Title: Gherkinit's quants—that sounds wrong. Maybe call them number people?

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Hello Apes,

That's right DD number three in two days, but this time it's not mine.

As some of you know I got a group of people together, that some of you refer to as my "quants", a little over a month ago. We have been diligently working behind the scenes to solve some of the fuckery surrounding GME and the other meme stocks correlation to GME.

Most of our research is still very much waiting to be confirmed.

\*\*However\*\*

This piece in particular is pretty time sensitive so we decided it was best to go forward and release it now as it is an imperative follow up to yesterdays [Buy & Hodl DD](https://www.reddit.com/r/Superstonk/comments/pj90o7/buy\_and\_hodl\_the\_guide/).

# All credit to my secret pickles, a Dan, and u/Dr\_Gingerballs

Without further ado...

A taste of some "secret DD"

# Revisiting T+35: Why It's Still Important and Why It's really T+69

Hello, fellow apes. I realize you are probably rolling your eyes at another T+35 post. Didn't that theory crash and burn multiple times already? Well, like the putrid remains of the delisted zombie stonks, I think it's important to raise this theory back from the dead one more time to discuss the mechanics of settlement, how this results in settlement periods much longer than 35 days, and what that means for those who buy and holl this magnificent stonk.

tl;dr: buy and hodl

The inspiration for this post comes from a paper written by a researcher in Australia back in 2009 about the mechanics of clearing and settlement in the US. [You can find a free version of the paper here](https://www.researchgate.net/publication/228260887\_Naked\_Short\_Sales\_and\_Fails\_to\_Deliver\_An\_Overview\_of\_Clearing\_and\_Settlement\_Procedures\_for\_Stock\_Trades\_in\_the\_US) (although I'm sure many of you have already found and discussed this). Specifically, this quote caught my attention (emphasis added):

"An algorithm run by the NSCC determines which of the participants with long positions (participants that are owed stock by the NSCC) due to be settled that day will receive stock. \*\*The algorithm works by allocating shares in the following order: priority groups in descending order, age of position within a priority group and random numbers within age groups\*\*. Participants can request that they be given priority to receive stock on a standing or override basis. Also, participants that submit buy-in notices (requests to receive stock owed to them) receive priority with buy-ins due to expire that day given priority over buy-ins due to expire the following day, which in turn are given priority over priority requests and priority overrides."

Essentially, the NSCC allocates the trade of real shares TODAY to previous buy orders that are about to be listed as fail to deliver. Now when it's only T+2 or T+3 this isn't super interesting. However, if someone is given [T+35 calendar days to settle their trades](https://www.law.cornell.edu/cfr/text/17/242.203) (about T+21 trading days), a significant amount of manipulation can occur within this system to hide a large and growing naked short position.

I decided to play with this dynamic, so I wrote a simple script that does the following:

- 1. Assign all traded volume for the day into the first slot of a 23 slot pipeline.
- 2. Take all legitimate volume and "deliver" by subtracting that volume from the pipeline volume starting at point 23 and working backwards until the volume is depleted.
- 3. Move everything forward in the pipeline by 1 day and repeat steps 1-2 for the new day.
- 4. Any volume that reaches point 23 becomes an FTD.

Let's take a simple example. Say that 1M shares are traded every day. 450k are the sale of legitimate shares, and 550k are naked shorts. We assume that we are starting from a perfectly settled system, so there are no outstanding delivers before this day. Figure 1 shows the progression of unsettled shares as they travel through the T+21 pipeline unsettled. For example, by trading day 20, there are 11M unsettled shares with an age of 11 trading days or fewer. FTDs do not emerge from the cycle until after 40 trading days, which corresponds to roughly 67 calendar days! In that time the SHFs would accrue 22M new naked shorts before a single FTD was registered.

[ Figure 1: Shares not settled as a function of trading days and age of the original transactions. ](https://preview.redd.it/6v9wu5m0u6m71.png?width=840&format;=png&auto;=webp&s;=d6b8dbda6d8dafe9b630b4a6aa94593cec278560)

Now let's assume that exactly half of that short volume is the shorting of located shares ([notice how we always seem to have 1M shares appear and disappear on the borrow list?](https://gme.crazyawesomecompany.com/)). In this scenario it would take about 80 trading days for any FTDs to emerge! That's 4 months! In that time they would stuff up to 33M naked shorts in the settlement pipeline. And if those legitimate shorts are constantly being borrowed, sold, and repurchased on a nearly daily basis, they could create this naked position with no real change to the observable legitimate short interest.

