



TURFTERSIT	↘	- 25,68%	258965874	752% Y	IRJURY
UJIEJDBCYZ	↗	+ 69,54%	976642431528	415% Y	YUTRREDF
ERFVGYYHU	↗	+ 57,82 %	958157346	748% Y	IUSDTRREEZ
JUIFTUIJH		+ 00,05%	48296587	745% Y	JUIKKJUY
GUJUOUJNE		+ 01,86 %	876187484	824% Y	TRANDDUIJ
ETOUFGBBE	↘	- 28,63%	8965874	589%Y	USELWAP
BOURSOPUT		+ 02,58%	41282589658	964% Y	PAKINDIAST
CGIDLHEMR	↗	+ 29,88%	258965874	258% Y	USELWAP
TPFDVDPAL	↘	- 25,78%	2589646587	971% Y	PAKINDIAST
HEIPF8EJEH		+ 03,52%	1574965874	853% Y	JNHUPKOLZ
GHGENR/GR	↗	+ 72,48%	145827412558	120% Y	HYTIC

**BETTER
MARKETS**

Post-Pandemic Digital World: Platforms, Algorithms, Cybersecurity, & Justice

Presentation to the Western New England Law Review Virtual Symposium

October 29, 2021

Dennis M. Kelleher, President and CEO | Better Markets | 1825 K Street, NW, Washington, DC 20006

- Finance platforms burst into the public consciousness in January 2021 when there was a trading frenzy in GameStop and other so-called “meme” stocks
- A \$6 stock shot up to an intraday high of almost \$500
- And then dropped down below \$100
- Other stocks showed similar if less dramatic volatility

- **These events raised numerous issues**
 - Stock market structure, retail traders, role of Reddit
 - Duties of broker dealers, market makers, etc.
 - Short selling, hedge funds, HFT activities
 - Payments for order flow/maker taker rebates
 - On exchange/off exchange “lit”/”dark” trading
 - Customer protections
 - Systemic stability

- I'm not going to talk about most of that today
- I'm going to focus on finance platforms and customer abuses
- However, for a ton of info on all the other subjects
 - Visit our website: www.bettermarkets.org
- Search “GameStop” or “gamification” and you’ll find tons of detailed materials on all the issues
- Now, turning to the platforms

- No cost
- Ease of access
- Ease of use
- “Delightful” experience
- Giving people what they want
- All equals bringing the stock market to the masses, not just rich insiders

Who does that sound like?



Oops, I meant:



- Robinhood and the other finance platforms aren't just platforms like Facebook, etc.
- They are broker-dealers registered with the SEC
- Subject to numerous state and federal laws and self-regulatory organizations (SRO) rules like FINRA
- Demonstrated in actions against Robinhood by SEC Dec. 2020; state of Massachusetts and FINRA in June 2021

- These finance platforms' biggest claim is ***they say***
 - “Commission free trading”
- But the problem is ***people hear***
 - “Free Trading”
- Which is what the media itself often irresponsibly says
- Ask yourself, how many things are “free” on Wall St?

**Quick Answer:
Nothing!**

- When someone says something is free, especially in finance, the questions are
 - Where is the cost hidden?
 - Who is paying it?
 - How much is the cost?

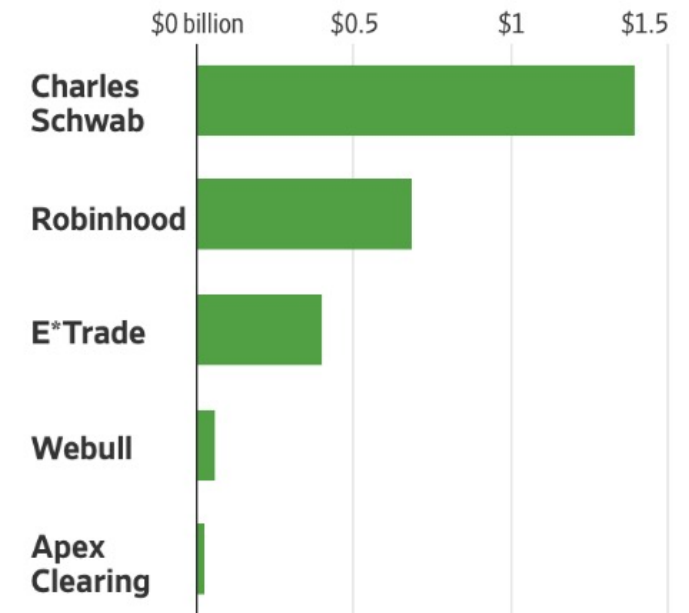
- **Here, we know the answers:**
 - Where is the cost hidden?
 - They moved a disclosed, clear, visible upfront “commission” cost to a hidden cost of trading
 - Who is paying it?
 - The retail trader
 - How much is the cost?
 - Very little per trade, but tens of billions in total

