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The OTC Conspiracy

GME, idiosyncrasies, and the infinite Banana Trees

Shining Some Light into the Dark Pool data

Probably the last DD you'll ever need to read... The OTC Conspiracy - Shining Some Light into the Dark Pool data - Apr. 25, 2021

Due Diligence

I know that collectively, we are anti-conspiracy right now, but as a simple ape, I just liked the way it rhymed.

What I'm presenting is 100% based on the publicly available published FINRA OTC data. The way FINRA presents their data makes it really difficult to spot anomalies and trends, so I decided to compile it into an Excel spreadsheet. The trends are clear. The data is revealing. And the Hedgies have some serious wedgies.

The data is pretty dense. I will try to give an overview of the "what" and the "when" and then cover the "who". My brain is too smooth to understand the "how" and the "why", so I'm hoping that this DD and the supporting data can help other apes unravel the full story.

If you haven't read my previous posts, I'll link them here so you can catch up.

FINRA ADF is not in operation (4/20)

Missing GME Bananas (4/21)

An Update on the Missing Bananas (4/23)

It's pretty easy to track my train of thought. And the fact that I was able to put this together in less than a week really makes me question what's going on with regulators behind the scenes...

To summarize - like many of my fellow apes, I was trying to understand this **FINRA ADF** nonsense and why a majority of daily volume was being routed there. All that buying pressure had almost no effect on increasing the price.

Then, I noticed that the calculated volume didn't add up to the daily trading volume on Bloomberg Terminals. There were missing bananas, and I wanted to find them.

After a few adjustments to the search criteria, I was able to see that the bananas weren't necessarily missing, but were not going through any of the exchanges. **Over 90%** of trades from 4/13 - 4/20 were being routed through **FINRA ADF** or some unknown dark pools (**OTC**). That really pissed me off...

So this weekend, I did some digging on the OTC website.

<u>u/broccaaa</u>'s DD on <u>FTDs and Dark Pools</u> really helped me to understand that something weird was going on and has been going on for several months. I still don't understand the majority of what he covers, but the Dark Pool part seemed to click.

<u>u/plants69</u> also had a DD <u>The Most Manipulated Stock - GME</u> which I saw just before starting to write this one. She does a great job digging into the "How" (with married puts and FTDs). She also does a deep dive into the **ATS data**, which I will only present in passing. Check out her DD!

Here goes nothing...

We'll start really general and then go into more detail.

Table 1: Monthly GME OTC activity

GME Monthly OTC Trades	Total Shares	Total Trades	Avg Shares/Trade
September	110,343,709	272,575	404.82
October	175,908,562	477,193	368.63
November	69,438,259	231,210	300.33
December	110,569,834	420,166	263.16
January	525,247,645	5,777,645	90.91
February	302,110,234	7,740,859	39.03

Monthly GME OTC Activity from September 2020 - February 2021

Not too difficult to spot the trend in this one. The number of shares that were traded OTC increased **4.75x** from December 2020 to January 2021.

The number of OTC trades increased **13.75x** from December 2020 to January 2021.

The number of OTC trades increased **18.42x** from December 2020 to February 2021.

The average size of the trade also has progressively decreased every month, from **over 400 shares/trade** in September to **39 shares/trade** in February.

And just look at the **number** of shares that were traded OTC. Over **525 million** shares traded in January, and over **300 million in February**. To put that in perspective, let's remind ourselves that the GME float is somewhere around **26.7 million** (and quite possibly less).

Here's the Weekly GME OTC data from September 28, 2020 through March 26, 2021.

Table 2: Weekly GME OTC activity

	Shares	Trades	Shares/Trade	Week of 1/19/2021	170,039,730	849,773	200.10
Week of 3/22/2021	48,568,861	1,436,410	33.81	Week of 1/11/2021	156,958,902	588,136	266.88
Week of 3/15/2021	41,980,529	1,403,548	29.91	Week of 1/4/2021	13,926,925	63,783	218.35
Week of 3/8/2021	76,529,930	2,960,633	25.85	Week of 12/28/2020	14,402,253	64,118	224.62
Week of 3/1/2021	70,118,713	1,477,452	47.46	Week of 12/21/2020	35,405,726	122,854	288.19
Week of 2/22/2021	121,667,480	3,157,057	38.54	Week of 12/14/2020	19,437,594	60,013	323.89
Week of 2/15/2021	21,554,348	341,014	63.21	Week of 12/7/2020	26,137,279	107,667	242.76
				Week of 11/30/2020	29,383,508	126,962	231.44
Week of 2/8/2021	49,113,110	825,424	59.50	Week of 11/23/2020	16,841,977	55,877	301.41
Week of 2/1/2021	109,775,296	3,417,364	32.12	Week of 11/16/2020	18,443,760	46,841	393.75
Week of 1/25/2021	184,322,088	4,275,953	43.11	Week of 11/9/2020	7,868,516	31,712	248.12
Week of 1/19/2021	170,039,730	849,773	200.10	Week of 11/2/2020	12,087,480	35,332	342.11
Week of 1/11/2021	156,958,902	588,136	266.88	Week of 10/26/2020	19,273,541	55,756	345.68
				Week of 10/19/2020	22,694,461	67,949	333.99
				Week of 10/12/2020	48,925,291	132,438	369.42
				Week of 10/5/2020	81,492,034	209,031	389.86
				Week of 9/28/2020	11,962,882	34,552	346.23

Sure seems like the GME OTC data has rapidly evolved since January

Figure 1: Total Weekly GME Shares Traded OTC



Things really seemed to change in January

Figure 2: Total Weekly Trades Made OTC



Look how those weekly OTC trades increased

Figure 3: Average Shares/Trade OTC



The number of shares/trade markedly decreased during the week of 1/25 and has remained less than 50 shares/trade since 2/22

So back in late September, October, November, December, and even mid-January, the average shares/trade in the OTC market was between **218** and **393** shares/trade.

The number of **OTC trades** for the 15 weeks leading up to January 11th was between **31,712** and **132,438**, with one outlier being the week of 10/5/20. The week of 10/5 had **81.49 million** in OTC volume and **209,031** trades, but still an average of **389.86** shares/trade.

During the week of January 11th, almost **157 million** shares were traded OTC and the number of OTC trades increased almost **3x** that previous outlier, to **588,136** trades.

During the week of January 19th, over **170 million** shares were traded OTC. A new record **849,733** trades were made OTC (**4x** the 10/5 outlier) and the average number of shares/trade dropped to a new low of **200.1** shares/trade.

During the week of January 25th, over **184 million** shares were traded OTC in **4.276 million** trades (**20.45x** the 10/5 outlier) for an average of **43.11** shares/trade.

So things got weird in January. Let's take a closer look at that data as a whole.

