

TD Securities Index and Market Structure Research Highlights 2021

GameStop and a War on Wall Street

From: February 1st Bulletin

"Oh those poor hedge fund managers. Why don't they invest next in whoever makes the world's tiniest violins."

Stephen Colbert, January 29, 2021

Every few years it seems the plumbing of Wall Street becomes front and center in the minds of investors. For instance, in August 2013, a little-known single point of failure in equity market plumbing, the Security Information Processor (SIP) for Nasdaq stocks, broke down resulting in a halt to trading in ALL Tape C Nasdaq names for over 3 hours intra-day. In 2014, a book by Michael Lewis hypothesized that market plumbing was rigged. In his book, Lewis drew attention to the infrastructure advantages for high frequency traders in the race for the fastest access to marketplaces and the battle by upstart marketplace IEX to neutralize this HFT speed advantage. Thirdly, in August 2015, the lack of coordination between single stock and related ETF limit up and down mechanisms caused a massive decoupling in valuations between the related instruments at the open on August 24 and caused a black eye for the securities industry. In each case, these high-profile events led to at the very least industry navel gazing and in some cases to improvements to the plumbing of equity market structure.

This brings us to current events involving a so-called "War on Wall Street" launched by a herd of retail investors taking control of stocks and causing these names to decouple from pricing reality. This confluence of events involving retail investors creates a complex set of problems for participants and regulators to address, with a key difference from other recent structural reviews being the politicization of current events.

Background – How Did We Get to Current Events?

Confucius Say, "This Onion Have Many Layers!"

It is hard to pinpoint where it all started, so we will take a shot:

- 1) For the past couple years, market access for do-it-yourself (DIY) investors was made easy by incumbent and upstart brokerage firms that catered to millennials with easy-to-download apps, excellent technology and cheap trading fees. New account openings and daily average revenue trades (DARTs) started to grow across the retail brokerage industry, catching the attention of analysts and executives at full-service brokerage firms on Wall Street. Meanwhile, the new disruptors in the DIY trading game such as Robinhood became very popular in attracting young participants to these new platforms through game-like features and zero commissions to trade. In 2019, it became clear to incumbents that Robinhood's appeal would not wane, so in defense each of the incumbent DIY brokers moved to zero commission trading one by one. Elimination of commissions meant that on-line trading firms were more reliant on payments from intermediaries and exchange rebates in order to be profitable;
- 2) In March, a pandemic sent everyone home and shortly thereafter stimulus cash arrived from the US government provided to citizens to compensate for loss of income. With citizens bored during the day, some social media influencers started to stream notes to followers about trading stocks, including how easy it was to make money. Specifically, Dave Portnoy of Barstool Sports, a well-known social media platform geared towards younger adults that enjoy sports gambling, became very vocal about stock trading replacing sports as a place to gamble (all the while stating clearly that he was not a stock market expert). Chat rooms on Reddit forums focused on trading such as Wallstreetbets exploded in popularity as traders shared ideas and followed the lead of high-profile users such as deep>>>value, one of the first to post about his big long position in GME. Meanwhile, DARTs at the on-line firms grew dramatically;
- 3) In the past couple weeks, chat room conversations started to target down and out stocks with old technology or stocks in sectors that are out of favor. One such stock, GameStop (GME), a company that sells new and used video games, became a favorite for the retail community after it announced new board appointments that included executives with a proven track record as innovators. The stock quickly rallied as retail piled into the name, forcing some investors with short bets to cover, thereby driving GME up higher. Shortly thereafter, one high profile hedge fund, Melvin Capital, announced it had taken a \$2.5 billion capital injection from Point 72 (Steve Cohen) and Citadel (Ken Griffin). Melvin had a large short position in GameStop and it became

clear to retail that the herd caused some of the large hedge funds to short cover. The dialogue on chat rooms soon turned to "we won round one of the us against Wall Street David vs Goliath battle" as retail celebrated its stonk win and searched for other down and out names with large short positions to attack from the long side. The notion that short bets were un-American once again became a theme at the same time institutional investors, such as hedge funds with short bets, degrossed risk and stepped away from long-short bets. The most shorted stocks significantly outperformed the market. As well, one high profile short-side hedge fund, Citron, announced it would no longer publish short position ideas. Steve Cohen, who recently purchased the New York Mets baseball team and joined Twitter, got caught in a social media fight with Portnoy and Cohen announced on the weekend he was taking a break from Twitter after his family received death threats;