- **Here, “free” is just another word for everything you have to lose (sorry Janis Joplin)**
 - Your money
 - Your savings
 - Your house
 - Your marriage
 - None of which you can afford to lose

Payment for Order Flow (PFOF)

- Nearly all of the supposedly “commission-free” retail broker-dealers (e.g., Robinhood, E-Trade, Schwab/TD Ameritrade) who have most of Main Street investors receive what is called “payment for order flow” (PFOF)
- That means those brokers sell their customers orders (for stock and options) to high frequency trading (HFT) firms like Citadel
- Those HFT firms execute the orders, sending them back to the retail brokers’ customers and paying those brokers like Robinhood for the right to execute their client’s trades
- That is the platforms’ business model:
 - In 2020, Robinhood reportedly received \$687 million in PFOF from HFT firms
 - Robinhood makes significantly more money per customer than any other retail broker according to recent studies

Estimate of PFOF Received, 2020
By Major Retail Broker-Dealer



Source: [Wall Street Journal](#), Company Filings via JMP Securities

Note: Schwab Data Includes Order-Flow Revenue of TD Ameritrade.

Protocol: “Data shows how Robinhood makes more money from its users than other brokers”

Robinhood’s money-making machine

Payment for order flow, in which brokers and market makers split the profits from retail investors’ trades, became a money-making machine for Robinhood, placing it far ahead of more-established rivals.

	Average Account Value (AAV)	Order Routing Revenue	Order Routing Revenue per AAV
Robinhood	\$2,235.00	\$90,900,000.00	\$40,683.00
TD Ameritrade	\$97,214.00	\$202,100,000.00	\$2,079.00
E*Trade	\$86,131.00	\$76,700,000.00	\$891.00
Charles Schwab	\$274,568.00	\$53,400,000.00	\$195.00

As of Q1 2020.