Table 3: January GME OTC data by sorted by Trades

January OTC by Trades			
	Shares	Trades	Shares/Trade
CITADEL SECURITIES LLC	252,215,846	2,557,687	98.61
VIRTU AMERICAS LLC	136,746,921	1,774,037	77.08
G1 EXECUTION SERVICES, LLC	76,372,485	536,911	142.24
TWO SIGMA SECURITIES, LLC	10,614,663	385,471	27.54
JANE STREET CAPITAL, LLC	13,545,773	206,678	65.54
UBS SECURITIES LLC	10,143,759	108,283	93.68
COMHAR CAPITAL MARKETS, LLC	7,540,994	64,824	116.33
WOLVERINE SECURITIES, LLC	3,966,090	40,405	98.16
ATIONAL FINANCIAL SERVICES LLC	40,913	39,912	1.03
STOCKPILE INVESTMENTS, INC.	34,512	19,044	1.81
De Minimis Firms	5,022,071	15,044	333.83
HRT EXECUTION SERVICES LLC	1,075,312	8,791	122.32
COWEN AND COMPANY	5,995,907	7,923	756.77
CUTTONE & CO., LLC	624,884	7,538	82.90
LEK SECURITIES CORPORATION	1,307,515	5,097	256.53
Total	525,247,645	5,777,645	90.91

January 2021 GME OTC data sorted by number of Trades

So this shows us the major players in January. Citadel, Virtu, G1 Execution, Jane Street, and Two Sigma traded the most number of **shares** OTC. You can sort by Shares or Trades, and I'm going to be consistent and sort by trades, because I think it's telling to see who was most active.

National Financial Services (Fidelity???) and **Stockpile Investments** were outliers in terms of shares/trade. Looks like some high frequency trading (HFT) if you ask me. **NFS** first began trading GME OTC during the week of **1/11**/2021 (never previously active from September - December). Stockpile first begin trading OTC during the week of 1/25. I'll leave it there for now.

So **Citadel** traded over **252 million** GME shares in the OTC market in January. They were busy. Based off their 13F filing, how many GME shares did they actually own again? **217,132** shares. In January, they traded **over 1161** GME shares for every **1** share that they own.

What about **Virtu Americas**? They were really active on the OTC market in January too, trading over **136 million** GME shares. As of 12/11/20, they owned exactly 0 GME shares. Luckily for them, they purchased **36,450** as of the 12/31 13F filing. In January, they traded **over 3751** GME shares for every **1** share that they own.

From what I understand, **G1 Execution Services** is basically **Susquehanna**. They decreased their number of GME shares from 4.444 million to **2.487 million** per their 12/31 13F. In January, they traded **30.7** GME shares for every **1** GME share that they own. According to the recent GME proxy, they now own **4.409 million** GME shares, but likely acquired these sometime after January.

Two Sigma went from **0** GME shares on 11/16/20 to **81,448** GME shares on 12/31. They've been making smaller and smaller shares/trade for a little while now, with an average of **27.54** shares/trade in January.

Let's zoom out one more time before looking at each of these players individually.

Table 4: GME Weekly Volume and % Weekly Volume traded Off-Exchange

	Total Weekly Volume	Total Volume OTC	Total Volume ATS	% of Total traded Off Exchange (OTC + ATS)	% of Float Traded	% of Float Traded Off Exchange
Week of 3/22/2021	137,061,550	48,568,861	10,272,415	42.93%	513.34%	220.38%
Week of 3/15/2021	112,607,860	70,118,713	7,111,156	68.58%	421.75%	289.25%
Week of 3/8/2021	228,393,910	76,529,930	15,948,009	40.49%	855.41%	346.36%
Week of 3/1/2021	166,191,450	70,118,713	10,322,290	48.40%	622.44%	301.28%
Week of 2/22/2021	352,655,925	121,667,480	18,960,413	39.88%	1320.81%	526.70%
Week of 2/15/2021	56,254,625	21,554,348	3,905,721	45.26%	210.69%	95.36%
Week of 2/8/2021	116,615,390	49,113,110	6,997,461	42.28%	436.76%	210.15%
Week of 2/1/2021	302,036,020	109,775,296	17,913,654	42.28%	1131.22%	478.24%
Week of 1/25/2021	559,240,540	184,322,088	44,126,023	40.85%	2094.53%	855.61%
Week of 1/19/2021	362,431,360	170,039,730	29,392,454	55.03%	1357.42%	746.94%
Week of 1/11/2021	307,073,745	156,958,902	22,330,904	58.39%	1150.09%	671.50%
Week of 1/4/2021	33,651,411	13,926,925	3,458,092	51.66%	126.04%	65.11%
Week of 12/28/2020	31,064,342	14,402,253	1,876,336	52.40%	116.35%	60.97%
Week of 12/21/2020	72,656,282	35,405,726	4,900,689	55.48%	272.12%	150.96%
Week of 12/14/2020	48,878,751	19,437,594	3,104,483	46.12%	183.07%	84.43%
Week of 12/7/2020	62,920,148	26,137,279	4,150,662	48.14%	235.66%	113.44%
Week of 11/30/2020	67,800,547	29,383,508	4,711,742	50.29%	253.93%	127.70%
Week of 11/23/2020	38,158,975	16,841,977	2,360,074	50.32%	142.92%	71.92%
Week of 11/16/2020	39,812,179	18,443,760	2,542,870	52.71%	149.11%	78.60%
Week of 11/9/2020	22,855,460	7,868,516	1,821,048	42.39%	85.60%	36.29%
Week of 11/2/2020	28,712,842	12,087,480	1,901,811	48.72%	107.54%	52.39%
Week of 10/26/2020	42,724,069	19,273,541	2,489,415	50.94%	160.02%	81.51%
Week of 10/19/2020	47,854,503	22,694,461	3,625,621	55.00%	179.23%	98.58%
Week of 10/12/2020	96,158,570	48,925,291	4,814,628	55.89%	360.14%	201.27%
Week of 10/5/2020	164,255,374	81,492,034	9,438,647	55.36%	615.19%	340.56%
Week of 9/28/2020	26,982,234	11,962,882	1,528,266	50.00%	101.06%	50.53%

Take a look at % of GME Float Traded and % of Float Traded Off Exchange





These are percentages...

Let me preface this by saying that I was extremely conservative and used the **26.7 million** number as the GME float for all calculations. If the GME float is less 26.7 million, these percentages will actually increase accordingly. I took the weekly volume and compared it to the OTC volume and ATS volume. I added the OTC and ATS to determine how much of the weekly volume was traded off exchange. These numbers were fairly consistent, with between **39.88 and 58.39%** of weekly volume trading off exchange in the **OTC** or **ATS** pools. However, the most recent data available shows a huge jump during the week of 3/15, with **68.58%** of volume trading off exchange. These seem to be in line with my calculations from my previous post (An Update on the Missing GME Bananas), which showed **over 70%** of daily GME volume was being traded via **FINRA ADF** (dark pool), or possibly **OTC** from 4/13 - 4/20. FINRA won't publish that data for another **4 weeks**, but I don't think we even need it anymore. What's missing from the daily totals is traded OTC or ATS. And that percentage is only increasing with less and less weekly volume.

