

Title: The ETF Money Tree

Author: Turdfurg23

Created 2021-10-21 21:15:56 UTC

Permalink: /r/DDintoGME/comments/qd1n19/the_etf_money_tree/

Url: https://www.reddit.com/r/DDintoGME/comments/qd1n19/the_etf_money_tree/

Good Morning Apes,

None of this is financial advice and the data gathered is from publicly available sources.

****A Brief Description of ETF Arbitrage****

<https://preview.redd.it/x4pdb6kicvu71.png?width=888&format=png&auto=webp&s=7be8da727a95b413f39dee7057448bf983255e3d>

Let's use an example using video games to explain ETF arbitrage.

There's a kid (a Hedge Fund) outside a video store who wants to rent (short) Dark Souls (a share of GME), but he's too young to rent it. The young kid (HF) asks an older guy (Authorized Participant, or AP) to be his middle man. The AP is great because he knows an employee in the video store (that employee is the ETF sponsor) who can get the older guy the video game (a share of GME).

The ETF sponsor gets what's going on, but unfortunately can only get the AP the video game if the kid pays for a rental fee for a bag of other video games, like No Man's Land or pre-modded Cyberpunk. In this example, the bag is the ETF, and the rental fee is the collateral.

Video game employee (ETF sponsor) passes the bag (ETF) of games to -> Old guy (AP) who passes that ETF to -> young kid (Hedge Fund).

The hedge fund goes home, opens the bag, ignores the other crappy games for Dark Souls, and starts to play (short) it, and actually plays it for too long. The AP (the older guy) tells the kid, "Hey man, you gotta bring Dark Souls back in T+2 days or you Fail to Deliver (FTD)." The young kid tells the AP that he's not going to bring that game back in 2 days, in fact he's not going to bring it back at all, and tells the AP the video game should just buy another copy from the (Secondary Market). Meanwhile, the kid continues to play (short) the game (GME share) in the primary market, thus affecting the share price.

TLDR: A lot of rental stores have to buy copies of Dark Souls in the secondary market (one that doesn't affect GME price) to maintain equal weighting in their funds. This has and continues to happen.

Also, if the AP in this example is doing this for a bunch of kids, and can't get the share back, at this point he'll just start shorting it as well in order to reduce their leverage- so they have an incentive to operationally short

Thanks to [u/likejokerdo420](<https://www.reddit.com/u/likejokerdo420/>) because I suck at writing

<https://preview.redd.it/1178jpxkcvu71.png?width=482&format=png&auto=webp&s=a95d15097cbb99ae821b3197d036fe091055ab9e>

<https://preview.redd.it/ugin4bylcvu71.png?width=606&format;=png&auto;=webp&s;=5b8721947597b5664a5d978e22a8190f2e7aeeb0>

[](<https://preview.redd.it/a4bzk40ncvu71.png?width=610&format;=png&auto;=webp&s;=aea69f7fc295b40f45f6a8ebbf97b21a277b4c33>)

****But What Does It Actually Look Like? Arbitrage Done Wrong****

<https://preview.redd.it/jtzqeixocvu71.png?width=716&format;=png&auto;=webp&s;=874e582af1641e6b255ba123489348f6d9c37c11>

****A Look Back at ETFs that Failed to Deliver****

So we know that GME went through several rounds of rebalancing from Russell 2000 to Russell 1000 on 6/25 and from S&P; 600 to S&P; 400 on 8/4. I wanted to take a look back at the various ETF funds that fell out of normal arbitrage where they were creating/redeeming more ETF shares than their standard creation unit size. For small funds this is usually 2,500-5,000 "Creation Units" and 25,000-50,000 for the larger index funds. This is where an AP has to either evenly buy in the secondary market for example 1,000 shares of each stock in their fund. Or they are cap weighted and it's based on market cap so each stock has to be bought at a different level to maintain a market cap weight. So back to January where it all began! There were some obvious funds that got shorted to insane amounts. Below I outline several significant ones.

****XRT, RETL, SLYV, & IJT. There were many more..****

<https://preview.redd.it/lleynibrcvu71.png?width=1501&format;=png&auto;=webp&s;=e8de061b3361db95ce48b9353a8efc0e1975db40>

****Apes March To The Beat of The Drum****

Again, during the March run up we see the same data appear except this time in different ETF funds. Hedgies needed new ETFs to short in this round and they did find them and some familiar ones too.

****AVUS, FNDB, IJR, & BUZZ...****

<https://preview.redd.it/mfvcddbtvcvu71.png?width=1299&format;=png&auto;=webp&s;=30d0b4648a4866e64c5cdcead7e2b1563bde48ad>

****June The Gateway To Summer.****

As GME continues on in these cycles June was pivotal in that after this pop in price action for GME. After the June rise we saw Ryan Cohen do a share offering on 6/22 and we also saw Gamestop rebalance and transition into the Russell 1000 on 6/25. Hedgies would now have to find Russell 1k ETFs and some old ETFs to short in the future which became increasingly more difficult...

****IWF, ITOT, XRT & VTI...****

<https://preview.redd.it/dhshirdvcvu71.png?width=1418&format;=png&auto;=webp&s;=50a5d73928a6ded68f14b8f4e5e24a33f83026ca>

****Where We Are Now.****

So currently, since the transition over from the S&P; 600 to the S&P; 400 we saw a lot of ETF funds that had been previously high amounts of FTDs no longer holding Gamestop. The total amount of GME in ETFs went from 14 million in January to about 8 million now. Of that 8 million Vanguard held over 50%. I have all the numbers for the ETFs containing GME in a Google doc linked below.

