1:1 RR ratio, no matter how good, having a string of 4 losses at some point is close to a certainty. Of the 2 “dubious” methods (ISL and LU), the LU method is the inferior one because it also loses more in terms of trading costs due to rollover/swaps. However on forums like Forex Factory where anyone can make absurd claims regarding methods like martingale, recovery, no stop-loss, increasing bet sizes, lock-unlock, futile hedging and so on ... many traders are drawn to such methods because they try to bypass the unpleasant feeling generated by closing a trade as a loss. Once the trader understands that he's simply playing a game of probabilities he should choose the methods that have a superior expectancy long term.