The One Percent a Week Stock Trading Program - Part III

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In **Part II**, I covered **STEP 1** of the modifications I would like to make to the free **Wealth-Lab** **One Percent Per Week** stock trading script. In **PART III**, I will elaborate on the strategy's properties and demonstrate that applying a traditional stop-loss will negatively impact final results. Also, stating better drawdown protective measures will be needed.

With only a few minor and well-placed program modifications, I changed the script's underlying trading philosophy and increased its CAGR to 56.66% over the last 14 years. This outcome far exceeds what we usually find in published trading strategies over the net. Yet, what was proposed was simply gaming a gambling strategy where the only reason to get in a trade was because it was a Monday.

The **One Percent Per Week** strategy is so simple that anyone with the means could do it. You don't even need a computer program. You could do it all by hand in a few minutes a week and be completely independent while building up your financial future. But I suspect you will still want to use the program.

This program is much like in the **The MoonPhaser Stock Trading Program** (free on Wealth-Lab), which, also for no other reason, bought its shares on a full moon and sold them back on the new moon, no matter what happened in between, before, or after.

That, too, was gambling. Could the impact of a coming full moon be relevant to stock prices? Regardless, the strategy delivered positive returns over the last twenty years, and that is remarkable. There are more full moons to come.

Not all short-term trading strategies will ultimately fail; some can survive and prosper for quite a while, including discretionary investment methods.

The original **One Percent Per Week** had a one-week time limit to reach its 1% profit target. Otherwise, by Friday's close at the latest, the position would be liquidated with either a smaller profit than 1% or a loss of undetermined size. Every Monday, if the strategy had its 1% discount on the opening price, it would take a position, and if not, it would pass.

You are the one to set entry and exit conditions and any time limit to exit any of your trades.

Should your profit target materialize between entry and exit, accept it and wait to repeat the process the following Monday.

The execution of a profit target gets you out of a trade early and becomes more of a stop-profit since after reaching your profit target, the stock price could continue to rise, but without you.

Therefore, the profit target will have cut your potential profit short. You might have achieved a higher profit if you had waited a little longer. You could have made more money just for sitting around.

The profit target transforms an unrealized paper profit into a realized one in your trading account. As such, it could be viewed as a keep-profit. Nonetheless, you first have to reach the profit target for it to have any impact since paper profits are ephemeral and can vanish in an instant.

Technically, the **One Percent Per Week** program is gambling on the premise that there will be more up weeks than down weeks, just like with the full and new moons.

Each Monday, you will have to decide whether to take the bet. It is an effortless task, especially since your computer program could do it. Your time involved in playing the market, practically none. A few minutes (seconds) on Mondays and a few more on Friday's close. In between, everything is on cruise control; you wait and can do whatever you please.

You could even execute this "program" by hand. On Mondays, you look at the price and decide whether you should get in or not. Place a GTC order for your profit target, and if it has not been executed by Friday, cancel the GTC order and liquidate the position just before the close.

The program only simulated what you could have done by hand over those 14 years. Should you do the same simulations, you will get the same results.

This strategy does not contain hype or misdirection. It does what it is programmed to do, period. The program is one of Wealth-Lab's strategy examples, which you can copy and transform at will. Nowhere does the program ask for the market's directions or outside opinions.

This program's strategy is so simple that it could be coded in any stock trading software. The simulation is only to show that the trading procedures were feasible and hopefully rewarding enough to justify their use.

The strategy required no technical or fundamental data to make trading decisions.

The first step: It's Monday. Do you buy in or not?

The rest will depend on what happens during the week. You reached your profit target; take it. There is a stop-trade by Friday's close. Then, every Monday, you

repeat the process over and over again.

After modifying the original strategy, including **STEP 1**, we have, to corroborate the results, Figures #1 and #2 in **Part II**. Using one of the simplest trading strategies, we ended with a 56.66% CAGR from testing the TQQQ ETF over the last 14 years.