[ETF Data](<https://docs.google.com/spreadsheets/d/1vhbn6HqmkhwHqtSj0CDNHeCNuNOp-hPcmfur0pZUuFs/edit?usp=sharing>)

We're still seeing ETF FTDs happening and over a broader group which means it's likely more expensive the short hedgies to provide collateral to all these funds. But we see as FTDs are low on GME hedgies have switched to more broad FTDs on a series of funds. I broke them up by biggest holders. Blackrock, Vanguard, State Street and all other ETF funds.

<https://preview.redd.it/xuxrz7rycvu71.png?width=1393&format;=png&auto;=webp&s;=b0316de426178d6f060574a5b76bab7c46217330>

<https://preview.redd.it/muk2kl00dvu71.png?width=1281&format;=png&auto;=webp&s;=3fa5fd049111659efc7469975b462f2a520b049a>

<https://preview.redd.it/9vblay0dvu71.png?width=1271&format;=png&auto;=webp&s;=7df7670d96c8604317e142ac6a840b2189b6665e>

<https://preview.redd.it/ihn1o252dvu71.png?width=1201&format;=png&auto;=webp&s;=6dd9b08f5b32f6fb4b506fa9d34f139bf2e92b7c>

****I know I know...****

<https://preview.redd.it/mkecw6x3dvu71.png?width=577&format;=png&auto;=webp&s;=bd82a67ed98f506d505f3d9e470b133e478c88e6>

****Options On ETF's****

So, not all funds but typically the larger ETF funds allow investors to trade options on them. These derivatives saw again significant increases along side the same time period that we saw GME price action. And for those that rebalanced and no longer held GME the options volume vanished with it.

[IWM January Open Interest](<https://preview.redd.it/2z4ubey5dvu71.png?width=1432&format;=png&auto;=webp&s;=f7da6b7c0ebe30c4abe4f2cd01f88ae1a550b107>)

[VTWO January Open Interest](<https://preview.redd.it/z0umiai8dvu71.png?width=1432&format;=png&auto;=webp&s;=956419f9d3f7c85a0cd71ea41dc8c9255beaa721>)

[XRT January\March Open Interest](<https://preview.redd.it/cx5ut3ladvu71.png?width=1426&format;=png&auto;=webp&s;=3968a488c37b96ca963cf9f610990d1a8c536a86>)

[IJR February\March Open Interest](<https://preview.redd.it/sminfdddddvu71.png?width=1431&format;=png&auto;=webp&s;=ddb5f359d20924f3684b2a7ef9e488528945dbec>)

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<https://preview.redd.it/rb8g922hdvu71.png?width=238&format;=png&auto;=webp&s;=9660f42afb4f8f115d136438109d33a5e3cecfaf>

[u/gherkinit](<https://www.reddit.com/u/gherkinit/>) Also describes in one of his recent streams that ETF quarterly options and Gamestops monthly options expire on 11/23 & 11/24. See his Youtube stream here [Stream](<https://www.youtube.com/watch?v=MZMLo4uAqhc>)

More FTD data: [Failure to Deliver Numbers](<https://public.tableau.com/app/profile/gmeshortsqueeze/viz/SECFails-to-DeliverData/SECFails-to-DeliverData>)

[u/Annihilationgod](https://www.reddit.com/u/Annihilationgod/) FTD posts on Reddit & Twitter

Some great articles & Congressional Depositions by The Kauffman Foundation & Blackrock

(Queen Kong follows Kauffman on Twitter)

Blackrock vs Kauffman Foundation

[Congressional Testimony](https://www.govinfo.gov/content/pkg/CHRG-112shrg74309/html/CHRG-112shrg74309.htm)

Financial Times Article on ETF Borrow Rate Increase

[Borrow Fee Increase Trend](https://www.ft.com/content/7901cbc4-22f3-4ef7-8c91-b80d5ac7b0d9)

ETF God King Richard Evans Paper

[ETF Short Interest & Failure to Deliver](https://jacobslevycenter.wharton.upenn.edu/wp-content/uploads/2018/08/ETF-Short-Interest-and-Failures-to-Deliver.pdf)

Thomas Stratmann ETF Paper

[ETF's, FTD's and Volatility](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2183251)

****Wut Mean When Moon!？****

<https://preview.redd.it/054lp58ndvu71.png?width=400&format=png&auto=webp&s=8d3691f7e0095043133a43068336ca6dd2891cc7>

****TLDR:**** GME has been through a lot since January, there are far less shares of GME in ETF's. Especially ones that are notorious for share lending and therefore shorting. Hedgies have had to short a larger and broader range of funds which is expensive and difficult to manage. ETF Borrow Rates are trending higher see Financial Times article. Many of the ETF's that were used for options conversions no longer hold GME. There's been a significant increase in ETF FTDs as hedgies haven't wanted to borrow GME directly. Instead of failing to deliver on several funds hedgies are spread thinner. Options will expire and the volume will come back into GME. Only now there are less tactics for SHFs to turn to in ETFs, Variance Swaps, and using retail shares since the DRS movement. **BULLISH ■■■■**