

COMPENDIUM OF WRINKLES

*correlating
different
theories*

u/bobsmith808



The Compendium Of Wrinkles: Correlating Different Theories

Due Diligence

Hi everyone, Bob here,

HOLY SHIT I THINK I MAY HAVE CRACKED THE CODE!!!! And by I, I of course mean the fuckin absolute truckload of DD and wrinkle brains that have contributed their DD to this saga. Thanks in advance to all the DD writers included in here, as well as the ones I failed to mention because they just aren't top of mind at the time of writing.

PS, get jacked, because this DD has been reviewed by some of the greatest wrinkly minds I know before posting, and I'll be keeping this one edited and fresh up to date as we learn more. Hope you learn something, and gain some wrinkles yourself - god knows we need 'em.

Some of you may have been around long enough to remember my DD on [u/criand](#)'s and [u/dentistfft](#)'s DDs. [This dd looked at the combined theories of some OG apes that got me into my own DD dive. In it, I explored some different movers and theorized its a combination of things.](#) I have had some offline conversations with some of the smartest fuckin people silverback DD-writing wrinkly ass apes on the planet and found some really interesting things I'd like to show you and get your thoughts on. The intention of this DD is to share the really TIT JACKING information I just uncovered and put together, with the help of all the apes mentioned here, which have been my guide either directly or indirectly through this learning process that is ~~Double-Down~~ Due Diligence.

Forward 0.0

First, I think it's important to realize where this is coming from and who the fuck [u/bobsmith808](#) is. Well, I'm just your average run of the mill no good crayon eating ape. I shit rainbows when the stonks go up and I shit bricks when the stonks go down, but when they go down, I rage buy more because *brick by brick* I will increase my position in this wonderful company with a bright fucking future, I call gamestop.

Why? **Because I like the fuckin stock.**

Table of Contents for the DD

I will be breaking this up into a couple posts because reddit is retarded - so retarded you cannot post over 40,000 characters per post. I guess they never anticipated the level of autism we could muster. ♂. I hope you enjoy the first part of this series.

In This chapter:

- 1.0 - Recap on understanding the T+ cycles and how they work, along with some insight to market mechanics
- 1. 1.1 - T+ Cycles & How They Work
- 2. 1.2 - Supplemental Liquidity Deposits
- 3. 1.3 - CBOE Futures Cycles
- 4. 1.4 - Key Terms

[In Part Deux:](#)

- 2.0 - Notable Theories & Observations
 1. 2.1 - Leenixus SLD Theory
 2. 2.2 - Gherkinit Futures Theory
 3. 2.3 - Zinko83 Variance Swaps
 4. 2.4 - Turdfurg23 Heartbeats
 5. 2.5 - My Own Observations
 6. 2.6 - Tying it All Together
- [3.0 - Conclusions](#)
 1. 3.1 - For The Wrinkles
 - a. 3.1- - Is Moass Inevitable? - An Exercise in Rationality
 - b. 3.1- - Is Moass Possible? And Could it Be Near?
 2. 3.2 - For The Smoothest Among Us (Yes there's a TADR)
- [69.420 - Disclaimers & Sources](#)

Recap On What We've Learned 1.0

1.1 - T+ Cycles & How They Work

So, What Are These T+x Cycles And Where Do They Come From?

I like cycles, and I like dates. Good thing for me, my most favorite stonk, GME, has both of these to play with. There has been and still seems to be a lot of confusion about the T+x cycles and what they mean, so I thought I'd start this out with a quick recap of what they are and how they work.

When someone buys the stock, the market makers sells it to them at whatever the market value (**haha - internalization see advanced fuckery**). That marks **T** day (Transaction Day).

First, The Market Maker

First comes the market maker's time to locate the share they just sold.

Yes, you read that right: The Market Maker (**MM**) can sell a share they don't even have in their "inventory". A bit fuckey already, but let's roll with it. So on Friday, the market maker sold you a share (because apes fuckin **buy** and hold). They didn't have this share, and now have from the date of the sale (**T** for Transaction) plus 2 *trading* days (**+2**) or T+2 days to "locate" that share to settle up the trade. When they fail to locate those shares, we enter the Fail To Deliver (**FTD**).

Side note: When the market maker sells you a share they don't have (BUY THE DIP!), and they fail to locate it (because there aren't any more to buy, bitches), it adds to the total shares they need to buy back. **They have been doing this for a very. long. time. Now.**

Who Is A Market Maker? *Shitadel, Virtu, GTS Securities* [[sauce](#)]

Second, The Authorized Participant

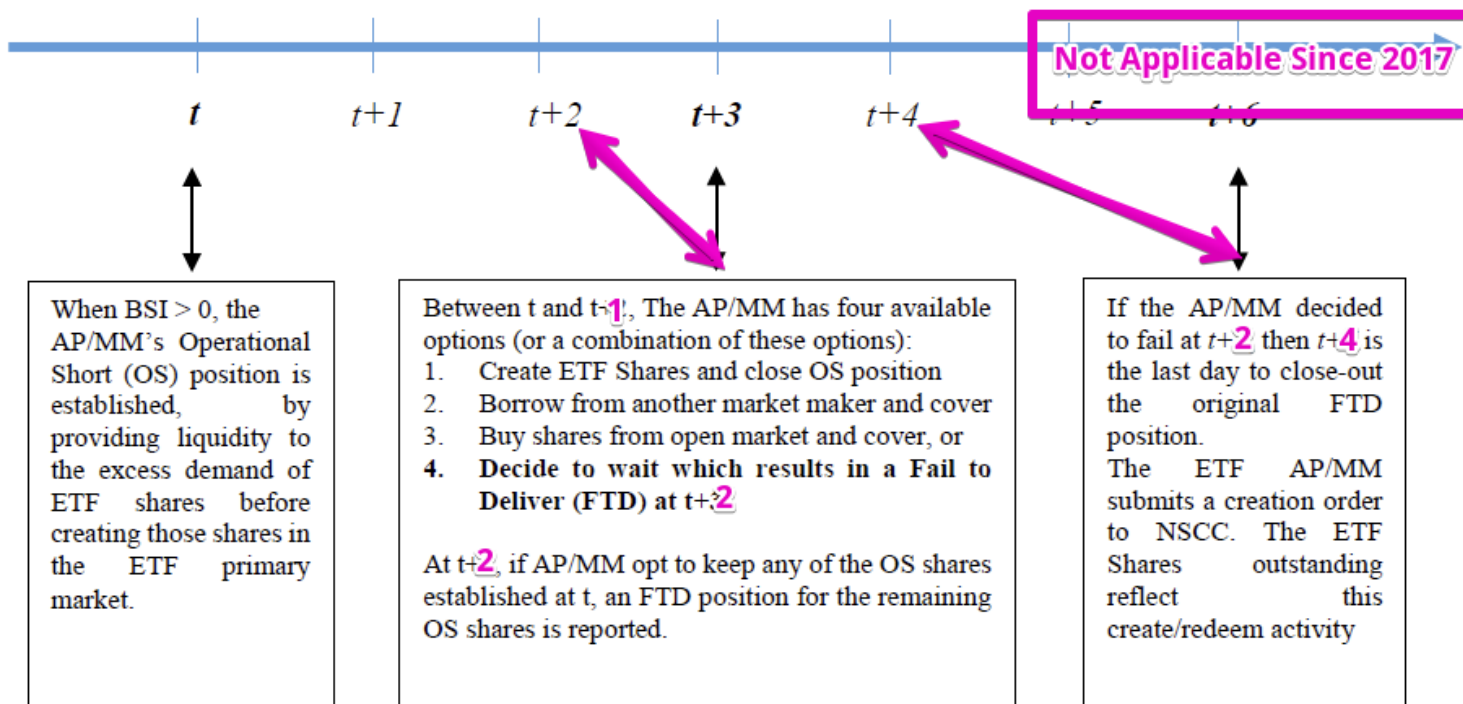
Authorized Participant Activity in regards to GME fuckery is all about ETFs, baskets and swaps. - check out XRT recently for a great example.

This applies to ETFs containing our favorite stonk. There is a theory floating around where an Authorized Participant (**AP**) can generate naked ETF shares that are used to then create phantom shares (more for them to buy back later) to suppress GME and then bundle that all up in a basket, ready for swaps.[\[sauce\]](#) Then viola, we have the quarterly swap cycles, *the most recent one, failing to deliver through possible internalization of the trades and the after hours run we saw just the other day* (credit [u/gherkinit](#))

So when the AP creates the ETF trade and baskets it, they have from the day of the transaction (**T**) plus two trading days (**+2**) to **settle** the trade. *Then*, they have an additional two trading days (**+2**) or **T+2** days to **locate** the shares traded in that ETF. [u/turdfurg23](#) has an awesome spreadsheet [here](#) that you can see to track GME's weight in several ETFs containing GME shares. Total time is **T+4** here for the **FTD** when it comes to ETF generated FTDs.

Who is an Authorized Participant? banks usually... *also Shitadel*

Figure 3 – ETF Settlement Failure Timeline: This figure displays the key events during a settlement failure for an ETF. Time t represents the time when an operational short is established. Dates $t+i$, where i is between 1 and 6, represent i days after the operational short position is established.