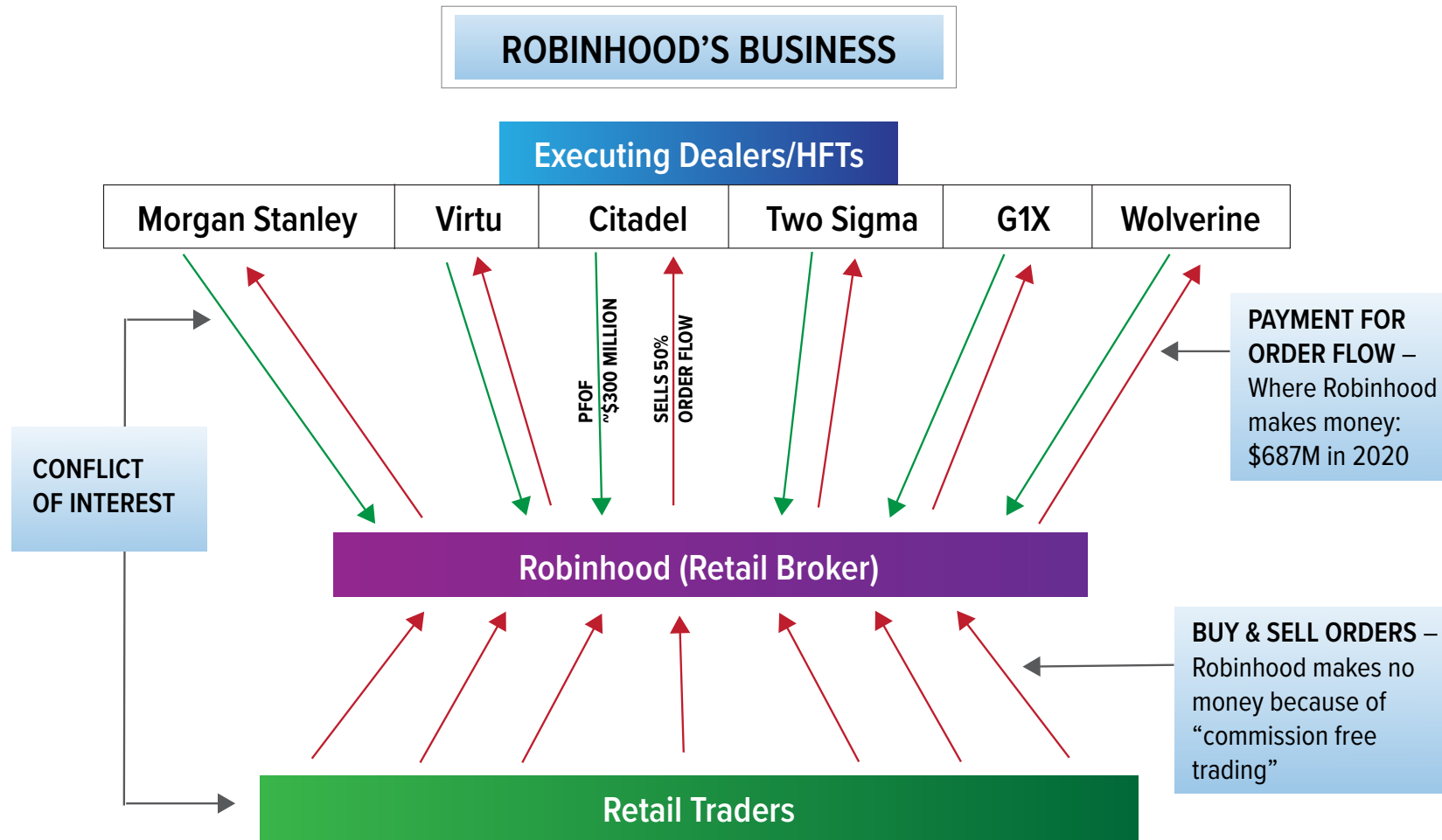
Source: Alphacution Research Conservatory

• Created with [Datawrapper](#)