Variables	Name	Initial Value	Ending Value	Notes
$F(t)$	F_0	$100,000	$59,176,233	Exponential function
F_0	Initial capital	$100,000	$100,000	A preset constant
W_r	Winning Hit Rate	E[~ 52% to 54%]	51.21%	Gaming Expectation
L_r	Losing Rate	E[~ 46% to 48%]	48.79%	Gaming Expectation
f_w	Profit target	~ 7%	~ 7%	Fixed in program
f_l	Stop-loss	0	0	Time-limited (5 days)
c_w	Overcompensation Rate	~ 1%	~ 1%	Fixed in program
c_l	Overcompensation Rate	0	0	Not Used
z_w	Increase # of Winning Trades	0	0	
z_l	Increase # of Losing Trades	0	1	
N	Total number of trades	0	742	
W	Number of Winning Trades	0	380	
L	Number of Losing Trades	0	362	
$\bar{g}$	Average growth rate	0	56.66%	
t	Simulation time in years	14	14	
b_i	Bet on trade number i	0	F_{t-1}	Exposure = 100%
$\bar{r}$	Average return per trade	0	1.02%	Average for all trades
$\bar{r}_w$	Average return per winning trade	0	4.54%	Positive trades only
$\bar{r}_l$	Average return per losing trade	0	-2.68%	Losing trades only
$\bar{x}$	Average profit per trade	0	$79,752.34	Average for all trades
$\bar{x}_w$	Average profit on positive trades	0	$399,515.94	
$\bar{x}_l$	Average loss on negative trades	0	-$255,911.11	

Figure 1: One Percent Per Week - Mod 1 - Variables

(**Click here to enlarge**)

Increasing Performance

I will want to increase performance in **STEP 2** and beyond. I already set the equations needed to do the task. To recall, here they are again with a few added

equalities:

$$F(t) = F_0 \cdot \left[\left(1 + \frac{f_w}{1 - (f_w + c_w)} \right)^{W + \Delta z_w} \cdot \left(1 - \frac{f_l}{1 + (f_l + c_l)} \right)^{L + \Delta z_l} \right] \qquad (1)$$

$$F(t) = F_0 \cdot (1 + \bar{g})^t = F_0 \cdot \prod^{N} (1 + r_i) = F_0 \cdot \sum^{N} (b_i \cdot r_i) = F_0 + N \cdot \bar{x} \qquad (2)$$

The variables used are listed above in Figure (1) with their initial values and their values in the simulation that generated Figures #1 and #2 in **Part II**. Most of the variables are self-explanatory.

What is remarkable is that each of the equal signs in equations (1) and (2) will hold such that if, for instance, we change c_w, even by a small fraction, it will have an impact on $\bar{g}$ and will impact not only r_i but also b_i and $\bar{x}$ depending of if c_w is helping or hindering the binomial equation.

The trading program used the following variables: F_0, f_w, b_i, and c_w. The others were not used or part of the portfolio's ending metrics: averages and other constants like the number of executed trades N and winning trades W, which would be known after the simulation.

From the start, the objective was to get **One Percent Per Week**. We ended with $\bar{r} = 1.02\%$, the overall average profit per trade. Since trades lasted at most one week, we could say mission accomplished, even though that was not the program's original intent. It simply wanted its **One Percent Per Week**, per week. And we delivered a "long-term average" of 1.02% per trade, which is more than acceptable. Compare that level of return (the 56.66% CAGR) to the market average for an average stock portfolio ($\bar{r}_m \approx 10\%$) over the last hundred years.

Expected CAGR	# Years	Multiplier	# Years	Multiplier
5%	15	2.0789	30	4.3219
10%	15	4.1772	30	17.4494
15%	15	8.1370	30	66.2117
20%	15	15.4070	30	237.3763
30%	15	51.1858	30	2,619.9956
40%	15	155.5680	30	24,201.4323
50%	15	437.8938	30	191,751.0592
55%	15	716.1029	30	512,803.4579

Figure 2: One Percent Per Week - Mod 1 - Expected CAGR Multipliers

To use the above table (Figure (2)), multiply the factor by your initial capital. For example, the 30% CAGR scenario over 15 years gives $\$100,000 \cdot 51.1858 = \$5,118,589$. However, I would go for more since it is so easy to get. The equation used is:

$$F(t) = F_0 \cdot (1 + \bar{g})^t = \text{multiplier} \cdot F_0$$

Do the same simulations presented here to see how the program behaves and what to expect going forward. As mentioned, there will be more Mondays to come.

You know what the strategy did in the past, but your interest is in what it will do in the future. What CAGR level could the strategy maintain, and for how long? That is the question. At least, past market data showed it could do wonders. That is a good starting point for studying this trading strategy, and its simplicity might provide further insight that could apply to other trading strategies.

In portfolio management, we got accustomed to mutual funds, hedge funds, and indexed funds types of returns (≈10% to 15%). And yet here, with minimal work (a few minutes a week), you can do it all yourself and reach beyond the 20% mark. It is not a small feat.