Source: ETF Short Interest and Failures-to-Deliver: Naked Short-selling or Operational Shorting? (accessed 8/1/17)

[u/keijikage](#) brought to my attention that the rules changed in 2017 from $T+3$ to $T+2$, so the graph above is updated to illustrate the changes. Source1 |

Source2

Rules Follow:

§ 240.15c6-1 Settlement cycle.

(a) Except as provided in paragraphs (b), (c), and (d) of this [section](#), a broker or dealer shall not effect or enter into a contract for the purchase or sale of a [security](#) (other than an exempted [security](#), government [security](#), municipal [security](#), commercial paper, bankers' acceptances, or commercial bills) that provides for payment of funds and delivery of securities later than the second [business day](#) after the date of the contract unless otherwise expressly agreed to by the parties at the time of the transaction. ²

(b) Paragraphs (a) and (c) of this [section](#) shall not apply to contracts:

(1) For the purchase or sale of limited partnership interests that are not [listed](#) on an exchange or for which quotations are not disseminated through an automated quotation system of a registered securities association;

(2) For the purchase or sale of securities that the Commission may from time to time, taking into account then existing market practices, exempt by order from the requirements of [paragraph \(a\)](#) of this [section](#), either unconditionally or on specified terms and [conditions](#), if the Commission determines that such exemption is consistent with the public interest and the protection of investors.

(c) [Paragraph \(a\)](#) of this [section](#) shall not apply to contracts for the sale for cash of securities that are priced after 4:30 p.m. Eastern time on the date such securities are priced and that are sold by an [issuer](#) to an [underwriter](#) pursuant to a firm commitment underwritten offering registered under the [Securities Act of 1933](#) or sold to an initial purchaser by a broker-dealer participating in such offering provided that a broker or dealer shall not effect or enter into a contract for the purchase or sale of such securities that provides for payment of funds and delivery of securities later than the fourth [business day](#) after the date of the contract unless otherwise expressly agreed to by the parties at the time of the transaction. ⁴

(d) For purposes of paragraphs (a) and (c) of this [section](#), the parties to a contract shall be deemed to have expressly agreed to an alternate date for payment of funds and delivery of securities at the time of the transaction for a contract for the sale for cash of securities pursuant to a firm commitment offering if the [managing underwriter](#) and the [issuer](#) have agreed to such date for all securities sold pursuant to such offering and the parties to the contract have not expressly agreed to another date for payment of funds and delivery of securities at the time of the transaction.

[58 FR 52903, Oct. 13, 1993, as amended at [60 FR 26622](#), May 17, 1995; [82 FR 15601](#), Mar. 29, 2017]

Oh, and if that isn't enough to absorb - it looks like they are looking to move to a T+1 cycle

What is T+21?

There is no T+21 that I'm aware of (and have stopped tracking it for this reason). credit to [u/crind](#) for noticing the pattern in the first place and to [u/dentisttft](#) for identifying the SLD periods ([see my previous DD on that](#)) that conveniently coincide with the "T+21 cycle".

Another theory was from [u/gafgarian](#) that stipulated that it was linear T10/T12 cycles stacked (last day to cover being the day before - and you get 21. This makes some sense when you think about the AP rules above, but it does get complicated when you factor in Continuous Net Settlement.

That said, I am still able to see a consistent cycle around another number...

Behold: T+35 (Rebranding to C+35)

C is for Calendar

Rule 204 provides an extended period of time to close out certain failures to deliver. Specifically, if a failure to deliver position results from the sale of a security that a person is [deemed to own](#) and that such person intends to deliver as soon as all restrictions on delivery have been removed, the firm has up to 35 calendar

days following the trade date to close out the failure to deliver position by purchasing securities of like kind and quantity. Such additional time is warranted and does not undermine the goal of reducing failures to deliver because these are sales of owned securities that cannot be delivered by the settlement date due solely to processing delays outside the seller's or broker-dealer's control. Moreover, delivery is required to be made on such sales as soon as all restrictions on delivery have been removed and situations where a person is deemed to own a security are limited to those specified in Rule 200 of Regulation SHO. A common example of a deemed to own security that cannot be delivered by the settlement date is a security subject to the resale restrictions of Rule 144 under the Securities Act of 1933.

Some thoughts here - credit to [u/keijikage](#)

"hypothetically the synthetic forwards could be a type of these, so we would see new options being opened up afterwards"



This means, once we see the FTD in the Finra data, they have 35 **calendar days** (from the date of the FTD in the data) **not trading days (C+35 ftw)** to settle up and find the shares to close out the trade.

1.2 - Supplemental Liquidity Deposit & Its Effects

Supplemental Liquidity Deposits (SLD) has been really nicely described by [u/dentisttff](#) (wherever he is) in a fun and informative “[liquid shifts](#)” DD. Here’s the juicy part:

THE CURRENT SLD RULESET:

Supplemental Liquid Deposits (NSCC Rule 4(a))

[https://www.dtcc.com/~media/Files/Downloads/legal/rules/nscc_rules.pdf]

Rule 4(a) can be found on Page 60 of the PDF.

Summary: A week before the monthly options expiration, a deposit amount is calculated for the 30 largest “members” of the NSCC (the financial companies involved in the NSCC). A couple of days before the monthly options expiration, the members need to deposit that amount to be held at the clearing corporation for 7 days. After 7 days, the deposit is returned to the member.

Details:

Here is the important terminology:

- **Monthly Expiration Date***:* The Saturday where the monthly options expire. It’s the Saturday after the third Friday of the month. (Often people think of options expiring on Friday, but they technically expire on Saturday. You just can’t trade them after regular trading hours on Friday, so it’s essentially Friday).
- **Options Expiration Activity Period:** It starts at the opening of business on the Friday before the Saturday Monthly Expiration Date and ends at close of business on the second Settlement Day after the start. So, essentially close of business on Tuesday.
- **Special Activity Calculation Date***:* The date where the amount needed for the deposit is calculated. There is no set date when this happens, the only requirement is that it has to be done no later than the fifth business day preceding the *Options Expiration Activity Period* (the Friday of the week before monthly expiration).
- **Special Activity Prefund Deposit***:* The name of the deposit that the member will have to make based on the Calculation Date.
- **Special Activity Liquidity Call***:* Between the monthly calculation dates, if the clearing corporation realizes the deposit isn’t big enough, they will require a larger deposit to be made within 2 business days of the call. The Liquidity Call deposit is then held for 90 days. (So if Melvin and Robinhood really did get liquidity called, they wouldn’t get that money back until April 28-30)

So every month, a deposit is calculated a week before monthly expirations. The amount is promptly given to the financial institution (“member”). Rule 4(a) SEC 6 says,

*SEC. 6 Notice of Special Activity Liquidity Obligations and Payment of Special Activity Supplemental Deposits. Promptly after the Special Activity Calculation Date, the Corporation shall provide each Special Activity Liquidity Provider with the amount of its Special Activity Liquidity Obligation for that Options Expiration Activity Period. **Not later than the close of business on the second Business Day preceding the applicable Options Expiration Activity Period, a Special Activity Liquidity Provider shall make its Special Activity Supplemental Deposit to the Clearing Fund.***

The member needs to make the payment by close of business on the second Business Day preceding Options Expiration Activity Period. The Options Expiration Activity Period starts on opening of business on the Friday of monthly expirations, so this means they would need to make their payment by close of business on Wednesday of monthly

expirations.

Now we jump to Rule 4(a) SEC 2, looking at the definition of the *Special Activity Prefund Deposit*,

“Special Activity Prefund Deposit” means a cash deposit of a Member to the Clearing Fund made by wire transfer to an account designated by the Corporation: a. that is in excess of the Required Fund Deposit of the Member; b. that the Member deposits to the Clearing Fund, not later than the time specified by the Corporation on the first Business Day of an Options Expiration Activity Period, if the Member anticipates that its Special Activity Peak Liquidity Exposure at any time during such Options Expiration Activity Period will be greater than the amount calculated by the Corporation pursuant to this Rule 4A; c. that the Member undertakes to keep on deposit in the Clearing Fund for at least seven Business Days after the end of the applicable Options Expiration Activity Period;*and*. that the Member designates as a “Special Activity Prefund Deposit” at the time of the deposit in a manner specified by the Corporation.*

- The deposit is held until 7 business days after the end of the *Options Expiration Activity Period*.
- The *Options Expiration Activity Period* ends on close of business Tuesday after monthly expiration.

So essentially the deposit is held for 12 business days total. I’m assuming the calculation date for the next month comes shortly after the deposit is returned rather than waiting until 5 days before expiration.

Got it? So the timeline ends up being...

Calculation Date -> Prefund Deposit is made -> Options Expiration Activity Period -> Seven days of holding the Prefund Deposit -> Deposit is returned.

Knowing this, let’s pull out some crayons. This is the 4 hour chart.



- ORANGE: The monthly options expiration.
- GREEN: Payment day
- BLUE: “Special Activity Options Period”
- RED: Deposit holding period
- WHITE: The entire time frame where the deposit is not in the position of the member.