- 4) Meanwhile, as retail investors stormed into a small group of securities and related derivatives, volatility in these names moved parabolically higher. In the midst of this volatility, the two central clearing corps for stock and option trading, NSCC and OCC respectively, demanded additional capital from its members to reflect the increased risk of default. In a small bit of irony, the firms required to pony up the most capital were the on-line trading disrupters that had the most concentrated activity in these retail names. NSCC capital requirements are in part determined by security concentration risk. With the future unpredictable, and on-line firms such as Robinhood facing capital calls on retail names rumoured to be as much as 10X higher, some retail firms moved to limit client activity to closing positions only or very small increased exposure. Buoyed by its recent success, the on-line trading herd screamed that these moves were designed to "protect hedge funds on Wall Street" and turned on previously popular disrupters such as Vlad Tenev, CEO of Robinhood. Politicians joined the outcry from both sides of the aisle. Stocks in the retail basket of activity bounced around with every new announcement about trading limitations. The SEC announced it would investigate the activities. Congressional hearings are certain to follow.

What Happens Next? What Might Regulators Zero in on?

Social Media Influencers and High-Profile Trade Idea Generators- There is lots of speculation on who really started this War on Wall Street, with some industry speculation that foreign actors might be in the middle of the influencer crowd. As part of the quirky nature of these chat rooms, new points of view are only allowed from participants with a track record, as moderators responsible for maintaining some semblance of order delete posts to minimize noise. It is possible that the entire episode was planned well in advance as the timing of the so-called Wall Street Attack occurred conveniently at a time in between leadership teams at the SEC (Proposed Chair Gary Gensler is awaiting Senate Confirmation and leading divisions of the SEC are all staffed by acting heads). Regulators will get to the bottom of the origins of the influencers on popular chat rooms in due course. It is also possible that some institutional participants were actively participating in chats, a point that regulators will be sure to run to ground.

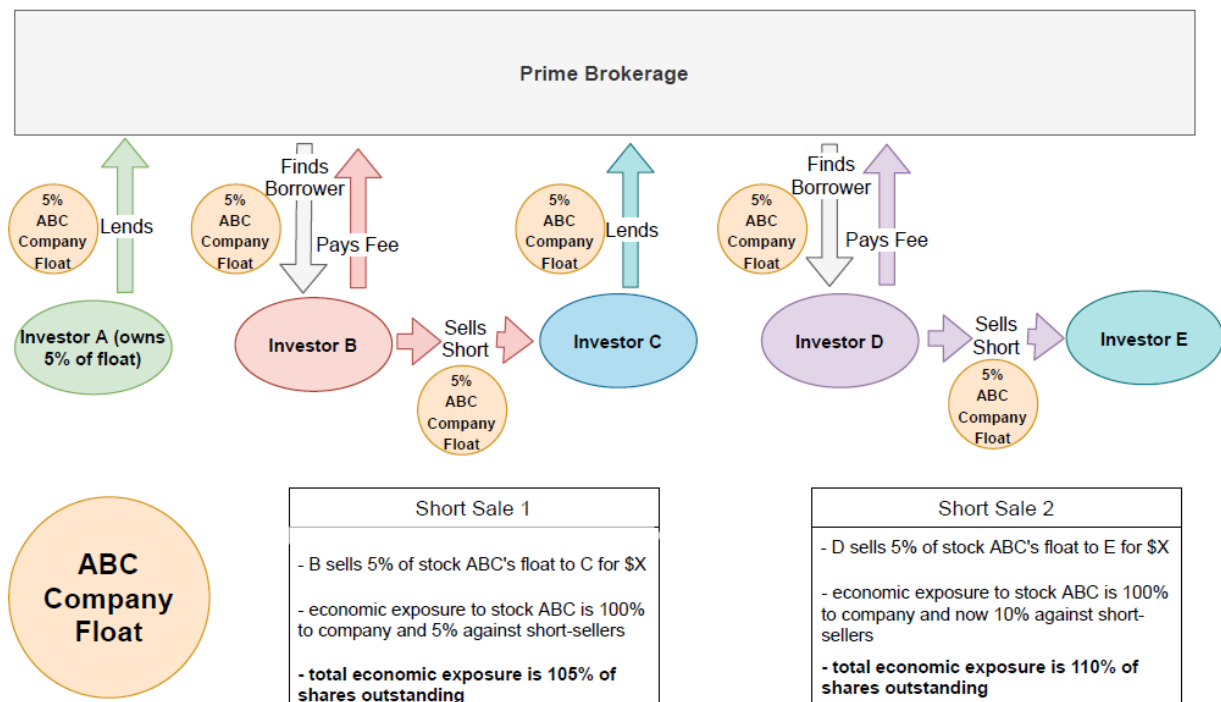
Influencers and high-profile chat room traders are definitely an area of interest for regulators who up until now have not done much to rein in social media activity in public stocks, save for some tweets from Tesla's CEO. With advisers in the securities industry held to serious standards in terms of recommendations, it seems strange that social media influencers can provide advice on trading strategies that are clearly impacting followers. One suggestion is that influencers, however defined, should be registered if they discuss registered securities in public.