For the next column, I took the weekly volume and divided by **26.7 million** to get the percent of GME float that was traded each week. Over **1000%** of the GME float was traded during the weeks of 1/11, 1/19, 1/25, 2/1, and 2/22. During the week of 1/25, the percent of GME float traded was over **2000%**!

But how much of the GME float was traded off exchange? Well, you see some pretty high numbers during October with over 340% of the float traded off exchange during the week of 10/5 and over 200% of the GME float traded off exchange during the week of 10/12. There are a few weeks when the percentage of float traded off exchange was over 100% (11/30, 12/7, and 12/21). Then comes January...

During the week of 1/11, over 671% of the GME float was traded off exchange.

During the week of 1/19, over **746%** of the GME float was traded off exchange.

During the week of 1/25, over 855% of the GME float was traded off exchange.

During the week of 2/1, over **478%** of the GME float was traded off exchange.

And during the week of 2/22, over **526%** of the GME float was traded off exchange.

That's one way to suppress buying pressure...

Let's move on to February

Table 5: February OTC by Number of Trades

February OTC by Trades			
	Shares	Trades	Avg Shares/Trade
CITADEL SECURITIES LLC	115,716,597	2,653,066	43.62
VIRTU AMERICAS LLC	116,013,310	1,991,314	58.26
G1 EXECUTION SERVICES, LLC	27,507,754	954,960	28.81
ROBINHOOD SECURITIES, LLC	774,632	772,023	1.00
TWO SIGMA SECURITIES, LLC	12,508,493	704,645	17.75
JANE STREET CAPITAL, LLC	10,662,807	252,904	42.16
UBS SECURITIES LLC	10,469,805	141,918	73.77
WOLVERINE SECURITIES, LLC	353,633	91,966	3.85
NATIONAL FINANCIAL SERVICES LLC	74,322	73,119	1.02
COMHAR CAPITAL MARKETS, LLC	3,515,877	56,215	62.54
STOCKPILE INVESTMENTS, INC.	40,218	21,616	1.86
CUTTONE & CO., LLC	400,198	9,486	42.19
De Minimis Firms	2,219,180	7,901	280.87
INTERACTIVE BROKERS LLC	4,878	4,878	1.00
COWEN AND COMPANY	1,848,530	4,848	381.30
Total	302,110,234	7,740,859	39.03

Look who decided to join the fray ...

As we saw in **Table 1**, the average number of shares/trade decreased from 90.1 to 39.0. And look who decided to join in on the OTC frenzy - Vlad the Impaler and **Robinhood**.

Fortunately for us, this is the first time they took part in the OTC.

They made **772,023 trades** with only **774,632 shares** for an average of **1.00 shares/trade**. That's some high frequency trading if I've ever seen it. Was it coordinated in a way to crush the price after the January peak?

I still don't know what to think about National Financial Services (Fidelity?), but the data doesn't lie.

Rather than commenting on each player here, I'm going to group them together to see what really happened on a weekly basis.

The Kingpins - Citadel and Virtu

Table 6: Citadel and Virtu Weekly OTC trades

	Citadel Shares	Citadel Trades	Citadel Shares/Trade	Virtu Shares	Virtu Trades	Virtu Shares/Trade
Week of 3/22/2021	14,661,892	350,723	41.80	19,014,998	399,802	47.56
Week of 3/15/2021	13,090,779	337,874	38.74	15,992,280	368,018	43.46
Week of 3/8/2021	23,908,440	681,265	35.09	29,256,853	723,074	40.46
Week of 3/1/2021	22,298,959	388,993	57.32	28,532,932	405,242	70.41
Week of 2/22/2021	39,259,675	739,295	53.10	52,451,996	927,612	56.55
Week of 2/15/2021	7,887,651	118,457	66.59	8,552,670	100,028	85.50
Week of 2/8/2021	18,848,780	298,575	63.13	19,222,124	251,804	76.34
Week of 2/1/2021	49,720,491	1,496,739	33.22	35,786,520	711,870	50.27
Week of 1/25/2021	92,991,756	1,983,757	46.88	43,388,647	1,205,460	35.99
Week of 1/19/2021	80,131,562	351,241	228.14	44,777,619	293,688	152.47
Week of 1/11/2021	73,156,206	203,633	359.26	44,448,707	247,026	179.94
Week of 1/4/2021	5,936,322	19,056	311.52	4,131,948	27,863	148.30
Week of 12/28/2020	5,751,265	19,245	298.84	3,836,975	26,060	147.24
Week of 12/21/2020	15,865,091	42,354	374.58	9,585,035	42,012	228.15
Week of 12/14/2020	8,738,023	21,179	412.58	4,156,969	17,617	235.96
Week of 12/7/2020	10,897,821	30,838	353.39	8,510,318	39,174	217.24
Week of 11/30/2020	12,214,717	36,410	335.48	8,090,526	33,199	243.70
Week of 11/23/2020	7,648,397	18,709	408.81	4,183,548	13,899	301.00
Week of 11/16/2020	8,017,917	16,665	481.12	4,727,447	11,371	415.75
Week of 11/9/2020	3,246,186	10,497	309.25	1,834,818	7,841	234.00
Week of 11/2/2020	5,335,110	11,819	451.40	3,575,977	9,179	389.58
Week of 10/26/2020	8,064,532	19,052	423.29	5,796,180	14,968	387.24
Week of 10/19/2020	9,508,051	23,582	403.19	7,376,522	19,824	372.10
Week of 10/12/2020	16,781,496	39,404	425.88	17,854,614	45,463	392.73
Week of 10/5/2020	35,590,247	75,652	470.45	27,079,731	67,595	400.62
Week of 9/28/2020	5,175,818	13,153	393.51	3,704,577	8,778	422.03

Look at the number of OTC trades and the change in shares/trade since January

Figure 5: Virtu and Citadel Weekly OTC Trades



Things really picked up in the OTC in January for these two

Figure 6: Virtu and Citadel Average GME Shares/Trade OTC



The number of shares/trade really dropped off since January 25th...

So these are the two biggest players when it comes to the GME OTC marketplace. Both have been trading a massive number of GME shares and making a massive number of trades since late September.

However, beginning 1/25, both began making much smaller trades. The number of shares per trade decreased from around 300-400 shares/trade to less than 90 shares/trade. The number of trades increased from tens of thousands to hundreds of thousands (and even millions).

For Shitadel, 7 out of the previous 9 weeks (77.7%) resulted in shares/trade under 60.

They made over **1.98 million OTC trades** during the week of **1/25** and over **1.496 million OTC trades** during the week of **2/1**.

Prior to January, their previous high for number of trades was 75,652 (10/5).

And a quick reminder, Shitadel, as of 12/31, owned only 217,132 GME shares.

For Virtu, 7 out of the previous 9 weeks (77.7%) resulted in shares/trade under 75.

They made over **1.2 million OTC trades** during the week of **1/25**.

Prior to January, their previous high was **67,595 trades** (10/5) and a majority of the weeks totaled between 10,000 and 40,000 OTC trades.

Again, a quick reminder that Virtu owned **0** GME shares on 12/11/20, and **36,450** as of the 12/31.