1.3 - CBOE Futures Cycles

These are dates for futures contracts, and a very important part of the GME saga (IMO)

YEAR	MONTH	U.S. INDEXES			NIKKEI / TOPIX	
		EXPIRATION	ROLL	First Notice	ROLL	EXPIRATION
2020	3	3/20/20	3/12/20	2/26/2020	3/9/20	3/13/20
2020	6	6/19/20	6/11/20	5/27/2020	6/8/20	6/12/20
2020	9	9/18/20	9/10/20	8/27/2020	9/8/20	9/11/20
2020	12	12/18/20	12/10/20	11/25/2020	12/7/20	12/11/20
2021	3	3/19/21	3/11/21	2/24/2021	3/8/21	3/12/21
2021	6	6/18/21	6/10/21	5/26/2021	6/7/21	6/11/21
2021	9	9/17/21	9/9/21	8/27/2021	9/7/21	9/10/21
2021	12	12/17/21	12/9/21	11/26/2021	12/6/21	12/10/21
2022	3	3/18/22	3/10/22	2/24/2022	3/7/22	3/11/22
2022	6	6/17/22	6/9/22	5/26/2022	6/6/22	6/10/22
2022	9	9/16/22	9/8/22	8/29/2022	9/6/22	9/9/22
2022	12	12/16/2022	12/8/22	11/28/2022	12/5/22	12/9/22

* Note: 9/7/2020, 9/6/2021, and 9/5/2022 fall on the US Labor Day holiday when markets are closed.

These come later with u/gherkinit's dd section

1.4 - Key Terminology

sHF

Short Hedge Fund. The bad guys in this saga, and the ones that r fuk.

Doomp

Deep Out Of the Money Puts. Basically put options taht are so fuckin far out of the money (like at a .50 strike) it's basically worthless. There's been a few theories as to why these exist, but nothing's been proven 100%

Max pain

Max pain, or the max pain price, is the strike price with the most open options contracts (i.e., puts and calls), and it is the price at which the stock would cause financial losses for the largest number of option holders at expiration. When the week ends, and options expire at or near the max pain price, options sellers make the most money possible. Options sellers are classically known as Market Makers.

[Delta Hedging](#)

Delta hedging is an options trading strategy that aims to reduce, or hedge, the directional risk associated with price movements in the underlying asset. The approach uses options to offset the risk to either a single other option holding or an entire portfolio of holdings. The investor tries to reach a delta neutral state and not have a directional bias on the hedge. Essentially this means that if a market maker sells you a call, that call represents 100 shares of GME. Why GME? Because who the fuck cares about other stonks, amiright? Anyway, let's say the delta value is .3 for the cal you bought. A market maker, knowing if the price moves against them (just up)

Options Greeks

So, I did a whole writeup on [options which goes into detail on the greeks and some other things about options](#). Check it out.

If you're just here for the Greeks, here you go:

The Major Greeks

There *are* minor greeks for options trading, but let's just start with the major ones that are critical to understand if you want to trade options. They are:

- **Delta**

- This is the measure of change in an option's price, relative to the premium. For example, if you have an option with .8 delta, and the price moves up \$1, your option value will gain 80 cents per share. (we'll omit the potential changes in delta here for simplicity's sake.) Also, Delta is often used as a probability indicator for the option being in the money at the expiration date. .8 delta would be an 80% chance of being ITM at expiration.
- At The Money (ATM) Options are usually carrying a delta of .5, while In The Money (ITM) options are higher than .5 deltas and Out of The Money (OTM) options are having deltas of less than .5

- **Gamma**

- This is the rate of change to the delta over time. Gamma values tend to be higher for ATM options and lower for deep ITM and OTM options. This is a constant, and you can think of it as an indicator of how volatile the price/value of the option will move relative to each point of movement of the underlying stock.
- For example, an option with a delta of .5 and a gamma of .8 will become an option with a delta of .58 after the price of the stock increases by 1 point. Conversely, if you have an option at the same strike with a delta of .5 and a gamma of .3, the delta will become .53 after the stock increases by 1 point... make sense?

- **Theta**

- This measures the rate of time decay on the value of the option in regards to its premium - or the price you pay for the right to buy the stock at the strike. This is always a negative number because it's how option writers make their money. As time passes, this is the rate that the option will automatically lose value. **This is why you do not want to diamond hand options!!!** What's more is, as the expiration date gets closer, the rate of decay (theta decay) increases, thereby accelerating the rate of the option losing value.

- **Vega**

- This measures the risk of changes in implied volatility. In ape, this is the estimation of future price action. Higher vega = higher risk of volatility, and you pay a higher premium for that option when you buy it. **This is where IV crush comes form.**
 - Vega can increase or decrease without price changes of the underlying asset, due to changes in implied volatility.
 - Vega can increase in reaction to quick moves in the underlying asset.
 - Vega falls as the option gets closer to expiration.

[Internalization](#)

When you place an order to buy or sell a stock, your broker has choices on where to execute your order. Instead of routing your order to a [market](#) or [market-makers](#) for execution, your broker may fill the order from the firm's own inventory. This is called "internalization." In this way, your broker's firm may make money on the "spread" – which is the difference between the purchase price and the sale price.

This has the impact of your order to buy moar GME not affecting the price of the stock (imo) like it should.

[More on internalization, dark pools and market equity quality](#)

Edit: Added links for Part 2

Are you ready to learn more about our excellent fuckin wrinkly DD authors and how things seems to fit together?

[Check out Part 2](#)

The Compendium Of Wrinkles: Correlating Different Theories, Part Deux

Due Diligence

Hi everyone, Bob here,

This is going to be part 2 of the series where we check out how things are lining up. I really feel like our wrinkles are coming together nicely with the DD we are independently doing, and arriving at very similar conclusions. In this chapter, We will be reviewing some choice DD and making some really neat connections.



PS, get jacked, because this DD has been reviewed by some of the greatest wrinkly minds I know of before posting. Hope you learn something, and gain some wrinkles yourself - god knows we need 'em.

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[Looking for Part 1? Go Here!](#)

[Chapter 1:](#)

- [1.0 - Recap on understanding the T+ cycles and how they work, along with some insight to market mechanics](#)
- 1. [1.1 - T+ Cycles & How They Work](#)
- 2. [1.2 - Supplemental Liquidity Deposits](#)
- 3. [1.3 - CBOE Futures Cycles](#)
- 4. [1.4 - Key Terms](#)

In This Chapter:

- 2.0 - Notable Theories & Observations
- 1. 2.1 - Leenixus SLD Theory
- 2. 2.2 - Gherkinit Futures Theory
- 3. 2.3 - Zinko83 Variance Swaps
- 4. 2.4 - Turdfurg23 Heartbeats
- 5. 2.5 - My Own Observations
- 6. 2.6 - Tying it All Together
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- 1. 3.1 - For The Wrinkles
 - a. 3.1- - Is Moass Inevitable? - An Exercise in Rationality
 - b. 3.1- - Is Moass Possible? And Could it Be Near?
- 2. 3.2 - For The Smoothest Among Us (Yes there's a TADR)
- 69.420 - Disclaimers & Sources

Theories 2.0

To do them justice, I've asked each DD author to contribute to this section however they saw fit. I highly encourage **demand** that you take some time to read, updoot, and understand these DDs I will be linking in this section. They are great reads and worth your time.

2.1 - Leenixus SLD Theory

Source DD: [February 22 - The next GME option clearing cycle & GME bull run](#)

From [u/Leenixus](#)

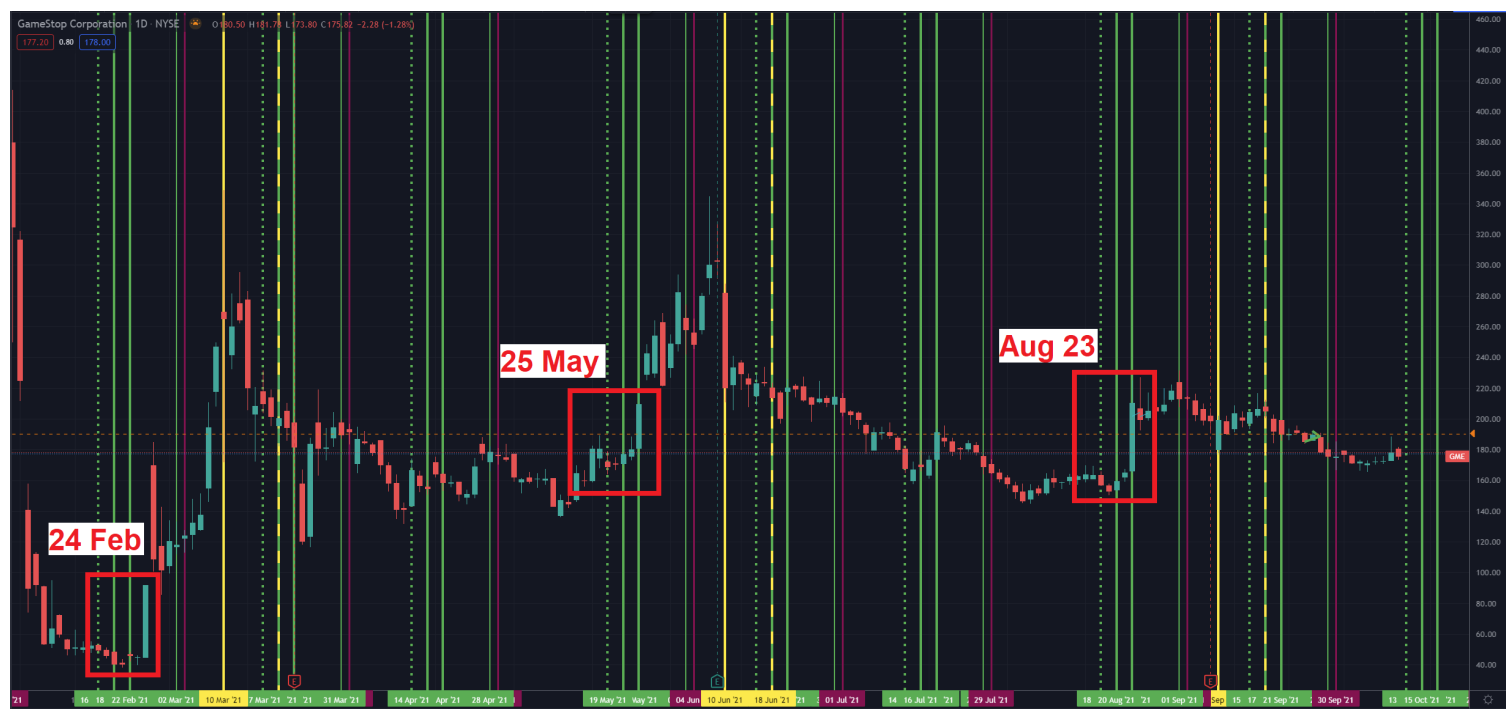


This image is the summary because unconfirmedly i believe that's when the previous month's expired options are cleared