You have Mr. Buffett, who has held a 20% CAGR over the last 50+ years, and the Medallion fund, which has had a 39% net return in the previous 30 years (after its 4/44 in fees), which is remarkable. But here, again, you could do it all yourself with no fees except for trading commissions. You could even do it with a broker that does not charge trading commissions.

None of the steps taken, meaning the changes to the program, were that big. We first dropped the 1% discount request and replaced it with a show of strength first approach by requesting that we have a rising price before entering a trade. A rise of a fraction of a cent was sufficient to take the trade ($\Delta p > 0.00$).

Since TQQQ is, by design, more volatile than QQQ, we adapted to what was being traded and raised the profit target from 1% to 7%, a move that better suited TQQQ's average volatility. Then, to push performance higher, was added to already rising prices, a 1% increase to the profit target.

These minor moves resulted from a better understanding of what was being traded.

We had an ETF three times more volatile than the QQQ ETF, composed of the 100 highest-valued stocks on NASDAQ. QQQ will not go bankrupt anytime soon, nor will TQQQ. As I said before, going with QQQ is the same bet on America Mr. Buffett made years ago and is still valid today. America has had that bet for over 200 years, and it still holds.

Caution To The Wind

Intuitively, we all know we need stop-loss procedures to protect our hard-earned capital, especially in this stock market game. Therefore, having some form of stop-loss in our trading strategies becomes more relevant, if not crucial. The question should be more: what kind?

Even before doing any tests, I anticipated, based on past research, that using a traditional stop-loss with this program would harm overall performance. There is a price to pay for protection. We need a compromise between acceptable drawdowns and future potential returns.

If you reduce the max drawdown to 20%, how much will it cost, return-wise? Figure #2 in **Part II** showed a max drawdown of -54.47%. So, how much are you ready to pay to reduce it?

Figure (3) below shows the trade distribution (average profit percent per trade) for Figure #1 in **Part II**. I used the Connors RSI indicator to spread out the trades, but many other indicators would have done about the same job. All I wanted was to see the distribution of trades based on the win or loss percentages. The red dots (363) show trades that finished losing money, while the green dots(381) are the winning positions.

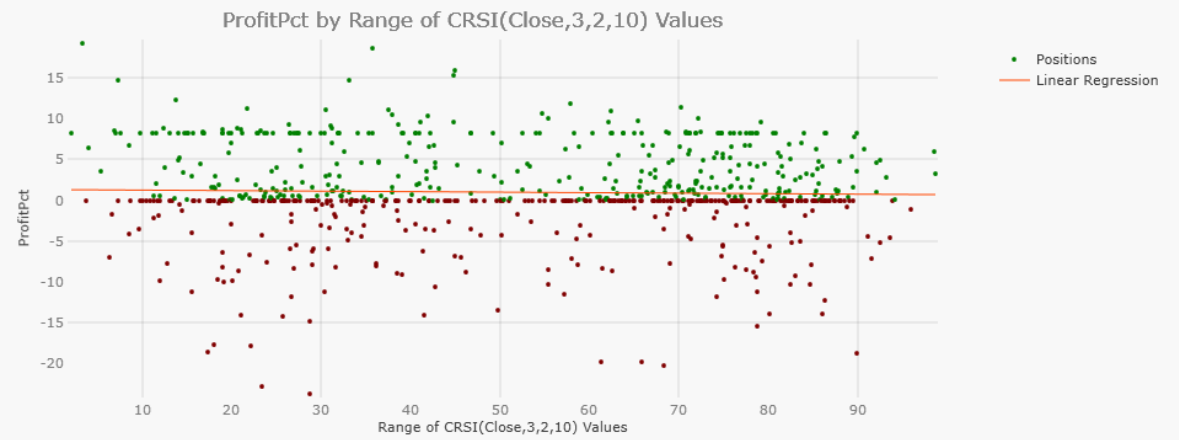

Figure 3: One Percent Per Week - Trade Distribution - Mod 1

(**Click here to enlarge**)

A few things that stand out. We can see a lot of green dots aligned at about the 7-8% level. We also have a series of red dots aligned at the 0% level. I was not expecting that many red dots on the zero line. It will merit investigation.

It is easy to understand the green dots aligning with the requested profit target and the dots between 0% and the profit target. You have the trades that did not reach

the profit target before the week ended but were still positive. There is also an explanation for the green dots above the 7-8% profit target; they result from opening gaps above the profit target threshold that we can easily accept. When the added profit is in our favor, we usually say yes.

