

Title: Graphs, Coloured Crayon Lines, insights to previous price movement

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Hello fellow apes and smooth brains, before Jan 2021 I knew nothing of markets and options or derivatives, but since the great sneeze of January I may have grown a wrinkle or two.

I have no background in finance/accounting but I believe that theories should be consistent and independently verifiable by another observer.

I present some graphs and observations I can make

TA/DR The stock often moves around periods of coloured crayon lines but this is not always the case and should be explained

[Graph taken from a user who is closely related to a pickle](<https://preview.redd.it/bq19ryc3ed881.png?width=2396&format=png&auto=webp&s=f52ea6a8f855dbe83a15cb11cf556b27eafd092a>)

I became heavily interested in this after seeing the above graph from a user which is closely related to a pickle. Part of his theory is that GME has periods of movement around dates

- * a) related to the CME Group Equity Index Quarterly Futures rollover and expiration dates.
- * b) Quarterly options and ETF options dates (the third Friday of Feb, May, August, November)
- * c) Leaps (Third Friday of December, Jan, June, where far dated (years) options expire)

With respect to Futures rollover and expiration dates he splits stock movements based on rolls and fails where:

- * a roll involves heavy volume before the rollover date (green rectangles)
- * a fail being a period of flat movement leading up to the rollover date (red), followed by upwards movement in the period afterwards.

There is also significant stock movement at the time immediately after quarterly ETF and options dates as well as leaps.

Previous price movement does not necessarily correlate with future price movement or performance but it is better than nothing and provides insight. There is no doubt that GME is an idiosyncratic stock that has unusual market movement.

I went to create my own graphs as I found the original theories difficult to understand, interpret and felt like some data was missing. By making it myself I thought I would understand the information better.

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Apologies for the poor graph format, I do not have access to any paid software.

<https://preview.redd.it/citixin7ed881.png?width=1193&format=png&auto=webp&s=f056b92b632ca5eed307c5740e118dbf225ebe8>

- * Red dotted line= Quarterly Options/ETF Expiry.
- * Light blue dotted line = Futures Rollover - Expiration Period.
- * Dark Blue dotted line= 35 calendar days (C+35) from rollover date.
- * Pink dotted line = Leap options/ETF expiry.
- * In light blue translucent rectangles represent T+2/C+35 OR T+3/T+6/C+35 dates
- * Dark blue translucent rectangle represent the period of time that is C+35 from the rollover/expiration

period

These concepts of T+2 / T+3 / T+6 is about FTD's (failure to deliver) and C+35 (35 calendar days), are related to the idea that once FTD's are generated for whatever reason, there is a time frame required to cover them and covering them causes buying on open/lit markets leading to true price discovery.

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Now that we have the background out of the way going into my observations

****The days of greatest movement tend to be****

*** **Immediately following quarterly options expiration dates except for this December****

*** **Immediately following leaps****

*** **Delayed to around when ETF FTD's are due from quarterly expirations****

We all know this graph well

<https://preview.redd.it/tc90qck9ed881.png?width=1109&format;=png&auto;=webp&s;=1b1179ae330c910e08c4e1904409f2d720321368>

I say \~ETF FTD because the dates do not line up perfectly and I am not sure why and this is potentially concerning and a flaw in the theory

****However this pattern does not quite hold up when placed back onto the full years and there are some anomalies as well****

<https://preview.redd.it/9dlpftgbed881.png?width=1193&format;=png&auto;=webp&s;=3be29e1d66b278be77fb114efcb3431a5f2d4d51>

Some of the supposed ETF FTD dates do not have any significant price action from the May & August quarterly expirations.

There is also a significant lack of upward movement on the November quarterly as well. (This is potentially explained by a significant ETF short volume to counteract the upwards movement however I do not personally have the data available to support this, alternatively this could be related to heavy put options activity driving down max-pain, again I do not have the data to support this).

However the majority of our favourite upward movements (especially the rebound of February when it went from \$40 back to the \$300), many of our pushes back above \$180 can be explained with the quarterly dates.

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****The Distinction between rolls and fails****

I am not convinced there is a distinction between rolls and fails of futures, if there is, then it is very hard to define and blurred due to the effects of the quarterlies

Looking at volume.

<https://preview.redd.it/q5f10ubced881.png?width=1193&format;=png&auto;=webp&s;=f1013829e6751cab7f2c87888e075b1018dc8d5>

There was an insane amount of volume traded during the sneeze of January (many times the float) which defies all expectations.

Due to this insane volume the graph poorly shows the volume traded in the May August quarterly dates but if we zoom into the May 2021 to current period.

<https://preview.redd.it/y1r38zzied881.png?width=1189&format=png&auto=webp&s=f7e7177a2f9365a3831eecd90b6d646ecc957032>

There is certainly still increased volume in the May August Quarterly cycles, and possibly November cycle

I am not convinced that there is a distinction between roll cycles and fail cycles, there is simply a period of increased activity immediately after quarterly dates and prior to options roll over. How high the stock moves depends on the amount of volume traded.

There is a decreasing amount of volume being traded, this is likely related to a shrinking float

****Anomalies****

<https://preview.redd.it/z4qzf5ked881.png?width=1193&format=png&auto=webp&s=3887aa6eb1e7bc7e8ccae6703e0dc30ff97cf43f>

The ? are the real anomalies that still need to be explained. The run of Nov 2-3rd could be explained by an ETF FTD from the September 2021 Monthly options cycle.

However I have not found an explanation as the the sudden crash and rise back in March/April or our current price movement.

We probably do not have enough data at this time to explain why we have had such significant downward price movement in December (there are possibly theories such as being shorted by an ETF, use of bearish options, or possibly ETF rebalancing and release of shares. I do not have data or evidence about this).

Things that I only thought about after nearly writing up this post

* Ryan Cohen's buy-in back in Sep 2020 and December 2020 likely had a bigger effect on stock price than previously thought and this should be accounted for

* The June leap period is complex with both a GME share offering affecting price

TL/DR

Observations/Suppositions/Inferences

* GME almost always goes up after quarterly dates in the past year

* ETF's are a large part of GME movement (basket theory)

* Leaps have the greatest effect on price movement, then quarterlies (this is likely due to stacking effects of things such as delta hedging/gamma ramps)

* The volume traded by GME is shrinking but we still have high volume days around the above movements but they are getting much smaller

* There is a discrepancy in the current price movement, whether this is related to a lack of a buy-in from Ryan Cohen or not is hard to know, how this will effect the stock is hard to know

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****TA/DR** The stock often moves around periods of coloured crayon lines but this is not always the case and apes should continue to find reasons to explain and test theories**

I am not point to any dates, I am just pointing out previous abnormal price movements as well as holes/flaws in explaining them. If you want dates, you'll have to calculate them yourselves.