More Detail on the Theory & Example from the DD

GME Example

In this example, you're seeing the day on which the GME dong appears. The progression is Feb 24, May 25 and Aug 23.



u/leenixus SLD cycles

Legend:

1. Dotted Green Line: NSCC SLD Deposit Period Opens

2. Bright Fat Green Line: **3'rd Friday of the Month / SLD Deposit Deadline**
3. Second Bright Fat Green Line: **Tuesday next Week**
4. Thin Pale Green Line: 6'th and last to final day of CNS/Netting
5. Red Line: Last day of option netting & return of remaining SLD to banks.
6. Yellow Line: **Futures Roll Date**
7. Dotted Yellow Line: **Futures Expiry**

You'll notice that as I previously said that the month where GME moons is ALWAYS the month before the futures roll month (First Yellow Line = Roll Date) and that it's almost **always the Tuesday after the 3'rd Friday of every month every 90 days**.

Some extra information here, any time between the date that futures will be rolled forward & futures expiry in the next month, GME takes a dump. Incidentally, this is also ALWAYS when GME earnings are scheduled. Make your own conclusion as to why this happens, i have mine.

2.2 - Gherkinit Futures Theory

Source DD: [Moass Trilogy: Book 1](#), [Book 2](#), and [Book 3](#)

From [u/gherkinit](#)

So the plan for this DD is as follows:

- The events leading up to and causing the gamma ramp/volatility squeeze that occurred in January.
- Tie together the ETF, FTD, Options and Futures cyclical movement that drives GME price action
- Lay out my futures cycle theory and explain the price movements on GME to date
- Explain why January's run did not cause the expected short squeeze on GME
- Take a look forward, using the same unavoidable market mechanics, to determine where SHFs, MMs, and ETFs are most exposed.
- Present a case for retail to in fact be the catalyst for MOASS
- Discuss the how and why , this is possible.
- Dispel the misinformation regarding options and present multiple ways they can be used effectively by those with the requisite knowledge.

I will attempt to make an evidence backed case for each of my conclusions and try to tie all of this together in a way people can digest and understand.

The Pieces of the Puzzle:

- **Section 1: Futures Roll Dates**
 - ****The Roll:****This is marked by an increase of volume and price into the roll date, followed by a drop immediately afterwards. (Feb-Mar and Jun - Jul)
 - ****The Fail:****This is marked by a sharp spike in volume several days prior to the roll date then a decline in volume and volatility until a window of activity appears (anomaly) T+35 days after the roll date. (these T+35 dates also lined up with spikes in SEC FTD reports)

- **Section 2: ETF Exposure**

- We were fairly confident at this point in our research that ETFs represented a significant part of the short exposure on GME.

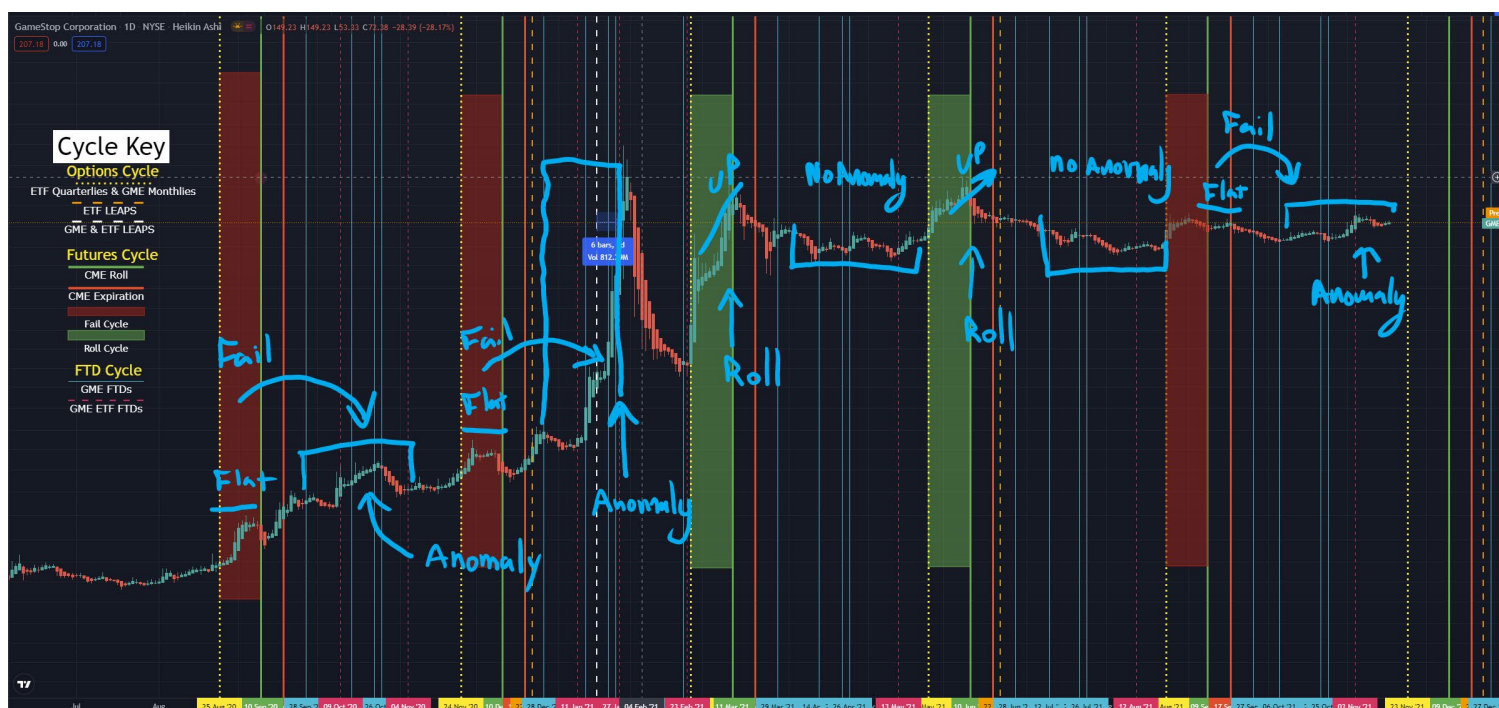
- **Section 3: The FTD pileup**

- Since the futures fail patterns have a unique outcome that causes this anomaly window what exactly drives that anomaly in the areas in between the ETF exposure dates and the the subsequent futures roll.

- **Section 4: January IS absolutely unique!**

- One day a year in January the highest amount of open interest and thus gamma exposure in the options chain occurs...GME LEAPS and ETF LEAPS expire simultaneously

These dates and windows (futures) track almost every single move on GME since September of 2020. If it didn't happen on one of these dates/windows then it happened within their respective settlement periods (T+2/3)



u/gherkinit futures theory in a nutshell

2.3 - Zinko83 Variance Swaps

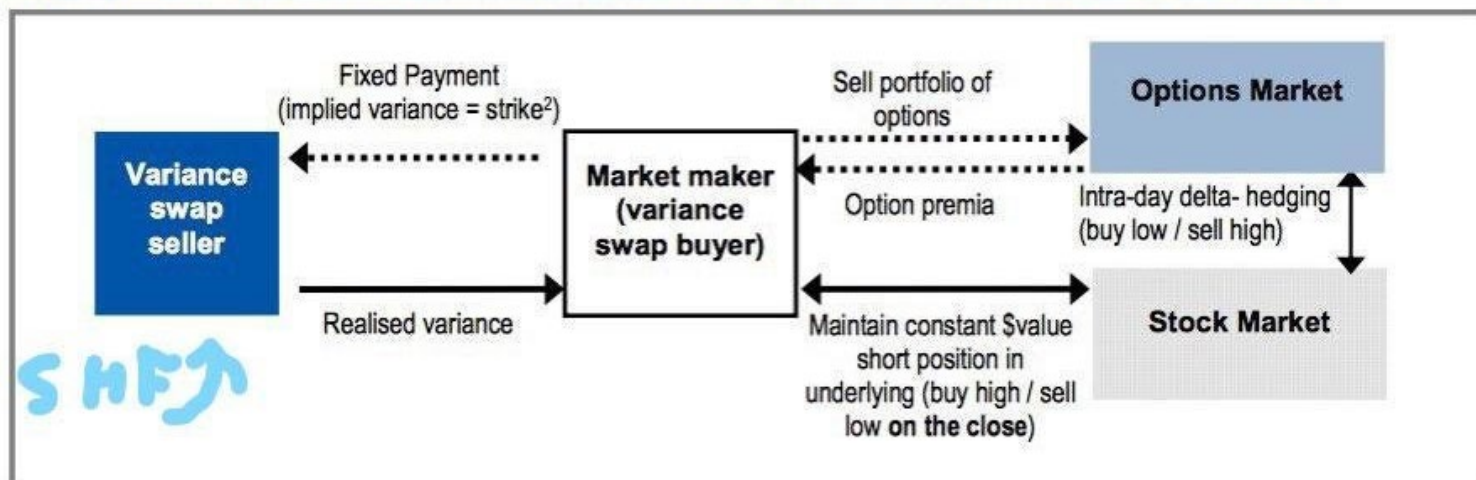
Source DD: [Volatility, Variance, Dispersion, Oh my!](#)

