Title: XRT IS DIRECTLY CORRELATED TO GME & THE SHORTING OF XRT, AFFECTS GME!! CHECK THIS SHIT OUT!! GET FUKD SHORTIES!!

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Url: https://www.reddit.com/r/Superstonk/comments/tkj5q7/xrt_is_actually_just_another_ticker_for_gme/?u

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Since posting this my wife (professional programmer) helped review my methodology and we found a significant error that does not change the general gist of this. R\^2 since 2013 ranges from .88 to .67 on an annual basis.

Friends, apes, primates, lend me your ears, for we have been poorly deceived. There has been analysis showing that GME and XRT are closely linked, but how closely has been a matter of some discussion. I ran an analysis of linear regressions on an annual basis back to the beginning of Reg SHO data in 2009, and the crazy thing is that XRT closing prices peg so ~closely to a perfect explanation of GME's closing prices that my linear regression modelling software says that I should check the data for an error~. it is an incredible explanation of 2/3 of GME's close price. As a control, I checked the same data against Kroger, ticker KR, which has a roughly equivalent weighting in XRT: https://www.ssga.com/us/en/intermediary/etfs/funds/spdr-sp-retail-etf-xrt

[Console output of regression modelling](https://preview.redd.it/y6ksrdevc1p81.jpg?width=620&format;=pjpg&auto;=webp&s;=b9518afdaa120480280ce894665ac52d79113a91)

Let's break this down: regressions measure the amount of variation in the independent variable (the stuff on the left side of the equation) against the variation of the explaining variables (the stuff on the right side of the equation). The R\2 or in this case the Multiple R-squared is a measure of the fitness of a line drawn through the mean of the explaining variables. At first I thought, *Hey, I bet that shares marked short means something*, and oh boy was I wrong. Any combination of variables including shares marked short was only able to explain about 7% of the variation in GME's closing price. **AFTER CORRECTION THIS IS STILL TRUE.** However, it did so with some accuracy. XRT's closing price is a ~~perfect~~ close correlate of GME's closing price. This is not true of other XRT components. XRT is and has been pegged closely to the GME closing price ***since at least*** ***~~2009~~******2013***.

I'm going to throw in a gratuitous table of some of the data I compiled using Reg SHO scraping from NYSE and FINRA for this task, just so you can see what I was working with.

[Gratuitous compiled data from scraping Reg SHO data and yahoo finance for historical volume](https://preview.redd.it/br35jclof1p81.png?width=2625&format;=png&auto;=webp&s;=500ee6155edeb20b38091d85e48a8f1a46fecf2f)

As you can see, I've done an enormous amount of work here, and there are some other interesting conclusions that might be made about lit exchanges, OTC, and marked short volume. However, this stuff is all secondary to the fact that ***XRT is another GME ticker***.

So whenever you see another "XRT has crazy SI" post what you should be thinking *I wonder how they're fucking with XRT to make it match GME today, and what kinds of shenanigans that SI for what is essentially another GME ticker means for GME*.

TI;dr: XRT isn't just closely linked to GME, it **is** GME.

Expertise: I worked professionally at a federal agency as a Statistician in support of Economists for 2 years. I currently write regulations in a different federal agency (for an other industry) and turn budgets into hate using projections that have a \~99% accuracy rate given an accurate description of the underlying conditions. This is my second Due Diligence post on Superstonk.

Edit: I showed this to my wife, who is an actual programmer, and I fucked up slightly. I accidentally attached the GME yahoo finance data to the XRT data. After correcting, the actual R\^2 isn't 1, it is 0.6782.

[I fucked up. Sorry. Still the best fit. Kroger improved to R\^2 of 0.00065](https://preview.redd.it/s9zesxde0 2p81.jpg?width=996&format;=pjpg&auto;=webp&s;=3f62b8ea892918fade4ac4166c2fdf752f973f7c)