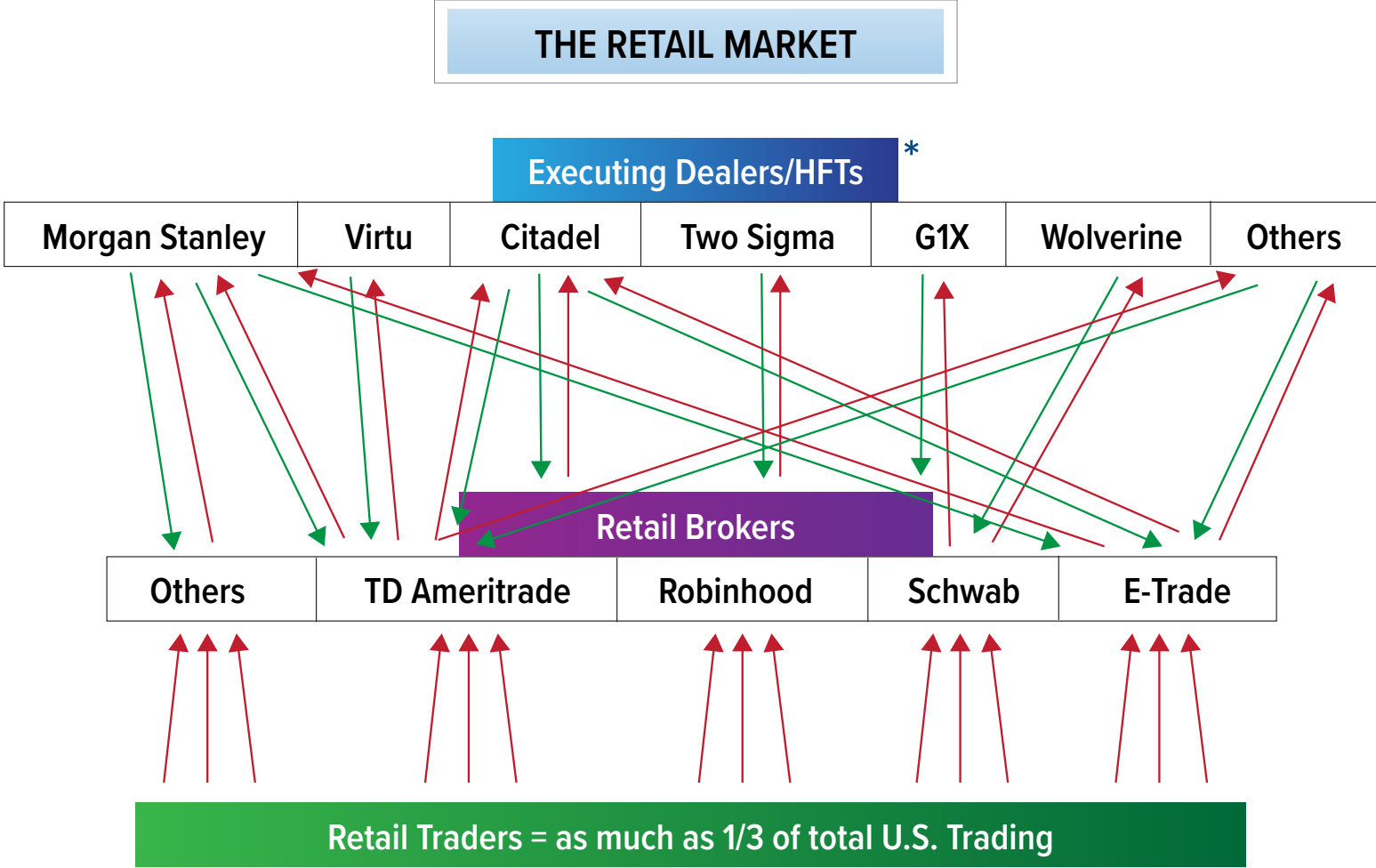
protocol

"All facets of [Robinhood's] business model are designed to maximize order routing revenue," Rowady said. "It's the most aggressive version of the retail brokerage (payment for order flow) model that facilitates this level of trading activity."

How Does Payment for Order Flow (PFOF) Work?



How Does Payment for Order Flow (PFOF) Work?



*Order Flow = Huge information advantage which enables positioning book advantageously

How Does Payment for Order Flow (PFOF) Work?

POSSIBLE TRADING VENUES FOR EXECUTING DEALERS/HFTs

Internalizers/ HFTs (7+)

(LEAST REGULATED AND TRANSPARENT)

1. Citadel
2. Virtu
3. Susquehanna
4. Morgan Stanley
5. Two Sigma
6. G1X
7. Wolverine

ATS*/Dark Pools (30+)

1. UBS ATS
2. Sigma X2
3. CROSSFINDER
4. JPM-X
5. LEVEL ATS
6. THE BARCLAYS ATS
7. IBKR ATS
8. MS POOL (AT-4)
9. BIDS ATS
10. INTELLIGENT CROSS LLC