From: [u/zinko83](#)

First thing is first, what is a variance swap? In simple terms it is a bet on volatility. The seller is going to receive a fixed payment called the "fair variance strike as vol" which is a fancy way of saying annualized implied volatility over a period of time (usually 30,60,90 days). The volatility strike is going to be calculated and agreed upon inception, that is going to be the fixed payment that the seller receives upon maturity. The opposite side of the trade is the buyer, the buyer is going to receive "realized variance" payment on maturity, meaning that it is going to get paid based on the volatility realized during the agreed upon period.

Here is an illustration showing the "vanilla" variance trade. Note the word "vanilla" not all trades are done this way:

Figure 108: Flows in the market as a result of a market-maker buying a variance swap and replicating it in the market



u/zinko83 Variance Swaps

Variance swaps, or volatility based swaps in general, seem to play a key role in this trade. Considering Citadel's entrenchment with it, it's easy to see to me anyway, how he was cocky enough to take on Melvin's position. Thinking he could hedge it away, internalizing all the risk and profiting off of dispersion trading and systematic variance shorting until everyone got bored and they could get out cheap.

The problem is growing for them, people have held and bought more, making the risk that got/gets internalized much heavier to carry, meaning they have to release that risk back into the market sometime causing unwanted and unmanageable tail risk to hedge away which can in turn make the problem worse (see a couple months ago). **DRS is having an effect simply because it basically marks registered shares as insider shares thus removing them circulation making delta hedging (which is daily on replicating portfolios) much harder and more costly.**

2.4 - Turdfurg23 Heart Beat

Source DD: [Gamestop and The Market Heartbeat](#)

From: [u/turdfurg23](#)

The two biggest ETF providers and lenders are Blackrock and Vanguard. Throughout most of the year over leveraged funds and short hedge funds have direct access to large numbers of shares in these ETFs. Blackrock and Vanguard are happy to collect the fee's associated with lending shares and their sponsors get a nice paycheck. Now to the interesting part in the data where I noticed high volume cycles. For example Vanguard (The biggest holder of GME) has predictable high volume cycles called "wash trades" Wall Streets dirty little secret you can read about on Bloomberg. It's an abuse of the ETF system structure to wash high volume through ETFs to avoid taxes. While they are doing this Blackrock and Vanguard are largely not lending shares and tell over leveraged and short hedge funds to go elsewhere for their shares. These cycles happen on a quarterly basis December, March, June, September.

<https://www.bloomberg.com/graphics/2019-etf-tax-dodge-lets-investors-save-big/>



u/turdfurg Heartbeat Wash Sales

2.5 - My Own Observations

Let's look at options first, because it has me the most jacked!

Some of you might remember a [recent DD update on a DD update on a DD update](#) I did for my series of research. Something that's really *really* been bothering me about my data is the [offset for the C35 options tracking data](#), seen here:

Date	Volume	Day Return	ONE PTE	ETF PTE	PTS Value	Options T-35 Vol	Options T-10 Vol	Options T-2	PTS T-35 Vol	ETF T-35 Total	ETF T-10 Total	ETF T-2 Total
10/29/2021	2,293,978	0.38%	5,502	1,325,391	\$344,248,000.33				7,305,489	1,151,642	626,710	655,307
11/1/2021	4,544,283	9.62%	17,808	758,890	\$155,443,117.94				4,718	622,820	575,328	1,261,872
11/2/2021	3,882,336	5.89%	1,257	788,130	\$185,592,098.24				688,100	771,772	690,715	1,176,252
11/3/2021	11,265,594	2.02%	24,838	1,315,326	\$292,589,202.86				10,206	646,575	583,540	628,710
11/4/2021	2,987,976	-1.87%	29,456	3,148,750	\$691,913,428.64	1,254,000			11,517	731,751	1,085,293	575,228
11/5/2021	1,810,717	-8.85%	9,177	2,647,357	\$133,750,621.75				32,603	2,281,410	648,188	680,713
11/8/2021	2,157,912	2.89%	10,034	425,732	\$86,788,067.04				0	3,319,583	1,325,583	583,940
11/9/2021	1,845,298	-5.94%	18,647	1,381,295	\$372,699,604.00				1,647,700	3,751,559	759,060	1,085,291
11/10/2021	1,300,385	-1.45%	6,458	671,861	\$135,130,577.81				1,458	2,312,533	788,139	648,383
11/11/2021	1,679,481	2.38%	0	0	\$0.00						1,325,391	1,325,391
11/12/2021	577,991	-0.02%	0	644,536	\$43,544,507.50					0	3,146,790	759,060
11/15/2021	1,466,424	2.59%	723	758,382	\$166,646,086.34				2,127,889	43,006	627,520	788,139
11/16/2021	1,214,596	-0.88%	3,016	1,078,520	\$322,415,188.48				657,700	213,285	643,455	435,732
11/17/2021	1,352,714	1.79%	54,258	651,926	\$148,507,040.00					4,538	1,091,823	1,361,285
11/18/2021	1,695,376	-0.06%	1,855	748,677	\$158,018,623.44				28,804	811,864	671,861	3,647,362
11/19/2021	3,843,728	9.40%	5,553	688,735	\$669,847,105.90				3,932,389	94,587	495,789	0
11/22/2021	4,379,684	7.62%	92,883	1,081,652	\$368,643,146.65					17,654	1,088,826	688,139
11/23/2021	3,251,636	-12.28%	71,624	2,142,962	\$479,559,065.60				1,493,700	6,907	1,125,591	786,383
11/24/2021	1,309,388	-2.52%	4,356	852,494	\$181,460,062.74					18,674	572,549	1,670,520
11/26/2021	1,235,271	-4.02%	427	1,057,922	\$331,379,462.28					11,253	541,772	740,677
11/29/2021	1,108,844	-0.98%	0	842,886	\$179,109,792.86				1,562,499	0	492,495	490,736
11/30/2021	1,723,949	-1.94%	1,120	2,274,755	\$448,593,599.85				0	87,280	1,047,581	1,081,892
12/1/2021	2,305,515	-9.81%	0	2,037,757	\$366,478,218.88					0	582,611	2,162,064
12/2/2021	2,887,188	-1.86%	0	2,748,422	\$688,745,068.32					0	1,306,187	852,464
12/3/2021	4,095,688	-4.76%	7,058	1,387,534	\$340,430,955.88					17,806	551,899	0
12/6/2021	2,228,616	0.67%	32,942	1,845,146	\$323,579,150.40				7,200,989	1,237	748,514	2,057,522
12/7/2021	1,972,395	1.30%	222,263	4,368,990	\$787,879,087.23					24,818	1,113,846	842,086
12/8/2021	2,611,195	-1.87%	32,558	2,481,880	\$419,218,598.70				756,200	29,456	3,113,824	2,274,785
12/9/2021	5,084,148	-6.78%	3,656	3,277,430	\$511,104,814.26					8,177	3,591,480	2,687,757
12/10/2021	4,520,868	-0.51%	2,747	6,011,890	\$958,264,175.31					16,954	329,277	3,748,422
12/13/2021	5,486,281	-14.53%	92,710	4,914,435	\$653,378,418.24					18,647	1,229,289	1,387,634
12/14/2021	6,512,133	12.74%	11,127	6,145,582	\$922,574,580.05				951,900	6,458	521,526	2,037,757
12/15/2021	2,765,993	0.77%	0	0	\$0.00					0	0	4,368,000
12/16/2021	3,164,763	-5.49%	0	0	\$0.00					0	484,575	2,493,880
12/17/2021	8,311,638	2.37%	0	0	\$0.00					633	796,183	2,177,436
12/20/2021	1,828,567	2.58%	0	0	\$0.00					3,016	1,070,520	6,011,696
12/21/2021	1,430,219	0.67%	0	0	\$0.00				1,487,900	54,258	651,526	4,934,438
12/22/2021	1,847,154	-2.75%	0	0	\$0.00					1,855	748,677	6,145,582
12/23/2021	1,855,535	-1.21%	0	0	\$0.00					3,351	496,736	0
12/27/2021	1,615,445	-2.43%	0	0	\$0.00				2,448,289	71,883	2,142,883	0
12/28/2021	1,224,472	-0.71%	0	0	\$0.00					4,388	852,494	0
12/29/2021	2,837,486	4.11%	0	0	\$0.00					0	0	0
12/30/2021	1,561,882	2.87%	0	0	\$0.00					437	0	0
12/31/2021	1,393,564	-5.40%	0	0	\$0.00					0	0	0
1/3/2022			0	0	\$0.00				2,556,189	1,120	1,951,522	0
1/4/2022			0	0	\$0.00					0	842,886	0
1/5/2022			0	0	\$0.00					0	2,274,755	0
1/6/2022			0	0	\$0.00					0	2,011,757	0
1/7/2022			0	0	\$0.00					0	3,749,422	0
1/10/2022			0	0	\$0.00				1,450,889	7,058	1,387,534	0
1/11/2022			0	0	\$0.00					122,263	4,368,990	0
1/12/2022			0	0	\$0.00					32,558	2,481,880	0
1/13/2022			0	0	\$0.00					3,656	3,277,430	0
1/14/2022			0	0	\$0.00					2,747	6,011,890	0
1/18/2022			0	0	\$0.00					92,710	4,914,435	0
1/19/2022			0	0	\$0.00					0	0	0
1/20/2022			0	0	\$0.00					0	0	0
1/21/2022			0	0	\$0.00					0	0	0
1/24/2022			0	0	\$0.00					0	0	0
1/25/2022			0	0	\$0.00					0	0	0
1/26/2022			0	0	\$0.00					0	0	0