There are certainly a lot of similarities between these 2 kingpins and that's why I grouped them together. As for coordination???

The Middle Men? - G1 Execution and Two Sigma

Table 7: Two Sigma and G1 Execution Weekly OTC trades

	Two Sigma Shares	Two Sigma Trades	Two Sigma Shares/Trade	G1 Shares	G1 Trades	G1 Shares/Trade
Week of 3/22/2021	2,645,822	119,800	22.09	4,766,416	142,289	33.50
Week of 3/15/2021	2,026,245	113,810	17.80	4,218,976	142,948	29.51
Week of 3/8/2021	4,149,293	229,172	18.11	7,606,670	288,151	26.40
Week of 3/1/2021	3,463,047	119,209	29.05	6,631,980	157,625	42.07
Week of 2/22/2021	5,393,608	221,579	24.34	11,598,219	289,751	40.03
Week of 2/15/2021	1,032,460	34,826	29.65	1,680,471	43,035	39.05
Week of 2/8/2021	2,372,217	94,006	25.23	2,960,287	114,354	25.89
Week of 2/1/2021	3,710,208	354,234	10.47	10,268,777	507,820	20.22
Week of 1/25/2021	4,379,714	309,797	14.14	22,258,085	388,250	57.33
Week of 1/19/2021	2,820,550	44,620	63.21	28,034,417	85,673	327.23
Week of 1/11/2021	3,024,572	25,886	116.84	24,381,517	57,490	424.10
Week of 1/4/2021	389,827	5,168	75.43	1,698,466	5,498	308.92
Week of 12/28/2020	396,272	7,861	50.41	1,754,213	5,569	315.00
Week of 12/21/2020	1,010,481	15,062	67.09	4,330,695	11,235	385.46
Week of 12/14/2020	663,272	9,814	67.58	2,417,185	5,881	411.02
Week of 12/7/2020	948,935	21,158	44.85	2,707,956	7,804	347.00
Week of 11/30/2020	1,273,191	33,438	38.08	3,507,642	9,434	371.81
Week of 11/23/2020	555,794	11,546	48.14	2,478,970	4,859	510.18
Week of 11/16/2020	632,190	6,686	94.55	2,462,092	5,250	468.97
Week of 11/9/2020	362,535	4,604	78.74	1,010,001	4,071	248.10
Week of 11/2/2020	534,754	4,592	116.45	1,252,948	4,343	288.50
Week of 10/26/2020	747,373	6,820	109.59	2,384,619	7,539	316.30
Week of 10/19/2020	743,691	7,016	106.00	2,566,965	8,935	287.29
Week of 10/12/2020	1,973,757	12,381	159.42	6,854,778	17,592	389.65
Week of 10/5/2020	2,989,613	23,475	127.35	9,508,400	22,732	418.28
Week of 9/28/2020	456,591	4.109	111.12	1.346.161	3,920	343.41

Again, look at the change in trades and shares/trade since January

Figure 7: G1 Execution and Two Sigma Weekly OTC Trades



Things really picked up in January for them too...

I won't belabor the point, but look at the change in shares/trade (**Table 7**) beginning **1/25**. Look at the increase in number of shares and number of trades.

For Two Sigma, the number of shares/trade after 1/25 was never higher than 30.

As a reminder, Two Sigma went from 0 GME shares on 11/16/20 to 81,448 GME shares on 12/31.

For **G1**, the number of shares/trade after 1/25 was never higher than 60. If **G1 Execution Services = Susquehanna**, then they have over **4.409 million** shares.

High Frequency Parasites? Robinhood and National Financial Services (NFS)

Table 8: Robinhood and NFS Weekly OTC Trading

	Robinhood Shares	Robinhood Trades	RH Shares/Trade	NFS Shares	NFS Trades	NRS Shares/Trade
Week of 3/22/2021	267,095	266,981	1.00	18,651	18,644	1.00
Week of 3/15/2021	297,276	297,194	1.00	17,539	17,536	1.00
Week of 3/8/2021	765,811	763,327	1.00	33,957	33,934	1.00
Week of 3/1/2021	257,412	257,315	1.00	12,983	12,966	1.00
Week of 2/22/2021	757,954	755,424	1.00	25,195	24,057	1.05
Week of 2/15/2021	14,983	14,907	1.01	2,984	2,983	1.00
Week of 2/8/2021	1,678	1,675	1.00	7,837	7,826	1.00
Week of 2/1/2021				38,306	38,253	1.00
Week of 1/25/2021				33,406	32,660	1.02
Week of 1/19/2021				4,784	4,665	1.03
Week of 1/11/2021				2,343	2,214	1.06

I don't know how else to interpret this other than massive High Frequency Trading by Robinhood

Robinhood (unfortunately) entered the fray during the week of **2/8**. They have progressively increased their trading activity.

During the week of **2/22**, they made **755,424 trades** with **757,954** of our **GME shares**. They might have been desperately trying to fend off our rapid ascent on **2/24**. The activity slowed during the week of **3/1**, before ramping up during the week of **3/8**. Is that significant? Well if we look back to 3/10, we had that massive drop from 348 to 172 in a matter of minutes. So you tell me...

This one sort of confuses me as a Fidelity customer. **National Financial Services** first entered the OTC marketplace during the week of 1/11. There was a jump in the number of trades during the weeks of 1/25 and 2/1, but the average number of shares/trade remained between 1.02 and 1.00. There was also an increase in OTC trades during the week of 2/22 and 3/8.

Table 9: Week of 3/8/2021 by Number of OTC Trades

Week of 3/8/2021 by Trades	Shares	Trades	Shares/Trade
ROBINHOOD SECURITIES, LLC	765,811	763,327	1.00
VIRTU AMERICAS LLC	29,256,853	723,074	40.46
CITADEL SECURITIES LLC	23,908,440	681,265	35.09
G1 EXECUTION SERVICES, LLC	7,606,670	288,151	26.40
TWO SIGMA SECURITIES, LLC	4,149,293	229,172	18.11
JANE STREET CAPITAL, LLC	4,635,098	142,790	32.46
UBS SECURITIES LLC	3,713,408	54,452	68.20
NATIONAL FINANCIAL SERVICES LLC	33,957	33,934	1.00
COMHAR CAPITAL MARKETS, LLC	1,467,847	27,690	53.01
WOLVERINE SECURITIES, LLC	13,223	4,425	2.99
STOCKPILE INVESTMENTS, INC.	9,262	4,190	2.21
INTERACTIVE BROKERS LLC	2,398	2,398	1.00
HRT EXECUTION SERVICES LLC	36,873	1,848	19.95
De Minimis Firms	510,711	1,671	305.63
COWEN AND COMPANY	315,498	1,205	261.82
CLEAR STREET LLC	104,588	1,041	100.47
Total	76,529,930	2,960,633	25.85

Look at the top trader of the week...

During the week when the GME price suddenly dropped from 348 to 172 in a matter of minutes, **Robinhood** was the top OTC trader and had exactly **1.00 shares/trade**...