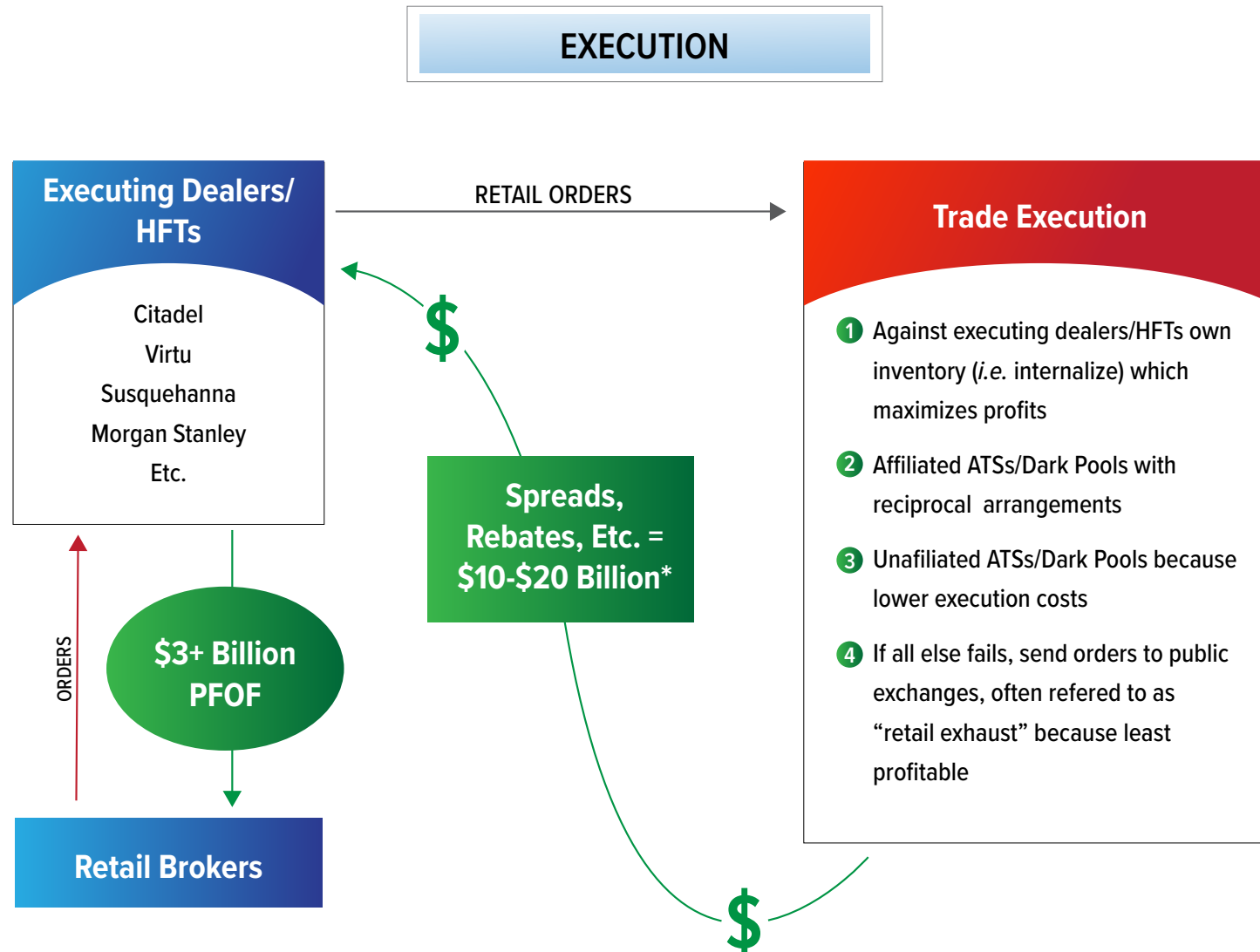
*Alternative Trading Systems

Public "lit" Stock Exchanges (16+)

(MOST REGULATED AND TRANSPARENT)

- | | |
|------------------|---------------|
| 1. NYSE | 11. Cboe EDGX |
| 2. NYSE Arca | 12. Cboe EDGA |
| 3. NYSE American | 13. IEX |
| 4. NYSE National | 14. MEMX |
| 5. NYSE Chicago | 15. MIAX |
| 6. NASDAQ | 16. LTSE |
| 7. NASDAQ BX | |
| 8. NASDAQ PSX | |
| 9. Cboe BATS | |
| 10. Cboe BATY | |