Something Seems off...

Then I had some conversations with some of the other wrinkles, and after [u/gherkinit](#) was kind enough to waste some time on my smooth brain discussing the finer details on how ETF FTDs are created, and the timelines around them (which you're all experts on now) - if not, go fucking read the first section of this DD... it finally clicked: I was missing the settlement period for the options. The **T+2** that happens before the **C+35** FTD period. So, I ran back to my hole, and did some frantic calculations on the keyboard, and ... HOLY SHIT, just look at this beautiful chart it created when i simply (and correctly) updated the C35 Options calculator to T+2+C35:

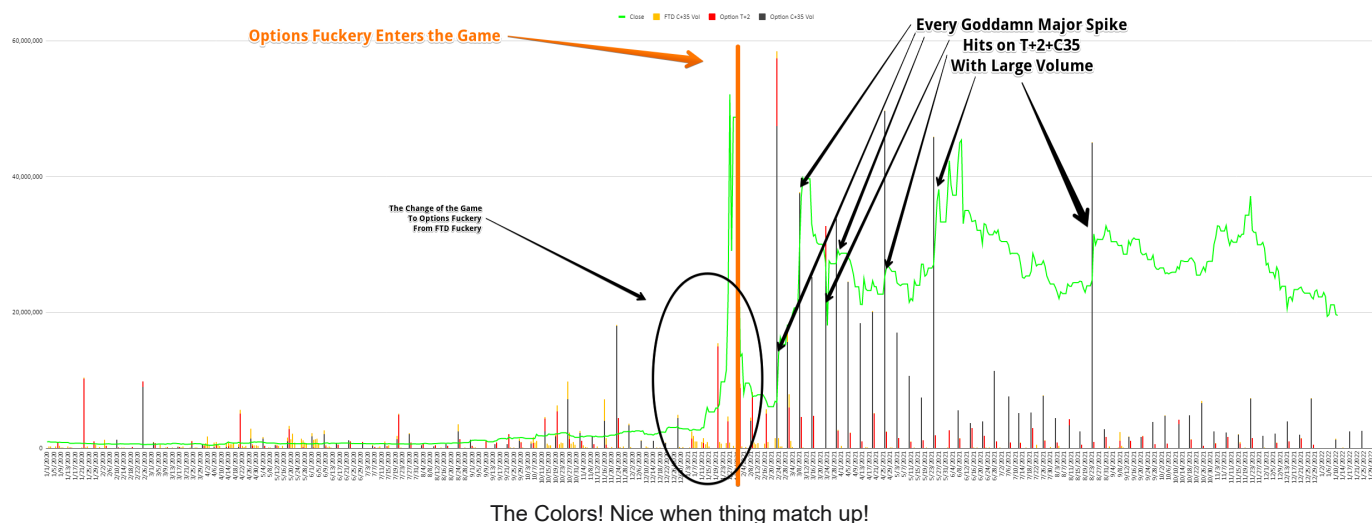
Date	▲ Day Price	Vol-C35FTD	GME FTD	ETF FTDs	FTD Value	Option C+35 Vol
2/23/2021	0.00%	-13,034,799	14,856	1,373,661	\$62,441,609.49	18,844,500
2/24/2021	105.17%	80,208,464	20,387	686,482	\$78,851,249.19	
2/25/2021	-35.88%	149,382,685	29,072	961,454	\$107,699,891.98	
2/26/2021	-13.38%	90,976,420	298,018	1,570,117	\$190,064,054.90	
3/1/2021	15.17%	42,919,082	82,708	1,810,037	\$277,886,498.00	3,522,700
3/2/2021	1.07%	31,008,666	26,373	3,183,654	\$379,360,990.86	
3/3/2021	1.36%	16,949,139	15,394	1,678,011	\$210,287,032.90	
3/4/2021	5.88%	28,619,997	20,176	1,303,700	\$175,214,988.60	
3/5/2021	7.47%	29,547,868	33,363	1,822,932	\$255,686,073.30	
3/8/2021	25.57%	23,610,946	1,907	1,400,879	\$272,841,877.68	29,599,100
3/9/2021	13.41%	36,151,400	27,582	1,999,630	\$498,000,262.80	
3/10/2021	-1.64%	70,187,016	22,839	2,094,054	\$560,976,645.00	
3/11/2021	7.60%	27,823,511	10,818	1,566,288	\$410,047,560.00	
3/12/2021	-3.82%	24,440,020	155,658	1,564,596	\$455,007,183.00	
3/15/2021	-20.68%	4,891,975	46,344	2,320,905	\$521,126,194.86	? 18,255,000
3/16/2021	2.47%	33,511,953	140,554	1,810,745	\$406,201,912.83	
3/17/2021	-3.69%	15,783,371	47,597	1,500,220	\$324,747,484.77	
3/18/2021	-5.72%	11,252,274	32,220	1,373,115	\$283,526,336.25	
3/19/2021	2.32%	24,677,297	637	1,647,468	\$330,065,988.35	
3/22/2021	-5.25%	8,790,945	17,163	1,941,535	\$380,947,174.02	
3/23/2021	-7.97%	-5,696,607	83,058	2,814,575	\$526,644,797.75	18,035,900
3/24/2021	-23.83%	20,796,100	38,387	2,031,470	\$292,408,991.38	
3/25/2021	48.80%	10,000,000	20,295	1,081,239	\$202,406,872.50	
3/26/2021	-8.44%	35,992,263	62,109	2,857,084	\$528,373,933.00	
3/29/2021	0.30%	-15,544,732	86,859	973,765	\$192,291,131.20	24,257,000
3/30/2021	3.71%	16,319,891	17,841	1,004,113	\$198,729,174.84	
3/31/2021	-3.89%	7,594,158	14,031	1,578,854	\$302,361,430.70	
4/1/2021	-0.99%	7,548,742	25,667	779,653	\$154,178,514.00	
4/5/2021	9.33%	-6,199,284	8,090	1,341,087	\$252,228,640.15	18,363,400
4/6/2021	-0.38%	4,728,126	15,799	1,645,366	\$306,484,942.50	
4/7/2021	-2.87%	3,700,809	85,817	2,392,097	\$440,994,354.58	
4/8/2021	-8.40%	8,842,922	8,161	819,437	\$140,906,835.48	
4/9/2021	-6.68%	8,650,517	71,528	1,057,897	\$178,855,743.00	
4/12/2021	-10.76%	2,203,510	1,186	1,151,587	\$162,644,742.57	13,131,100
4/13/2021	-0.63%	6,091,628	28,097	1,421,688	\$94,602,175.15	
4/14/2021	15.99%	10,000,000	6,015	1,175,803	\$196,808,151.54	
4/15/2021	-4.02%	6,536,918	36,460	1,192,197	\$192,211,101.08	
4/16/2021	-0.84%	3,119,188	67,097	1,007,864	\$166,285,717.09	
4/19/2021	-4.32%	-4,171,901	2,572	746,030	\$123,047,710.74	13,004,200
4/20/2021	-3.42%	3,413,496	88,599	538,667	\$99,440,478.98	
4/21/2021	0.07%	2,577,255	0	2,402,562	\$380,830,102.62	
4/22/2021	-4.98%	2,879,030	15,959	1,852,275	\$282,420,933.78	
4/23/2021	1.46%	2,459,951	23,180	1,123,834	\$173,405,576.52	
4/26/2021	11.89%	34,967,008	3,862	920,521	\$156,156,020.19	43,611,300

Price Spikes Correlate to T+2+C35 From option expirations

<https://news.gamestop.com/news-release-details/gam...>
GameStop Completes At-The-Market Equity Offering Program
 Apr 26, 2021 — GameStop disclosed on April 5, 2021 that it had filed a prospectus supplement with the U.S. Securities and Exchange Commission to offer and sell ...

It's all coming together!

Also in Crayon



Yes, HOLY shit... I was right all along, but was too fuckin smooth to calculate the dates right. Sorry folks, but now we know...