Short Selling – There are two questions related to short selling that will be debated: 1) should short selling be banned, or the rules modified and; 2) should there be a limit on the percentage of shares that can be sold short?

- 1) While most issuers would surely say yes to the question of whether short selling should be banned, their institutional investors would almost all say no it should not. Bans on short selling have been imposed several times in the past, including for Financial Services stocks in 2008 and early in COVID in certain countries in Europe. In every instance, academic and practitioner analysis proved that market quality was worse off with short selling bans – spreads widened, and the depth of order books was reduced. Short selling is an important component of market efficiency and is core to market making strategies for stocks and derivatives and adds liquidity for long-only buyers. Most importantly, short selling helps ensure that stock prices do not move dramatically above fundamental value. These facts are often overlooked in the heat of a crisis. The recent outcry from retail investors winning on GME and other similar bets that short selling is "un-American", or anti-capitalism, draws an interesting parallel to the 2008 housing crisis. Historians would argue that the notion of home ownership for all was the catalyst that led to the housing crisis, as many homeowners without the financial means to buy houses ended up in foreclosure. This led to a cascade impact on complex structured products that included mortgages tied to homes owned by citizens with no equity. The public blamed Wall Street, and extensive regulations followed for banks and broker dealers (see Volcker, Dodd-Frank). While Wall Street certainly deserved its share of criticism, in hindsight the problem started with an endless thirst by the public to own houses and financial intermediaries allowing easy access to cheap and often misleading funding. It is concerning that retail investors seem to think stocks only move in one direction and ownership is a god given right and a way to fight the evil doers on Wall Street at their own game.

- 2) There is no need to limit short interest. That said, understanding how a company can have a short position bigger than its share float is perhaps one of the more misunderstood aspects of the GameStop euphoria, especially with rules in place to ensure a short seller locates shares prior to completing a short trade. While there are some exemptions from the locate rule for bona-fide market makers, these exemptions do NOT explain GameStop's current short interest of 125% of float shares outstanding. In fact, GME's short interest fluctuated at or above 100% of its float for the past year. Nevertheless, it is very important for investors to understand the nature of a shareholder base to determine what impact high short interest might have on the possibility of forced buy-ins.

Anatomy of Short Interest in ABC Company



Source: TD Securities

In the example above, we start with zero short interest and an investor A who lends 5% of the shares through a prime broker. The prime broker finds a short seller and uses Investor A's shares for the locate requirement. Investor B shorts stock ABC to Investor C, who lends it out to Investor D who shorts it to Investor E. This process can continue legally to no real end. Importantly, as short interest grows, the economic exposure to a stock grows. In the ABC example, Investors A and C own a 5% economic interest in ABC but only Investor E is the beneficial owner. In this example, economic exposure to ABC is 10% higher than shares outstanding (assuming that Investors A and C are not hedging). Importantly, Investors B and D owe Investors A and C compensation payments including a fee for lending as well as any distributions paid by ABC.

The nature of a company's shareholder base is important to borrowers, as a stable set of passive and long-term holders ensures that a short squeeze due to forced buy in does not occur. On the other hand, if the majority of shares in the lending market come from retail margin accounts, then the borrow might be much more volatile.

In the example above, if Investor A calls back their borrow, perhaps to sell shares or vote on an important company matter, then the Prime Broker will need to find shares to return to A. These shares can come from any other lender, which is easier to ensure if a large portion of shares are in stable hands. While clearly GameStop was held in lots of margin accounts and these shares were circulating in the lending market, a buy in was not the cause of GameStop's dramatic rally. Instead, the short cover was as we understand initiated by the hedge funds short the name, not because of a lack of borrow. In fact, GameStop has a large passive core ownership. Unless regulators uncover some new wrinkle in the lending market, then there is no reason to change rules. That said, it is possible that regulators will push for additional transparency in securities lending activities as part of a review of short selling rules.