Table 10: Week of 3/15/2021 by Number of OTC Trades

Week of 3/15/2021 by Trades	Shares	Trades	Shares/Trade
VIRTU AMERICAS LLC	15,992,280	368,018	43.46
CITADEL SECURITIES LLC	13,090,779	337,874	38.74
ROBINHOOD SECURITIES, LLC	297,276	297,194	1.00
G1 EXECUTION SERVICES, LLC	4,218,976	142,948	29.51
TWO SIGMA SECURITIES, LLC	2,026,245	113,810	17.80
JANE STREET CAPITAL, LLC	2,581,334	76,816	33.60
UBS SECURITIES LLC	2,265,783	29,541	76.70
NATIONAL FINANCIAL SERVICES LLC	17,537	17,536	1.00
COMHAR CAPITAL MARKETS, LLC	837,028	13,704	61.08
De Minimis Firms	649,333	4,349	149.31
STOCKPILE INVESTMENTS, INC.	3,958	1,758	2.25
Total	41,980,529	1,403,548	29.91

Robinhood was busy again during the week of 3/15

Robinhood stepped up again with some serious high frequency OTC trading. Did anything happen that week? Oh yeah, the GME price experienced a huge drop from **280 to 210** on **3/15** and then to around **172** on **3/16**. They didn't switch things up at all from their previous attacks. **297,276 shares** traded **297,194 times** for an average of **1.00 shares/trade**.

Week of 3/22/21 By Trades	Shares	Trades	Shares/Trade
VIRTU AMERICAS LLC	19,014,998	399,802	47.56
CITADEL SECURITIES LLC	14,661,892	350,723	41.80
ROBINHOOD SECURITIES, LLC	267,095	266,981	1.00
G1 EXECUTION SERVICES, LLC	4,766,416	142,289	33.50
TWO SIGMA SECURITIES, LLC	2,645,822	119,800	22.09
JANE STREET CAPITAL, LLC	2,714,662	84,204	32.24
UBS SECURITIES LLC	2,719,052	31,196	87.16
NATIONAL FINANCIAL SERVICES LLC	18,651	18,644	1.00
COMHAR CAPITAL MARKETS, LLC	839,368	14,971	56.07
De Minimis Firms	744,245	2,803	265.52
DRIVEWEALTH INSTITUTIONAL LLC	127,782	2,312	55.27
STOCKPILE INVESTMENTS, INC.	3,970	1,362	2.91
HRT EXECUTION SERVICES LLC	44,908	1,323	33.94
Total	48.568.861	1.436.410	33.81

Back at it like a bad habit...

And just in case you had any lingering doubts, the data from 3/22 shows us more of the same high frequency OTC trading from Robinhood. **267,095** shares traded **266,981 times** for an average of **1.00** shares/trade.

Since **Robinhood** entered the OTC marketplace on the week of 2/8/2021, they have made **2.357 million trades** with **2.362 million shares**, for an average of exactly **1.00 shares/trade**. Thanks Robinhood! They are really staying true to their mission of "**democratizing finance for all**".

And just so we don't completely neglect the ATS dark pools

Table 11: Weekly ATS Data

ATS Data				Week of 12/14/2020	3,104,483	16,397	189.33
	Shares	Trades	Shares/Trade	Week of 12/7/2020	4,150,662	23,690	175.21
Week of 3/22/2021	10,272,415	183,159	56.08	Week of 11/30/2020	4,711,742	25,883	182.04
Week of 3/15/2021	7,111,156	152,114	46.75	Week of 11/23/2020	2,360,074	13,595	173.60
Week of 3/8/2021	15,948,099	348,272	45.79	Week of 11/16/2020	2,542,870	16,050	158.43
Week of 3/1/2021	10,322,290	203,512	50.72	Week of 11/9/2020	1,821,048	11,577	157.30
Week of 2/22/2021	18,960,413	370,347	51.20	Week of 11/2/2020	1,901,811	13,204	144.03
Week of 2/15/2021	3,905,721	45,227	86.36	Week of 10/26/2020	2,489,415	13,357	186.38
Week of 2/8/2021	6,997,461	80,593	86.82	Week of 10/19/2020	3,625,621	14,803	244.92
Week of 2/1/2021	17,913,654	392,399	45.65	Week of 10/12/2020	4,814,628	29,518	163.11
Week of 1/25/2021	44,126,023	593,161	74.39	Week of 10/5/2020	9,438,647	43,353	217.72
Week of 1/18/2021	29,392,454	206,476	142.35	Week of 9/28/2020	1,528,266	8,314	183.82
Week of 1/11/2021	22,330,904	145,558	153.42				
Week of 1/4/2021	3,458,092	21,807	158.58				
Veek of 12/28/2020	1,876,336	12,173	154.14				
Veek of 12/21/2020	4,900,689	28,967	169.18				

GME Weekly ATS Data showing decreased shares/trade since week of January 25th

Figure 9: Weekly Number of Trades on ATS



Similar trends in ATS dark pools, starting in January

List of Unanswered Questions:

Was there any significance to the high level of OTC trading during the week of 10/5?

How do all the pieces fit together?

Why did National Financial Services (Fidelity?) join the OTC fray in January?

Was the increase in high frequency OTC trading from **Robinhood** during the week of **3/8** in any way related to the massive drop in GME price on **3/10**? What about **3/15** and **3/16**?

What in the actual hell is going on behind the scenes to allow this kind of OTC trading to continue, undisturbed, for almost 3 months?

Who might be willing to do something with this data?

I'll continue to update this list.

As for me - my shares aren't for sale. Seeing the desperate behind-the-scenes OTC shenanigans over the last 3 months only raises the floor. And I really like the stock.

TLDR: Here is a different way to look at the OTC GME data. It should be abundantly clear that what is going on in the OTC dark pools is extremely abnormal. **Citadel** and **Virtu** market makers seem to be doing a whole lot of OTC trading. How did they get hundreds of millions of shares? What about **Two Sigma**? Why are the same entities trading so much volume so frequently in the OTC marketplace? Why did the number of shares / trade decrease so drastically beginning 1/25? Winter is coming. Are any of them wearing any clothes???

Edit 2: added the Weekly **3/15 Data** to show that **Robinhood** was highly active again at a time when GME experienced a huge price drop (see Table 10). Thanks <u>u/RecoveryChadX7R</u> !

Edit 3: Also, take a look at the DD posted by <u>u/Doom Douche</u> - <u>A Deep Dive into Dark Pool Trading</u> - which shows the difference between OTC trading for GME vs other stocks. And just note that his data used a GME float of 54.1 million rather than the 26.7 million (or less) that we can now deduce from the updated GME proxy, so the difference is even more pronounced.

Edit 4: Added some Charts (Figures 1-9).

Edit 5: Updated Tables and Figures with 3/22 weekly data

The OTC Conspiracy (Part 2) - Shining Some Light into the Dark Pool data (March Update) - May 5, 2021

Due Diligence

I'll try to make this post short and sweet!