KNOWING 
IS HALF THE BATTLE

But there were still questions. We know what is happening, but **WHY** does the expiration for these abusive looking options OI correlate so fuckin' well to the green johnsons we all know and love and yearn for. **WHY** does it work this way?

[u/zinko83](#) has entered the chat.

Go read and fully understand [that wrinkly DD](#). Or at least understand this: He pointed out a correlation in the data he was looking at with swaps that DIRECTLY correlates to the spikes i'm seeing as well. When the large OI is removed (swaps dropped), we see our johnsons at C35 from those dates. Because they are exposed and likely running these hedges that zinko talks about *naked*. So when this is dropped, they are exposed, naked, and afraid.

2.6 - Tying It All Together

To Recap:

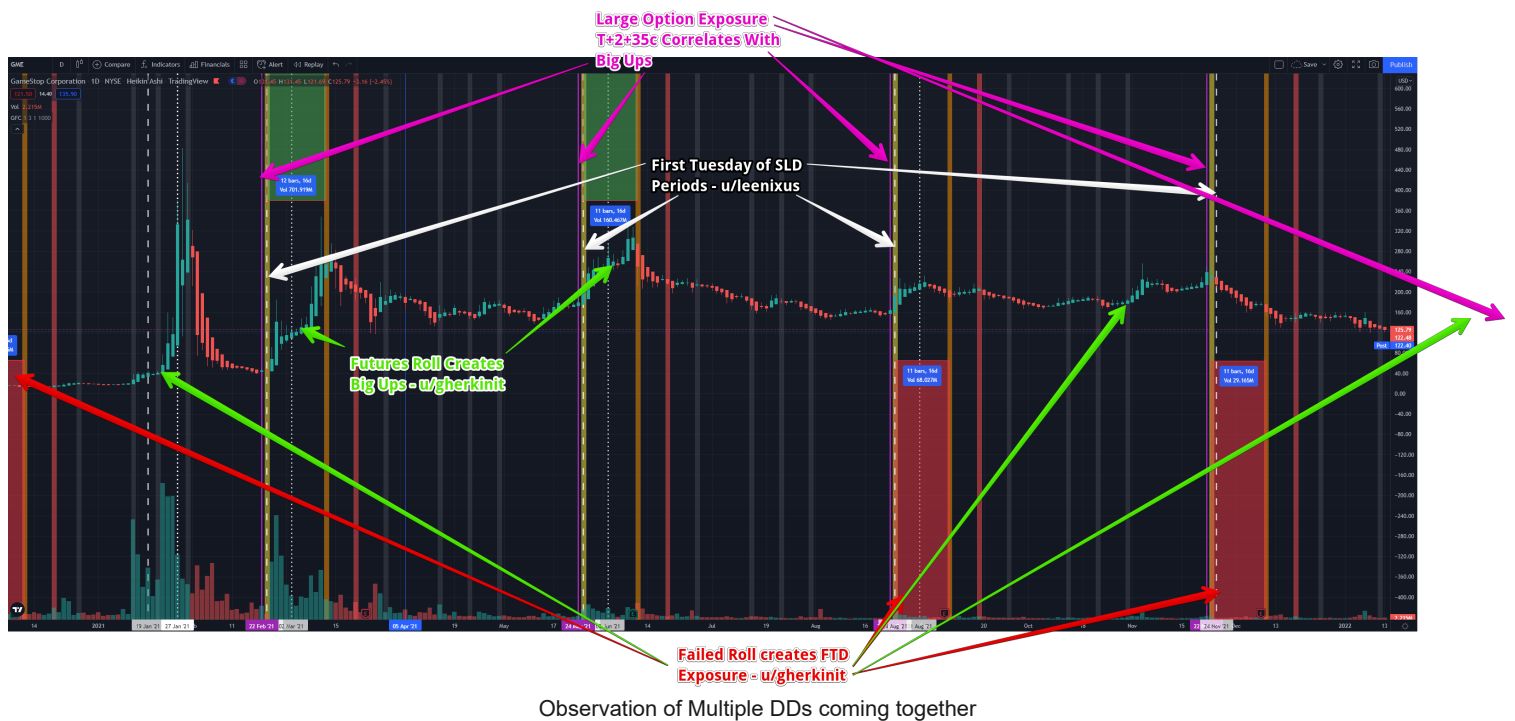
So, we've reviewed multiple theories by some of the communities greatest DD writers (myself excluded) of our time. Here's the interesting part:

We seem to have come to similar conclusions from multiple different angles.

Lets see...

We have multiple DD authors writing about dates for different reasons. Some think it is related to SLDs, some think variance swaps play a role c35 after they fall off, others have observed heartbeats to evade taxes. What's more, is one big brain motherfucker worked together with a lot of wrinkly apes to find several pieces of the puzzle that all fit nicely together. Shit, the only thing I've really contributed to this whole thing is collecting data, and drawing wild ass correlations.

Confused and need a hot crayon injection? Look no further:

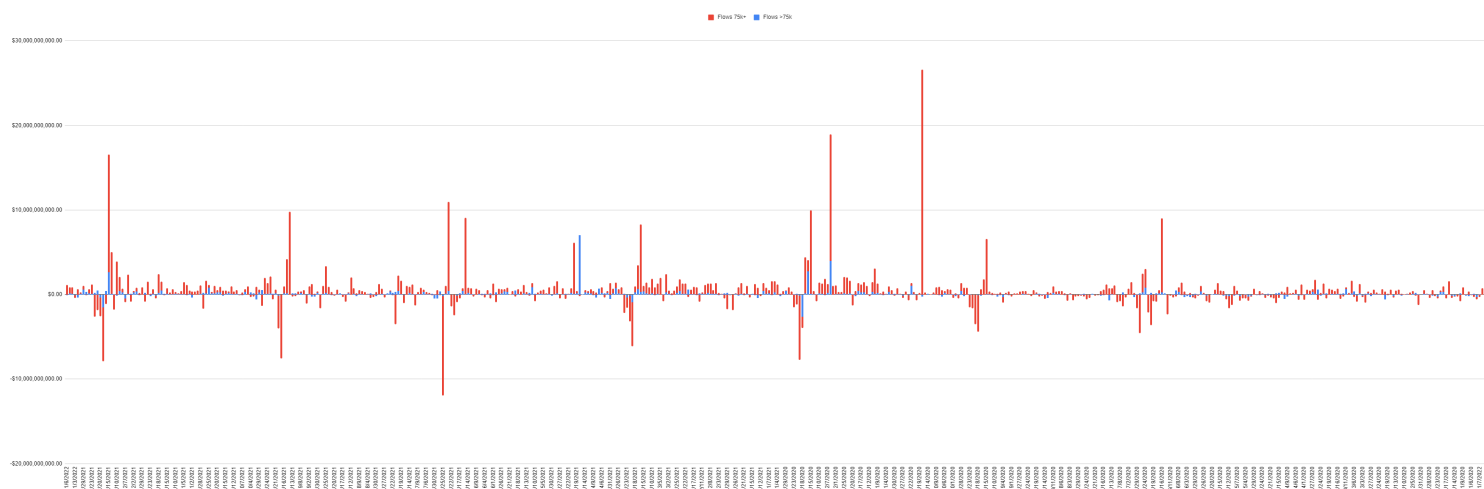


Also, [u/zinko83](#) noticed that we get spikes C35 after the swaps fall off



More basis matching dates and spikes

Oh, and don't forget to check for tax evasion all along the way. ([u/turdfurg23](https://www.turdfurg23.com))



All ETF Heartbeats

Conclusions 3.0

3.1 - For The Wrinkles

3.1- - Is Moass Inevitable? - An Exercise in Rationality.

In our review on this DD, one really wrinkly ape that I respect the hell out of wanted to point out some possibilities that could result of netting off the exposure through Continuous Net Settlement (**CNS**). Remember when reading, that CNS

applies to FTDs, both in GME and GME containing ETFs.

I'm choosing to add this section because its important to stay rational in all this. If you are here for the usual rockets I post in my DD (**I AM BULLISH AF**), you'll find that section/recap after the wall of text below.

Anti-Moass Bear Thesis Warning - May Unjack Titties

Here's what they had to say:

[A solid run down of Net Settlement actions with examples of share movements.](#)

The nuts and bolts of how the volume matters and the CNS impacts can be summed up with a few key points:

1. **Continuous means continuous.** There is no method of preventing it from happening and there is not method of making it happen. It is an automated system that runs in premarket, consolidating and netting all transactions in after hours, and in aftermarket, consolidating and netting the day's transactions.
2. **It is a First in, First out system.** Meaning that obligations created yesterday are cleared today and today's obligations are automatically rolled to tomorrow.
3. **It is based on an individual brokerage firm (not fund, investment bank, etc).** Meaning it does NOT take into consideration WHO buys or WHO sells, only that there was a buy or a sell.
4. **It is based on the net trading from the reporting brokerage.** Meaning CNS also does not care how many buys or how many sells, it ONLY cares about the net positive or negative.
5. **Its purpose is to match transactions to shares,** so it is only in practice when there are not shares to be matched in one direction or the other. When obligations at brokerages exist, CNS is responsible for auto-netting, clearing, OR rolling the shares forward. The point is netting to a zero obligation.

What does this look like?