The red regression line is at about the average return per trade of 1.02%. With no stop-loss other than Friday's close, the red dots have no equivalent to the 7-8% green level. At the time the chart's snapshot was taken, there were 742 dots in that chart, which makes whatever averages we could extract representative of the whole.

There are 213 red dots at the zero level, which is too high. It should have been around ten and even less. I will investigate further and find the reason for this phenomenon. But if it turns out that it is part of why you get such a high CAGR and not a bug, it will become a welcomed feature. We will see.

The Fixed Stop-Loss

There were three trades with losses greater than -20% and 25 with losses between -10% and -20%. Twenty-eight trades in all with losses greater than -10% out of 742, that is 3.77% of trades responsible for a big chunk of the losses. The three trades with losses greater than -20% represent at least 51.2% of the portfolio value since $(1-0.20)^3 = 0.512$.

Using the numbers from the simulation, it is more like

$$(1-0.2375)\cdot(1-0.2285)\cdot(1-0.2030) = 0.4689$$

a 53.11% drop in value. Just eliminating those three trades would double the portfolio's outcome.

So yes, we should have protective measures that are more elaborate than Friday's close or a generalized fixed stop-loss.

Adding a stop-loss is one line of code: *t.AutoStopLossPrice = executionPrice * 0.80;* where a position would be liquidated if the price fell by 20% or more. The overall results should stay the same if we have no such trades. However, more stop-losses would be triggered if we get more restrictive, like lowering the stop-loss threshold.

Accepting a -10% stop-loss (*t.AutoStopLossPrice = executionPrice * 0.90;*) should force the stop-loss on the trades with a loss greater than -10%. But it does not, at least, not by much. All three of the worst trades remained in place. Did the stop-loss not work? No, it did.

The price gapped lower than the stop-loss at the open, generating the steeper loss. The -10% stop-loss offered no real protection; it even increased the drawdown. When the stop-loss simulations were executed, there were two added weeks to the

number of trades, but this does not change the generalizations.

Stop-Loss	Portfolio Results	CAGR	Max Drawdown	# Trades	# Winning	# Losing
-25%	$61,002,262	56.83%	-54.47%	744	381	363
-20%	$61,002,262	56.83%	-54.47%	744	381	363
-15%	$51,646,084	55.05%	-54.47%	744	381	363
-10%	$27,550,846	48.35%	-56.51%	744	378	366
-5%	$10,385,019	38.59%	-63.13%	744	370	374

Figure 4: One Percent Per Week - Stop-Loss - Mod 1

Even after setting the stop-loss at -5%, none of the three trades with losses greater than -15% were affected. However, we did increase the number of losing trades, not by much, only by 11. This attempt to reduce risk wasn't really effective.

Yet, the opportunity cost in trying to minimize the impact of the drawdowns reduced the portfolio's value by some $50 million. And you still had those painful drawdowns in place. The only change to the program was this stop-loss number, from 0.75 to 0.95, which was devastating for the portfolio. We have this single number having quite an impact.

The question is: Was it worth it? I think not. It should also be noted that as we reduced the stop-loss, ready to accept a -5% drawdown at most, it generated a portfolio drawdown that was even worse at -63.13%. We most certainly should question the use of the fixed stop-loss in this scenario.

Why did it not work? That is a fair question too. The answer is simple. No matter the stop-loss, the trades were taken simply because it was Monday and prices were rising even by the smallest of margins. The stop-loss had no impact on the decision to take a position. It was not even considered in the buying decision process.

Therefore, other means of protection will have to be devised. A strict stop-loss setting might not be the best solution for this trading strategy. If you set it too loose, say at -25%, it might have no effect on the outcome. While setting it higher, say at -5%, it would be harmful to the initial objectives, which were to make more money.

You wanted to reduce the overall drawdown by putting a stop-loss in place, but all it did was reduce the overall performance by over -80%. At the same time, it increased the max drawdown from -54.47% to -63.13%. We lost on both counts, and the only reason for this was the stop-loss, nothing else.

We can extract from equation (2) the series of returns: $F(t) = F_0 \cdot \prod^N (1 + r_i)$ and

rearrange the 742 return series as:

$$F(t) = F_0 \cdot \left[\prod^{739}(1 + r_i)\right] \cdot (1 - 0.2375) \cdot (1 - 0.2285) \cdot (1 - 0.2030)$$

since we would obtain the same results whichever order we wanted to calculate this return series.