Please refer to my previous post (<u>The OTC Conspiracy</u>), which I updated with some charts and will continue to update with weekly data as it becomes available from the <u>FINRA OTC website</u>.

For this DD, I took a look at the monthly OTC data for GME vs 33 other "popular" stocks. I chose the stocks more or less at random based on Boomer-ism, personal interest, or stock price. I'd be happy to include some additional ticker requests in the next update.

Let's start with the monthly OTC trading data for GME.

Table 1: GME Monthly OTC Data

Month	Shares	Trades	Shares/Trade
September	110,343,709	272,575	404.82
October	175,908,562	477,193	368.63
November	69,438,259	231,210	300.33
December	110,569,834	420,166	263.16
January	525,247,645	5,777,645	90.91
February	302,110,234	7,740,859	39.03
March	252,134,580	7,671,216	32.87

A major increase in number of OTC trades and a major decrease in average shares/trade





Increasing number of OTC trades



That's interesting. So an increasing number of smaller trades (aka **high frequency trading**). I wonder how these metrics compare to other stocks...

Let's start from the beginning.

December 2020







The number of shares/trade looks fairly typical compared to the rest

What about % of Float traded OTC in December?



Over 410% of the GME float traded OTC in December

January 2021



GME OTC trades markedly increased (13.75x) from December (420,166) to January (5,777,645). Only AMC, Tesla, and Apple had more OTC trades in January.



A substantial decrease in shares/trade, from 263 in December to 90 in January

What about % of Float traded OTC in January?



Little bit of an outlier, with almost 2000% of the GME float traded OTC in January

February 2021



Another increase in the number of trades made OTC. Only AMC had more.

Only AMC had more OTC trades than GME in February 2021.



Further decrease in the number of shares/trade, from 90 in January to 39 in February

Only Tesla (36.42) and Sony (37.9) had lower shares/trade than GME (39.0) in the OTC marketplace in February.

What about % of Float traded OTC in February?



Still an outlier, with over 1130% of the GME float traded OTC

March 2021



Only Tesla (7.89 million) had more OTC trades than GME (7.67 million) in March



GME (32.87) had the lowest shares/trade of any stock in March



Only SLGG (1724%) had higher % of Float traded OTC than GME (944%)

Let's add January, February, and March OTC Trades to get Q1 2021 Total



Only AMC (24.2 million) had more OTC trades than GME (21.2 million) in 2021

And what was the % of Float traded OTC in Q1?



Over 4000% of the GME float was traded OTC in Q1. SLGG and AMC were also over 1000%

Table 2:

Month	Shares	Trades	Shares/Trade	%Float Traded OTC
September	110,343,709	272,575	404.82	413.27%
October	175,908,562	477,193	368.63	658.83%
November	69,438,259	231,210	300.33	260.07%
December	110,569,834	420,166	263.16	414.12%
January	525,247,645	5,777,645	90.91	1967.22%
February	302,110,234	7,740,859	39.03	1131.50%
March	252,134,580	7,671,216	32.87	944.32%

Putting it all together

Conclusions

Please take a look at my previous post (<u>The OTC Conspiracy</u>) for a more in-depth dive into the weekly OTC data. It also includes a breakdown of the major players in the OTC marketplace. I will continue to update that post as data is released.

The purpose of this post was to compare the OTC trading of GME vs some other "popular" stocks.

- The number of monthly GME OTC trades increased over 28x from September 2020 to March 2021.
- The average shares/trade has decreased every month, from over 400 shares/trade in September to 32 shares/trade in March.
- Only **GME**, **Tesla**, and **Sony** averaged less than 40 shares/trade in a month. GME has done it twice each of the last two months.
- The 32.87 shares/trade average in March was the lowest for any stock across any month.
- The % of GME float traded OTC has been over **260%** every month since September 2020 and increased to almost **2000%** in January 2021.
- In February, another **1131%** of the GME float was traded in OTC, followed by **944%** in March.
- The % of float traded OTC is much higher for GME than any of the other stocks that were evaluated. The only exception was **SLGG (1724%** in March). Shout out to the sluggs!
- Besides GME (and SLGG in March), only AMC had more than **100%** of float traded OTC in any month.
- If we look at **Q1 data**, over **4043%** of the GME float was traded OTC in **Q1** alone.
- In Q1, only AMC (24.2 million) had more OTC trades than GME (21.2 million).
- SLGG (1883%) and AMC (1195%) are the only other stocks with over **220%** of their floats traded OTC.
- Including SLGG and AMC, only 6 of the 33 stocks traded over **100%** of their floats OTC during Q1.
- 22 of the 33 had less than 40% of their floats traded OTC during Q1.

• 19 of the 33 had less than 20% of their floats traded OTC during Q1.

Bananas for Thought

How did those sneaky Market Makers trade over 4000% of the GME float on just the OTC marketplace during Q1?

What about those diehard, diamond-handed apes who have been holding bananas since 2020?

Why have we seen a progressive decrease in GME volume every month?

- 1.26 billion in January
- 827.56 million in February
- 679.79 million in March
- 172.43 million in April
- Record lows in May ...

Is the banana factory broken? Are all of the bananas finally drying up?

Where did they come up with the 172.43 million additional shares that were traded in April?

What about those April options contracts? Tick tock...

How many bananas did they "produce" in their factory?

And how many bananas are they now going to have to buy back???!!!

OoOoOoOoOo I think they naked...

TLDR: Buy, HODL, Vote --> tendies!!! (not financial advice)

Appendix

OTC Data January - March 2021 (December didn't really fit)