Day 1: Imagine you and your friend just became the two big brokers in the market. It is your first day trading for your clients. Congrats. At the end of the day, through all of the transactions you orchestrated, according to your tape, you, as a net seller, have a "long" position of 500 shares. Your friend, though, was unable to secure his shares as easily, as a net buyer, he has a "short" position of 1000 shares. In this small world where you two are the only brokers in the game, your net ends with a -500 balance. This balance now rolls over to the next market day. You have 500 potential FTDs, floating on your books as broker. Not to worry though, you still have one more day before they are truly FTDs (**T+2** remember)!

So, day 2. Volume surges but you net even for the day... FUCK. CNS ONLY deals in netting out the imbalance. Your friend still needs his 500 shares and now you have 500 FTDs legit reported at the T+2 cycle date. You are a brokerage firm. NSCC doesn't know who among your clients are not delivering the shares for netting but YOU do. NSCC doesn't care, but YOU do. Why? Because in the end, according to REG SHO, the broker has responsibility for the delivery of the FTD NOT the client, because you have more to lose..... so..... what is the fix here?

Well there are TWO consolidation cycles a day. You, completely legally, encourage after hours volume surges. More volume comes into brokerage, especially after hours, more shares are available to net. Premarket consolidation and netting occurs and the roles have reversed. You are sitting on 500 shares long, 500 immediately clear your FTDs.

But what happens if there are not enough shares? You just push volume as much as possible. Positive or negative netting is still netting in one direction or the other and the CNS is "First in, First out" so the volume of tomorrow will clear the FTDs of two days ago and create new FTDs to be dealt with two days from now.

You might be thinking that CNS sounds an awful lot like an FTD rollover machine? And you are 100% accurate in every way.

Here is the hard truth. The system is built to be a fortress of checks and balances. Stable rigid gears and weighted levies holding back the potential flood of silt and loss. The most important reality of why the CNS matters in this is because, in a speculative market driven by the pressure of undelivered shares, the fact that a completely automatic, non-custodial, and purposeful cog of that machinery is built to automatically roll over the very thing causing that pressure, should be a very telling truth.

If you ask me, the dude that wrote that could use a little hopium



3.1- - Is Moass Possible? And Could it Be Near?

Bullish AF Observations. Warning: May Jack Tits

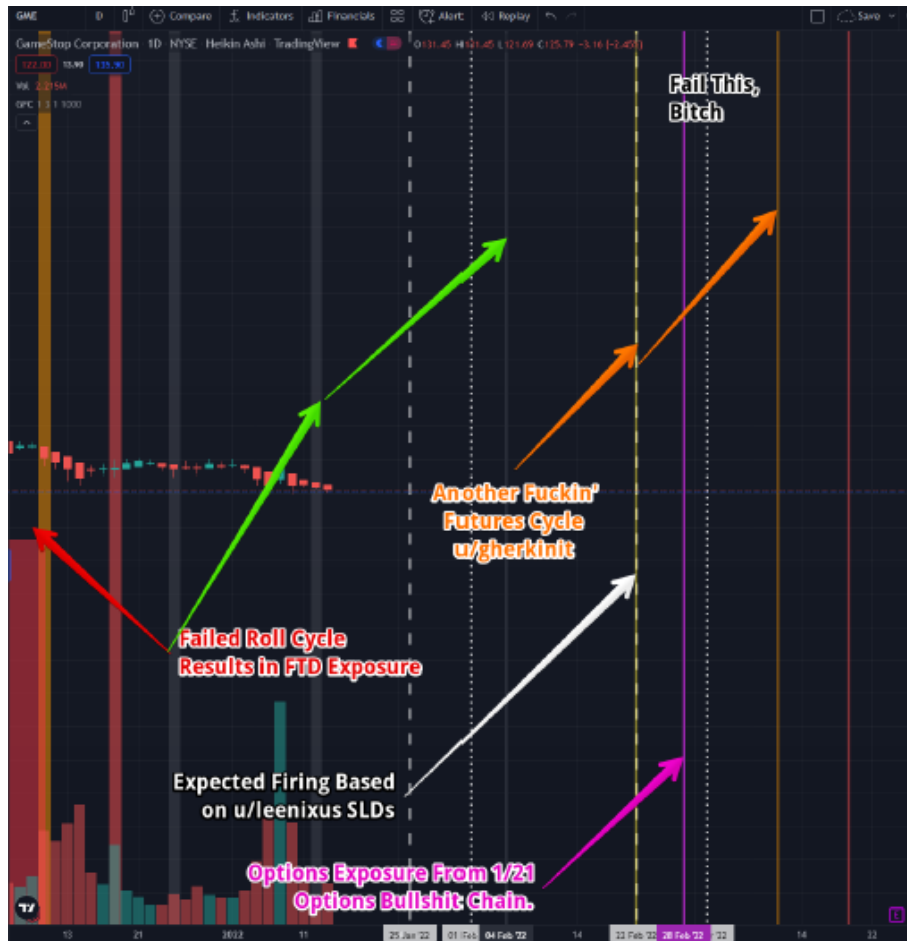
It looks to me, through all my research and analysis of the DD, and data that we have a lot of things happening here (go figure).

I think the game was identified by [u/gafgarian](#) (now a , but we still love him) way back when when he posted his [epic FTD cycle DD](#) (warning - drive link), then the big sneeze happened. This is (I think) when they got into variance swaps heavy ([u/zinko83](#)), and the exposure in the cycles identified by [u/herkinit](#) were really exacerbated. Now we find ourselves in a heavily illiquid stock, that is probably still sitting at well over 100% SI (I can elaborate on this if you'd like - ask me), and we have literally nowhere to go but up from here. What's more, is if you check out DFV's original thesis, a lot of that which he discusses has already come to fruition. And I think GME has already blown out some of those expectations. What's more you ask? GmeDD's new report is bullish AF from a fundamentals perspective. BTW, [u/deepfuckingvalue](#), if you're here watching this all unfold, **what the fuck dude, go enjoy yourself - you've earned it!** But seriously, I'm curious what your analysis might be on the stock these days. **My bet would be bullish ;).**

3.2 - For The Smoothest Among Us <3

I thought it'd be nice to part with a little TADR. First, let's take a hit of that sweet nectar we call hopium.

If we look at the combined chart, You can see the following:

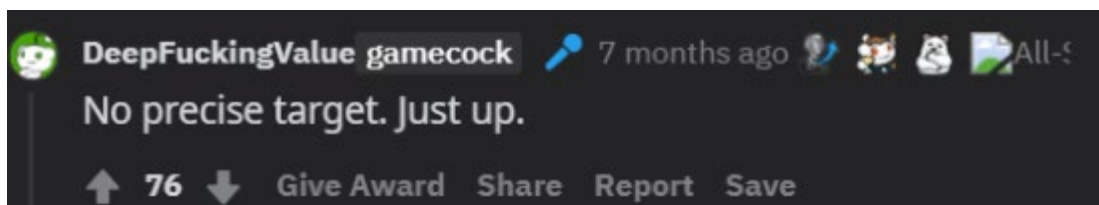


The best DD writers (in my humble opinion) as of late are all converging on patterns that pretty much line up with each other. Maybe it's futures driving the price action, Maybe it's variance swaps? Maybe it's simply a liquidity squeeze, and observed when money is temporarily taken away during the SLD periods? Maybe it's all of the above. You be the judge. Personally, IDGAF who's theory is right, as this raggtag group of apes have uncovered so much fuckin fuckery in our financial system, particularly on GME, it's amazing to behold. Even more amazing is the fact that these guys came from different angles and all arrived at the same conclusion:



Credit to [u/Bosse19](#)

What's this mean? What does the future hold?



Closing & Disclaimers 69.420

Thanks to all the contributors of this DD, and thanks for all you do for the community. I am really glad I found you all, and you welcomed me into the fold. I've learned so fuckin much from each and every one of you, and cannot thank you enough. There really is a wealth of information here in the ape community, so don't be shy - reach out and form a wrinkle or two!

Oh, and [u/yelyah2](#), don't think I forgot you - I just need more granular data to add [your theory](#) to this. To quote [u/zinko83](#):

I'd bet my next paycheck that those sensitivity spikes you are observing would correlate nicely to where Zinko sees the swaps drop off.

But joke's on you, I don't get paychecks...

TO THE MOON!

Disclaimer:

1. **DRS:** I like DRS'd shares because they are supposed to help curb fuckery. [I even built a DRS tracker](#) that I probably should update sometime. Who does this shit if they don't like DRS?
2. **Options:** I like options, but they are risky AF - please understand the risk and mechanics of options before considering them as a way to leverage your position. [u/leenixus](#) is currently writing up some DD series on options if you're interested in learning about them. [Here's the first in the series.](#)
3. **NFA Bitches:** Nothing of what I say or present in reddit form or elsewhere is financial advice. Quite the opposite actually - It's just the slightly coherent ramblings of an autistic ape who eats so many crayons they shit rainbows regularly.
4. **BULLISH AF ON GME**

Sources:

[MM](#) | [AP](#) | [RegSho and Locate Reqs](#) | [FTD](#) | [Settlement](#) | [AP Agreement](#) | [CNS](#) | [Swaps](#)

Backup: [On my Drive under the DD Folder](#)

PS: Please let me know if anything is inaccurate here, I will update for accuracy - just don't be a tool about the way you present the information, and please provide sources.

[Link to part 1](#)