Capital Charges and the Impact on Clearing Firms - every step along the chain of the market results in counterparty risk. When a retail investor buys shares on margin, then the clearing broker needs to post capital against this position. The more volatile and concentrated the order flow, the higher the capital posted to the clearing corp by the clearing broker. In some instances, clearing brokers stopped accepting orders in GME and similar retail herd names as a result of concerns about available capital. Up until this recent retail herd market move, firms were able to manage capital requirements with existing lines of credit or available capital. Last week, some of these firms needed to recapitalize, which represents a systemic concern for regulators. That said, the central clearing corp is designed as the last layer of industry defense against a failure, with the client being first, the clearing broker second and the clearing corp and its other members last. It will be interesting to see if some clearing firms either exit the business or push for changes to the capital charge formula.

Retail Market Participation, Payment for Order Flow and the Politicization of GameStop – as is often stated in commerce, when a product is free, you are the product. This notion is true for do-it-yourself investors trading for free in on-line platforms. In December, Robinhood was fined by the SEC for failing to disclose that it received payments from wholesalers (market makers) who paid to trade against Robinhood flow. While transparency in these bi-lateral payment arrangements is much improved, there remain questions about whether off exchange trading between retail firms executing orders for do-it-yourself investors and the wholesalers that take the other side of these transactions are harmful to market structure.

Opponents of payment for order flow arrangements believe the practice should be banned. It results in a two-tiered rule structure, creates agency conflicts, segments order flow on and off exchange and between institutional and retail order flow and results in higher all-in trading costs as a result of excessive intermediation. Interestingly, in our recent market structure survey, all but one asset owner/asset managers responding favored banning payment for order flow in the United States equity market. That said, a ban on payment for order flow would need to be accompanied by changes to exchange trading fees and specifically the elimination of rebates for liquidity takers.

Proponents of payment for order flow (PFOF) arrangements would argue that it results in lower costs for investors to trade and helps democratize access to stock trading for the do-it-yourself retail investor. Recently, as trading by on-line firms exploded, these same proponents argued that on-line traders in stocks today will become investors tomorrow. While this may be true, when all the key players involved, from exchanges to on-line firms to wholesalers, are incentivized to maximize volume traded, slowly but surely guardrails for do-it-yourself retail investors disappeared for competitive reasons. One of these guardrails was the explicit cost of executing a trade which has now been replaced in the US by the notion that trading is free.

On the one hand it is excellent that more individuals are learning about capital markets. On the other hand, it is clear from a cursory review of twitter feeds and chat rooms that many of these new investors have zero knowledge or interest in markets; their only interest is a quick buck profit. This is not a long-term sustainable strategy.

During the height of retail pandemonium last week, most retail brokers had capacity issues of some sort and market makers were from time to time required to route away order flow. With a small number of wholesalers dominating the intermediation of retail flow, these providers have become essential to retail trading firms. One of the leading wholesalers with 46% share of retail wholesaling volume, Citadel, is also a leading designated market maker (DMM) on the NYSE with over 50% of stock appointments and controls 32% of market share in options. In a report released on January 22, 2021, Citadel estimated that it commands 27% of equity volume market share. Combined with its role as one of the few NYSE market makers and the leading wholesaler, participants have started to raise concerns that this firm is becoming too big to fail in equities.

Finally, market pundits are concerned that the retail herd currently piling into stocks and pushing valuations well above fair value do not realize yet that it is a David vs David rather than David vs Goliath battle that will result in significant losses for a portion of these retail investors. When the music stops, politicians will look to blame Wall Street but, in this instance, Wall Street is not completely to blame. How do the politicians incorrectly blaming hedge funds and Wall Street proper accept that the same retail investors that are the political constituency are in fact to blame for the losses? It is important to think about how sensationalized this debate is likely to become as Congress will demand hearings and politicians will grandstand with pressure on the SEC to enact rules aimed at protecting do it yourself investors from themselves. It is possible that the Congressional hearings will result in momentum for a Federal Financial Transaction Tax aimed at curbing excessive trading activity, in particular by high frequency traders and other Wall Street players (but of course exempting retail activity).

If this David versus Goliath (retail herd versus Wall Street) activity were to be a baseball game, then it certainly feels like we are in the early innings of the game. David got off to a quick start jumping all over the Goliath starter's fastball. The Goliath starter just got sent to the showers and a reliever is on the mound. Goliath has its top hitters coming up in the next at bat and is sure to score some runs. That said, the manager of Team Goliath is a little concerned about some past umpire decisions, worried that past disagreements with the umpire carried over to this game and may result

in another loss. The game is certainly not over, but the end outcome still remains probably in favour of the home Goliaths.

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