	March				February				January				Float	
Symbol	Shares	Trades	Shares/Trade	%Float OTC	Shares	Trades	Shares/Trade	%Float OTC	Shares	Trades	Shares/Trade	%Float OTC		% Float Q1
GME	252,134,580	7,671,216	32.87	944.32%	302,110,234	7,740,859	39.03	1131.50%	525,247,646	5,777,646	90.91	1967.22%	26,700,000	4043.04%
MSFT	153,074,852	1,502,587	101.87	2.05%	131,086,299	1,238,715	105.82	1.76%	187,592,012	1,638,311	114.50	2.51%	7,460,000,000	6.32%
AAPL	1,003,915,829	6,104,670	164.45	6.08%	730,058,578	5,417,171	134.77	4.42%	1,001,461,355	5,788,951	173.00	6.06%	16,520,000,000	16.56%
TGT	26,826,106	349,149	76.83	5.40%	12,452,883	169,409	73.51	2.51%	19,439,673	232,021	83.78	3.91%	496,960,000	11.82%
SLGG	315,743,372	834,778	378.24	1724.43%	13,201,726	37,231	354.59	72.10%	15,943,538	38,628	412.75	87.08%	18,310,000	1883.61%
AMC	1,195,984,178	6,643,303	180.03	286.34%	1,730,624,527	10,245,769	168.91	414.34%	2,066,125,448	7,342,220	281.40	494.67%	417,680,000	1195.35%
MDT	19,033,860	145,112	131.17	1.41%	15,354,202	136,618	112.39	1.14%	15,777,789	146,102	107.99	1.17%	1,350,000,000	3.72%
AMD	360,838,285	1,608,197	224.37	29.82%	283,771,593	1,435,488	197.68	23.45%	417,089,199	1,853,392	225.04	34.47%	1,210,000,000	87.74%
RNG	3,425,183	48,252	70.99	4.33%	2,243,082	39,428	56.89	2.83%	2,090,809	29,770	70.23	2.64%	79,170,000	9.80%
ORCL	68,881,104	258,872	266.08	3.96%	31,907,724	132,212	241.34	1.83%	29,415,301	129,341	227.42	1.69%	1,740,000,000	7.48%
MRK	69,947,193	374,060	186.99	2.76%	50,863,838	338,598	150.22	2.01%	46,895,256	251,066	186.78	1.85%	2,530,000,000	6.63%
SKT	50,413,278	195,723	257.57	51.93%	17,416,426	56,432	308.63	17.94%	38,427,979	96,407	398.60	39.59%	97,070,000	109.47%
LOW	19,794,742	208,758	94.82	2.76%	14,340,380	172,390	83.19	2.00%	18,590,487	150,724	123.34	2.59%	716,680,000	7.36%
TSLA	391,103,892	7,892,395	49.55	50.50%	201,529,180	5,532,975	36.42	26.02%	296,482,290	5,702,561	51.99	38.28%	774,490,000	114.80%
DIS	70,628,438	1,198,983	58.91	3.90%	71,134,445	1,076,457	66.08	3.93%	46,351,642	776,776	59.67	2.56%	1,810,000,000	10.39%
AAL	431,230,962	1,286,215	335.27	67.97%	378,312,410	1,113,309	339.81	59.63%	582,882,185	1,439,879	404.81	91.88%	634,420,000	219.48%
PFE	189,026,962	741,515	254.92	3.39%	218,957,508	998,853	219.21	3.92%	237,463,057	1,039,893	228.35	4.26%	5,580,000,000	11.57%
NFLX	18,713,144	439,680	42.56	4.29%	14,298,903	346,751	41.24	3.28%	40,877,591	650,563	62.83	9.37%	436,220,000	16.94%
FB	136,884,043	1,030,943	132.78	5.75%	89,878,509	802,628	111.98	3.78%	133,686,967	1,262,981	105.85	5.62%	2,380,000,000	15.14%
TWTR	111,383,783	491,736	226.51	14.34%	176,899,531	727,551	243.14	22.78%	129,746,056	641,102	202.38	16.71%	776,580,000	53.83%
SBUX	31,834,408	367,794	86.55	2.70%	23,804,428	294,400	80.86	2.02%	29,165,942	358,867	81.27	2.47%	1,180,000,000	7.19%
GM	162,018,745	753,299	215.08	11.83%	131,498,875	750,012	175.33	9.60%	212,706,926	963,843	220.69	15.53%	1,370,000,000	36.95%
KO (Coca-Cola)	86,030,866	491,974	174.87	2.01%	75,274,918	494,798	152.13	1.76%	120,820,905	748,740	161.37	2.82%	4,280,000,000	6.59%
BA (Boeing)	238,127,619	1,578,187	150.89	40.77%	89,499,638	809,309	110.59	15.32%	104,040,248	993,807	104.69	17.81%	584,060,000	73.91%
SQ	98,460,764	1,168,505	84.26	25.60%	71,882,078	900,779	79.80	18.69%	64,514,527	830,891	77.64	16.77%	384,670,000	61.05%
WMT	59,455,076	666,170	89.25	4.16%	54,167,852	650,155	83.32	3.79%	42,712,586	465,345	91.79	2.99%	1,430,000,000	10.93%
PYPL	47,406,715	768,103	61.72	4.05%	65,806,280	866,224	75.97	5.62%	37,700,526	513,551	73.41	3.22%	1,170,000,000	12.90%
NKE	38,287,515	364,443	105.06	3.11%	22,076,399	240,441	91.82	1.79%	21,710,478	256,033	84.80	1.77%	1,230,000,000	6.67%
PTON	57,674,383	438,478	131.53	22.82%	50,690,864	450,409	112.54	20.05%	48,073,786	369,216	130.21	19.02%	252,780,000	61.89%
SONY	5,853,371	117,414	49.85	0.47%	5,119,412	135,059	37.91	0.41%	5,238,476	118,095	44.36	0.42%	1,240,000,000	1.31%
RCL	33,508,339	276,878	121.02	15.34%	31,433,895	271,083	115.96	14.39%	20,430,753	192,546	106.11	9.36%	218,390,000	39.09%
JNJ	41,495,778	597,774	69.42	1.58%	43,028,710	548,396	78.46	1.64%	51,120,936	548,335	93.23	1.94%	2,630,000,000	5.16%
ABNB	40,048,624	714,024	56.09	46.40%	31,370,064	617,940	50.77	36.35%	50,058,445	683,210	73.27	58.00%	86,310,000	140.75%
NVDA	53,827,159	1,000,339	53.81	9.02%	52,588,061	915,594	57.44	8.81%	51,281,611	827,060	62.00	8.60%	596,640,000	26.43%

Edit 1: Added January, February, and March to get Q1 2021 Data

Edit 2: Added Bananas for Thought

The OTC Conspiracy - This graph and data shows GME price is being manipulated by predatory, high frequency OTC and Off-Exchange trading by Market Makers and Robinhood. I will try to put together a full DD by the end of the week. HODL!

