



RISK IN TIME⁸

A Conceptual framework for Trading & Investing

Our goal in Trading or Investing is to maximize profits over time, repeat it again & again to utilize power of compounding to affect this cause. While we are doing this, we would also like to minimize Drawdowns in our Trading/ Investing portfolios. There are various ways of doing it effectively such as reasonable Stops, Diversification, Asset Allocation etc.

I will be discussing a fundamental concept as to how losses affect us asymmetrically & why Risk in time may be one of the best methods to tackle this situation. As we all know, that profits needed to compensate for any losses is asymmetric, let's look at the table to understand this concept:

Drawdown Percent	Recovery Percent	Recovery Months @15%
1%	1.01%	0.8
2%	2.04%	1.6
3%	3.09%	2.5
5%	5.26%	4.2
10%	11.11%	8.9
20%	25%	20.0
30%	42.86%	34.3
40%	66.67%	53.3
50%	100%	80

As we can see in 2nd column that its around 10% drawdown levels that we start to have impact of asymmetry & at 50% Drawdown, we need 100% returns to get back original amount.

Now, let's look at column 3 which is much more interesting & less discussed. At 15% CAGR strategy when we have 10% Drawdown, the time taken is almost 9 months which is a pretty long time. So, what to do about it?

This concept is straightforward & simple, yet important to grasp before we move to Risk in Time concepts.

Average Trade Length (ATL)

For this, we need to know to know our **Average Trade Length (ATL)** – both winning & losing trades. Any back-testing tool like Amibroker etc. gives you that. If you are not good at coding, then you can manually check charts of situations of your trading system & enter the duration based on entry & exit. This must be done for a minimum of 30 trades, though more is better. Please, remember that this is just an average – that's it – not a perfect future prediction.

Suppose, our ATL of winning trades is 10 days & our ATL of losing trade is 5 days. Also, let's assume that we are in markets 75% of the time. This is my top down approach which has helped me a lot in times good & bad. Here's a ballpark calculation method which one can use (just an illustrative example):

- Yearly permissible drawdown: 24% of portfolio
- Monthly permissible drawdown: 4% of portfolio
- Weekly permissible drawdown: 2% of portfolio

Firstly, a simple concept is important for all of us to understand Market's Money Bias. There's a tendency amongst all of us to think about money in compartments. But here, we have to understand the concept that all unbooked profits of open positions is actually our money only & not market's money. This leads us to be structured about open positions, thus effecting our Risk management. So, our overall Risk-taking capacity generally would be determined by:

Overall Risk-taking capacity = Risk of open positions + Available risk for new trades.

Therefore, Available risk for new trades = Overall Risk-taking capacity - Risk of open positions.

Let me add a twist here, we will consider 50% of open profits (if trade goes in favor to manage risk overall). At the time of initiation of trade, Maximum trade loss will be fixed, its only when we are in profits, we will spread our risk.

Example 1

Let me discuss with an example, suppose you decide that your overall market risk can't be more than say 5% & combined risk of all new Positions (after combining overall Stops) is say 2%, then as per above –

Available risk for new trades = 5% - 2%;
= 3%

Now, if we are in profitable trades & our trailing SL has moved up, here we will consider 50% as our money & 50% market's money.

Continuing from above, if trailing profits = 4% (of portfolio), using our concept of 50% of open profits, we will take only 2% into our calculation. Thus
Available risk for new trades (**now**) = 3% + 2%
= 5%

Example 2

Risk/trade = 1% of portfolio.

Open trades = 1 (after full position is initiated).

Suppose, average entry price = 100.

Max loss SL = 90.

Max risk/trade = 10 (1% of overall portfolio).

Now, CMP = 110.

Trailing SL = 100

Max risk/trade = 10 (<1% of overall portfolio).

Since, it is open profit, we will consider for next trade only 50% as market's money leading to calculation (5 in this case):

Open risk assumed = 0.5%

Available risk for opening of next trades (Weekly)
= 2 - 0.5 = 1.5%.

This provides a decent framework to create a mix of Risk in time.

Summarizing

Now, coming back again to illustrative example:

- Yearly permissible drawdown: 24% of portfolio
- Monthly permissible drawdown: 4% of portfolio
- Weekly permissible drawdown: 2% of portfolio

Now, there's no need to scratch our heads as to how is it possible? Because if we get continuous 6 losing months of 4% drawdown becomes 24%. Here's how it works:

- Risk/trade = 1% Staggered entry – minimum 3 entry levels (based on Support/ Resistance or MAE). This gives 0.33% risk/entry/day on an individual position on an average basis over 3 or may be more days.
- Risk/day = 3 trades/positions 0.33%/trade, leading it to roughly 1% trade/ day. Our 2nd or 3rd position entry is always on MAE or in favor & using 50% method as described above, our net risk would be roughly 2% during the week spread over few days.
- Risk/week = Open positions based on trailing SL & 50% market money risk calculation method; we will have sufficiently controlled risk in markets all the time. A maximum of 2%.

- Similarly, extending the argument to Month & Year.
- Now, what if we have successive losses soon, even with all this (a low probability yet plausible) scenario. We simply wait out the time. So, if we lose 2%/1st week, we have 2% for next 3 weeks (assuming 4%/month), we calibrate to 1%/2nd week. 1%/3rd week. 4th week risk would be decided by 1st 3 weeks, if we hit 4% loss mark by 3 weeks, we don't do anything in 4th week.
- Similarly, after a 4% 1st & 2nd consecutive monthly losses, we have 16% (for next 10 months), we will have to recalibrate to say 2% for next 8 months. If we lose all that & hit a mark of 24% in only 10 months, then we have to seriously rethink as to what has happened & why we lost the yearly permissible limit in 1st 10 months only & wait it out for next 2 months.

These are 2 conceptual frameworks – 50% of unbooked profits as market's money & Risk calibration over time. You can tweak it as per your needs & contact me in case of confusion.

Happy trading & investing...

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ABOUT THE AUTHOR

Prof. Rajeev Shukla is a part system & part discretionary trader. His journey of trading started 13 years back & through his learning over time he developed his own systems as well as discretionary techniques to trade. He trades Equity mainly with a dash of Currency trades. He's a founding member of Advanced InvesTrade Forum. He loves to read & is also a practising Orthopaedic Surgeon.