This simple example illustrates how an SHF could sustain a massive naked short position (a size which could exceed the float) for months without any evidence of this short position in the reported short interest numbers and with no FTDs. So let's look at volumes that more closely mirror the actual volumes we have traded in the past to get an idea of how large they can make this naked short position. We will model the volume as a decaying exponential over a given cycle. For the sake of this exercise, let's assume again that half of the legitimate shares exchanging hands occur via traditional shorting of existing shares.

\*\*Let's begin with the March-May cycle\*\*. Our volume went from around 22M on the descent on 3/15 to about 4M before we started our initial climb on 5/13. This is roughly 42 trading days. 42 is greater than T+35 so the theory is busted, right? Nope. If we assume an exponential decay in volume over that time with a time constant of 20 days and a constant short volume of 60% (half located, half naked), it will take 42 trading days before FTDs start cropping up in the net settlement system. At that point, there could be around 130M shorts hiding in the settlement chain, or roughly 230% of the float (at least half of which are naked). And if you really want to get your tits jacked, 42 trading days is roughly 69 calendar days.

\*\*Therefore, I submit that T+35 has really been T+69 all along.\*\*

Now at this point I'm sure that everyone wants to know what's going on this cycle. If we assume a similar exponential decay in volume from 21M with a time constant of 17 days, and assume a constant short volume of 55% each day, FTDs appear after 42 trading days with about 100M shorts packed into the chain (at least 50M of which are naked). Certainly not as high as the last cycle, which may explain why we haven't soared as high this time in the run up so far, but still a huge short position. Now this analysis does not include any nefarious activity surrounding ETF baskets and the options chain, nor does it factor in the effect of the share offerings, all of which would increase the amount of shorts that could be hidden from view. Nevertheless, I estimate a minimum of 50M new naked shorts have been pumped into the system this cycle. As of this weekend we have seen about 52M in volume during this runup, with an average short volume percentage of 55%. This means they might still have around 25M more shorts to clear before this cycle ends to avoid FTDs.

Now does this mean that T+69 explains all of the behavior we have seen so far? Not quite. I believe that they are timing their shorting so that the FTDs appear at a convenient time. For example, suppose they are using futures contracts and/or swaps to establish the net long position they need to receive the T+35 settlement time ([OTC derivatives with expiry dates longer than 3 months carry net capital calculation penalties so they could be using quarterly swaps as well as quarterly

futures](https://www.law.cornell.edu/cfr/text/17/240.15c3-1)). They need to start rolling these to new contracts a few weeks before they expire, at which point they lose their T+35 benefit. If they short too hard, the FTDs crop up too soon. If they don't short hard enough, they risk the stock gaining positive momentum. So they short it just as much as they can based on the amount of legitimate daily volume to drag the FTD cycle to their rollover date.

So what do we do? By now everyone on the planet sees the obvious quarterly boom/bust cycle that we are in. I'm sure a lot of you are thinking that you will try to day trade the peak this week. Hell, I know I've thought about it too. But the key to this entire mechanism I've proposed here is LEGITIMATE VOLUME. They need real transactions to occur to give them the flexibility they need to pack the pipeline with naked shorts. If nobody sells, they just continue to dig their own grave. Many of us have been through 3 drops now, and most of us hodled every single one of our shares with the diamond hands memes are made of. Buy and hodl is working, and it's working better every day.

I think if we don't simply MOASS this week and go one more cycle, our volume will become so dry that the whole grift will burst with the might of 1000 suns within 69 days of earnings. The SHFs aren't stupid. They know we see the cycle, and you can bet they will use that against us to get us to do the one thing that can save them: paper hand.

\*\*Don't fall for the FUD.\*\*

Now is our opportunity to show Wall Street what happens when a bear attacks an ape.

\*\*Buy & Hold it's what Guybrush would do...\*\*

If you want to see more information on this subject matter feel free to join me in the :

Daily Live charting (always under my profile [u/gherkinit](https://www.reddit.com/u/gherkinit/)) from 8:45am - 4pm EDT on trading days

Join me, on my [YouTube Live Stream](https://www.youtube.com/c/PickleFinancial) from 9am - 4pm EDT on trading days\\*

Check out the [Discord](https://discord.gg/BGmjnrvHnw) for more stuff with fellow apes

\*\*As always thanks for following along.\*\*

\- Gherkinit

\*\*Disclaimer\*\*

\*\\* Although my profession is day trading, I in no way endorse day-trading of GME not only does it present significant risk, it can delay the squeeze. If are one of the people that use this information to day trade this stock, I hope you sell at resistance then it turns around and gaps up to \$500. :)\*

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