Education



	Total Weekly Volume	Total Volume OTC	Total Volume ATS	% of Total Traded Off- Exchange (OTC + ATS)	% of Float Traded **	% of Float Traded Off-Exchange **
Week of 5/17/2021	26,070,236	8,641,890	1,959,201	40.66%	44.53%	18.11%
Week of 5/10/2021	25,389,796	8,097,919	1,850,964	39.18%	43.37%	17.00%
Week of 5/3/2021	17,951,366	6,544,895	1,013,578	42 11%	30.67%	12.91%
Week of 4/26/2021	33,447,581	12,807,571	2,094,608	44.55%	57.14%	25.46%
Week of 4/19/2021	27,379,529	9,807,479	2,009,781	43.16%	46.77%	20.19%
Week of 4/12/2021	57,700,098	28,330,524	4,940,816	49.00%	98.57%	48.29%
Week of 4/5/2021	44,566,839	15,107,618	4,382,794	43.73%	76.13%	33.29%
Week of 3/29/2021	44,865,279	18,499,623	3,033,910	48.00%	76.64%	36.78%
Week of 3/22/2021	137,051,550	48,568,861	10,272,415	42.93%	234.13%	100.51%
Week of 3/15/2021	112,607,860	70,118,713	7,111,156	68,58%	192.36%	131.93%
Week of 3/8/2021	228,393,910	76,529,930	15,948,009	40.49%	390.15%	157.97%
Week of 3/1/2021	156,191,450	70,118,715	10,322,290	48.40%	283.89%	137.41%
Week of 2/22/2021	352,655,925	121,657,480	18,960,413	39.88%	602.42%	240.23%
Week of 2/15/2021	56,254,625	21,554,348	3,905,721	45.26%	96.10%	43.49%
Week of 2/8/2021	116,615,890	49,115,110	6,997,461	42.28%	199.21%	95.85%
Week of 2/1/2021	302,036,020	109,775,296	17,913,654	42.28%	515.95%	218.12%
Week of 1/25/2021	559,240,540	184,322,088	44,126,023	40.85%	955.31%	390.24%
Week of 1/19/2021	352,431,360	170,039,730	29,392,454	55.03%	619.12%	340.68%
Week of 1/11/2021	307,073,745	156,958,902	22,330,904	58.39%	524.55%	306.27%
Week of 1/4/2021	33,651,411	13,926,925	3,458,092	51.66%	57.48%	29.70%
Week of 12/28/2020	31,064,342	14,402,258	1,876,336	52.40%	53.07%	27.81%
Week of 12/21/2020	72,656,282	35,405,726	4,900,689	55.48%	124.11%	68.85%
Week of 12/14/2020	48,878,751	19,437,594	3,104,483	46.12%	83.50%	38.51%
Week of 12/7/2020	62,920,148	26,137,279	4,150,662	48 14%	107.48%	51 74%
Week of 11/30/2020	67,800,547	29,383,508	4,711,742	50.29%	115,82%	58.24%
Week of 11/23/2020	38,158,975	16,841,977	2,360,074	50.32%	65.18%	32.80%
Week of 11/16/2020	39,812,179	18,443,760	2,542,870	52.71%	68.01%	35.85%
Week of 11/9/2020	22,855,460	7,868,516	1,821,048	42.39%	39.04%	16.55%
Week of 11/2/2020	28,712,842	12,087,480	1,901,811	48.72%	49.05%	23.90%

	Citadel Shares	Citadel Trades	Citadel Shares/Trade	Virtu Shares	Virtu Trades	Virtu Shares/Trade
Week of 5/17/2021	3,693,994	85,681	43.11	2,815,384	68,679	40.99
Week of 5/10/2021	3,354,403	104,801	32.01	2,398,072	77,588	30.91
Week of 5/3/2021	2,709,300	92,398	29.32	1,920,356	67,828	28.31
Week of 4/26/2021	5,178,592	115,231	44.94	4,114,214	95,587	43.04
Week of 4/19/2021	3,838,332	115,470	33.24	3,195,142	96,017	33.28
Week of 4/12/2021	8,771,644	198,440	44.20	7,945,869	175,303	45.33
Week of 4/5/2021	5,712,951	151,334	37.75	4,922,223	131,517	37.43
Week of 3/29/2021	7,021,363	136,845	51.31	5,907,702	118,632	49.80
Week of 3/22/2021	14,661,892	350,723	41.80	19,014,998	399,802	47.56
Week of 3/15/2021	13,090,779	337,874	38.74	15,992,280	368,018	43.46
Week of 3/8/2021	23,908,440	681,265	35.09	29,256,853	723,074	40.46
Week of 3/1/2021	22,298,959	388,993	57.32	28,532,932	405,242	70.41
Week of 2/22/2021	39,259,675	739,295	53.10	52,451,996	927,612	56.55
Week of 2/15/2021	7,887,651	118,457	66.59	8,552,670	100,028	85.50
Week of 2/8/2021	18,848,780	298,575	63.13	19,222,124	251,804	76.34
Week of 2/1/2021	49,720,491	1,496,739	33.22	35,786,520	711,870	50.27
Week of 1/25/2021	92,991,756	1,983,757	46.88	43,388,647	1,205,460	35.99
Week of 1/19/2021	80,131,562	351,241	228.14	44,777,619	293,688	152.47
Week of 1/11/2021	73,156,206	203,633	359.26	44,448,707	247,026	179.94
Week of 1/4/2021	5,936,322	19,056	311.52	4,131,948	27,863	148.30

	Robinhood Shares	Robinhood Trades	RH Shares/Trade	
Week of 5/17/2021	48,124	48,117	1.00	
Week of 5/10/2021	54,703	54,677	1.00	
Week of 5/3/2021	55,247	55,242	1.00	
Week of 4/26/2021	73,804	73,803	1.00	
Week of 4/19/2021	73,390	73,373	1.00	
Week of 4/12/2021	129,402	129,381	1.00	
Week of 4/5/2021	99,780	99,772	1.00	
Week of 3/29/2021	eek of 3/29/2021 90,487		1.00	
Week of 3/22/2021	267,095	266,981	1.00	
Week of 3/15/2021	297,276	297,194	1.00	
Week of 3/8/2021	765,811	763,327	1.00	
Week of 3/1/2021	257,412	257,315	1.00	
Week of 2/22/2021	757,954	755,424	1.00	
Week of 2/15/2021	14,983	14,907	1.01	
Week of 2/8/2021	1,678	1,675	1.00	
Week of 2/1/2021				
Total	2,987,146	2,981,666	1.0018379	

	Two Sigma Shares	Two Sigma Trades	Two Sigma Shares/Trade	G1 Shares	G1 Trades	G1 Shares/Trade
Week of 5/17/2021	421,285	21,486	19.61	556,217	20,618	26.98
Week of 5/10/2021	404,022	25,078	16.11	883,209	36,524	24.18
Week of 5/3/2021	442,029	23,444	18.85	883,209	36,524	24.18
Week of 4/26/2021	218,754	18,759	11.66	768,998	32,574	23.61
Week of 4/19/2021	520,516	24,581	21.18	1,318,367	37,779	34.90
Week of 4/12/2021	1,071,302	54,895	19.52	2,583,516	76,212	33.90
Week of 4/5/2021	726,153	44,149	16.45	1,687,284	57,073	29.56
Week of 3/29/2021	1,088,636	43,290	25.15	1,635,995	48,950	33.42
Week of 3/22/2021	2,645,822	119,800	22.09	4,766,416	142,289	33.50
Week of 3/15/2021	2,026,245	113,810	17.80	4,218,976	142,948	29.51
Week of 3/8/2021	4,149,293	229,172	18.11	7,606,670	288,151	26.40
Week of 3/1/2021	3,463,047	119,209	29.05	6,631,980	157,625	42.07
Week of 2/22/2021	5,393,608	221,579	24.34	11,598,219	289,751	40.03
Week of 2/15/2021	1,032,460	34,826	29.65	1,680,471	43,035	39.05
Week of 2/8/2021	2,372,217	94,006	25.23	2,960,287	114,354	25.89
Week of 2/1/2021	3,710,208	354,234	10.47	10,268,777	507,820	20.22
Week of 1/25/2021	4,379,714	309,797	14.14	22,258,085	388,250	57.33
Week of 1/19/2021	2,820,550	44,620	63.21	28,034 <mark>,</mark> 417	85,673	327.23
Week of 1/11/2021	3,024,572	25,886	116.84	24,381,517	57,490	424.10
Week of 1/4/2021	389,827	5,168	75.43	1,698,466	5,498	308.92

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