No matter where in the 742 returns you would put the last three, it would give the same result. The same would go for the 28 trades with a loss greater than -10% and including the 3 above the -20% drawdowns. Say we have: $(1 - 0.10)^{25} \cdot (1 - 0.20)^3$ for the losses above -10%. It would be equivalent to

$$F(t) = F_0 \cdot \left[\prod^{714}(1 + r_i)\right] \cdot (1 - 0.10)^{25} \cdot (1 - 0.223)^3$$

In aggregate, no matter the ordering in the return sequence, those 28 losing trades would have for impact: $F(t) = 0.03367 \cdot F_0$.

The 28 trades can reduce the portfolio's value by 96.63%. So, yes, it would be a good thing to have some protective measures, except that the fixed stop-loss might not be your "best" choice.

With Reduced Expectations (dividing the 7% profit target and the added 1% by 3).

Just holding SPY would have produced the same as in the prior simulations in the above table, that is, SPY (Benchmark): $394,577 with for Total Return: 11.86%.

By design, TQQQ is three times more volatile than QQQ. So, let's reduce the profit target by two-thirds and do the same for the add 1% on rising stocks. Rerun the program for each of the ETFs.

This is where we see that reducing the profit target for TQQQ does reduce its overall outcome even though we increased the number of profitable trades as more positions qualified for the 2.3% stop-profit target.

All this is to say we should adapt to what we trade.

When we switched to TQQQ, we saw quite a difference; now, our CAGR is running at 56.80% to provide us with $61,002,262 in profits on a $100,000 investment over 14 years. That is 92.25 times larger than QQQ and 705 times better than trading using SPY.

Yet, in all four cases, the number of trades was 744 (two added weeks to the simulations). So, why such a difference? For DIA, SPY, and QQQ, we had a few

ETF	Total Profit	CAGR	Total Trades	# Winning	# Lossing
DIA	$181,302	7.58%	744	336	408
SPY	$136,953	6.24%	744	356	388
QQQ	$1,181,422	19.58%	744	381	363
TQQQ	$15,645,065	42.58%	744	441	303

Figure 5: One Percent Per Week - Lower Profit Target - Mod 1

trades (2-3) that reached the weekly 7-8% profit target. In contrast, TQQQ exceeded the 7% threshold 125 times.

If we wanted to adjust the profit target down for DIA, SPY, and QQQ, we would also reduce overall profits, which would be counterproductive.

We have a scenario where putting in a stop-loss, which is supposed to protect you, is detrimental to your portfolio, and having a stop-profit, which should limit your profits, helps you retain some of what could otherwise be paper profits.

Nonetheless, playing either DIA or SPY using this trading program would still be less productive than using QQQ, which can at least exceed SPY's total return.

Comparing ETFs

The table below is just for comparison. The strategy (with Mod 1) was rerun over the same time interval using DIA, SPY, QQQ, and TQQQ with SPY as benchmark.

If all you did were to buy SPY and hold it, you would have had an 11.86% CAGR for the period (14 years). No hassle, nothing to do but wait it out.

ETF	Total Profit	CAGR	SPY (Benchmark)	SPY Total Return
DIA	$171,824	7.26%	$394,577	11.86%
SPY	$86,462	4.47%	$394,577	11.86%
QQQ	$661,271	15.30%	$394,577	11.86%
TQQQ	$61,002,262	56.80%	$394,577	11.86%

Figure 6: One Percent Per Week - ETF Comparison - Mod 1

However, if you opted to use this trading strategy on SPY, it would have only given

you a 4.47% CAGR. It is understandable, your total exposure was 57.87%, meaning that on average only 57.87% of your capital was at work.

By switching to QQQ, you would increase your CAGR to 15.30%, better than with SPY or DIA, but not by that much. At least you outperformed the benchmark. We could consider the added CAGR as compensation for the time you would put into monitoring your trades.

This conclusion should sound counterintuitive. You try to protect yourself, and you make matters worse. Not only did we lose $50 million by pushing for the -5% stop-loss, but we also increased the max drawdown to -63.13% in the process. Better methods are indeed needed.

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The One Percent a Week Stock Trading Program - Part II

The One Percent a Week Stock Trading Program - Part I

The Long-Term Stock Trading Problem - Part II

The Long-Term Stock Trading Problem - Part I

The MoonPhaser Stock Trading Program

Anticipating A Stock Portfolio's Long-Term Outcome

The Big Open Project

Sitting On Your Bunnies Might Be Your Best Investment Yet

Self-Managed Retirement Funds

Make Yourself A Glorious Retirement Fund

The Age Of The Individual Investor

Use QQQ - Make the Money and Keep IT

Take the Money and Keep it – II