

## The Paradox: Losing money with a profitable system.

It seems as if it never fails to happen. Is it bad luck, or some form of Murphy's law (what can go wrong will go wrong)? Its hard to tell, maybe some investors are just destined to lose money, but each year there is a tough luck story of investor or two who loses money trading a profitable system.

This year's nominee has to be an Attain investor who stopped the Helix system after it took a \$2,075 loss on July 20th - its fifth loss in a row and 11th loss out of 19 trades at that time in July. The system was in a drawdown of approximately \$13,000 per contract and she had seen enough, despite her prior admissions and emails saying she understood the system had drawdowns of over \$30,000 in backtesting.

Well, as luck would have it, Helix went on to make approximately \$2,200 the rest of July and \$18,070 in August. Our poor investor called in the other day wondering how the system could have done so well after looking so bad in July, and became so distraught over the missed profits she closed her account.

What causes us to behave in such ways. How can we let emotions into a system trading realm which is ruled by mechanical, non-emotional decisions. The disconnect occurs at the portfolio, or asset allocation, level. While the actual trade by trade decisions of a system are mechanical and consistent, the decision to start or stop a system is still predominantly an emotional one.

Attain has found the decision to stop trading a system becomes more emotional and ill-timed the more an investor "watches" their investment. This makes sense given that most systems make money on only about 35% to 50% of their trades, meaning a trading system investor watching every trade will be disappointed in what she sees the majority of the time.

The following discussion, including the statistics and numbers within, can be directly attributed to Nassim Taleb, from his excellent book, Fooled by Randomness, Texere, LLC Publishing, 2001.

Many investors believe if they had an investment which had a 93% probability of making money each year, they would have found the holy grail. Such an investment would be ideal, and put simply would mean that roughly nine out of every ten years would be profitable.

Consider the troubling idea that a grand majority of investors involved in such investments ultimately lose money. How can that be? - you ask, when there is a 93% probability of success.

Many investors lose money trading systems for the simple fact that they get too close to the action. The great majority of what goes on in a normal trading system account is just noise - with small losers, winners, break even trades, and more going on a daily basis.

Investors who zero in on this noise, instead of the end result can fall into the very dangerous trap of judging their investment too soon. It is the investing equivalent of 'judging a book by its cover', and can lead to an investor stopping a profitable trading systems.

Consider the investor who enjoys a "15% return per year, with 10% volatility per annum. This translates into a 93% probability of making money in any given year. But seen on narrow time scale, this translates into a mere 50.02% probability of making money over any given second."

The investor who checks this account on a second by second basis has no chance of long term success. The investor will be an emotional wreck: "...each day he will have 241 [profitable] minutes against 239 [non-profitable] ones." They will jump off systems at the wrong time, and jump on new systems at equally poor times. They are investing based on the noise, not the facts.

As many investors will attest to, a non-profitable minute (or day) causes much more harm, than a profitable one causes benefit, thus even though the minutes are almost evenly spaced, the emotional drain of all those non-profitable minutes will start to weigh on the decision maker. The result will be an emotional decision to stop trading a system which has a high probability of long term success.

The investor who looks at her statements on a daily basis will have 167 days in which they need to mentally handle losses, versus 197 enjoyable statements. Compare this with the investor who only checks her statements on a monthly basis, being challenged by losses only 4 times out of a year. Now consider this same account, viewed on a yearly basis, would have positive returns on the statement 19 out of 20 years, or 93% of the time. This investor would be crazy to stop the investment, for fear of not enjoying the next 19 profitable years, but the investor who quits after 2 out of 3 losing months deems herself wise.

It goes against human intuition to believe that something which can be witnessed losing money 50% of the time on a daily basis will make money 93% of the time on a yearly basis. It just doesn't seem to make sense, and the reason it doesn't is it's caused by randomness. There is simply a lot of random noise present when viewing performance on a daily basis, and it is extremely difficult to filter out this noise.

The following table shows the probability of viewing a positive return in an account which makes a 15% annual return with 10% volatility at different time intervals.

Probability of making money at different time scales	
Scale	Probability
1 Year	93.00%
1 Quarter	77.00%
1 Month	67.00%
1 Day	54.00%
1 Hour	51.30%
1 Minute	50.17%
1 Second	50.02%

\*from Fooled by Randomness, Nassim Kaleb, Texere Pub. 2001