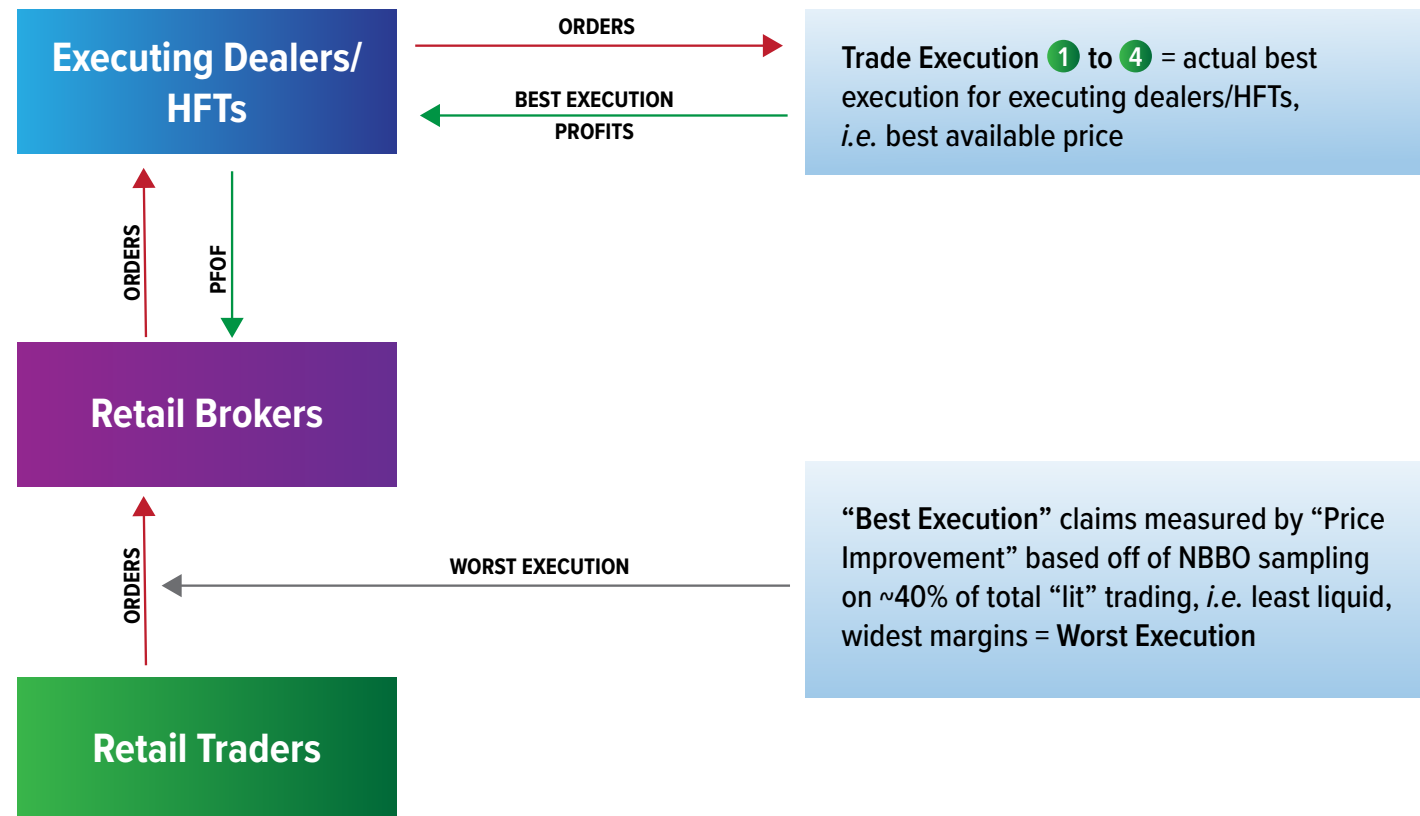
How Does Payment for Order Flow (PFOF) Work?



*Citadel alone had \$6.7 Billion in net trading revenue in 2020

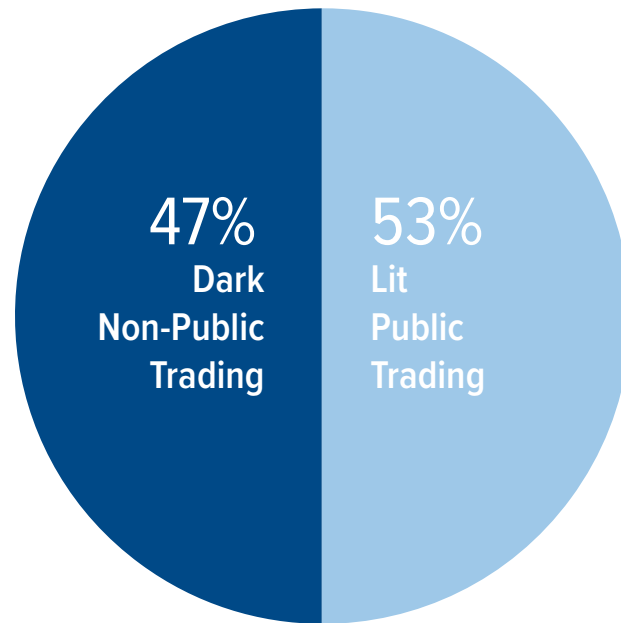
How Does Payment for Order Flow (PFOF) Work?

BEST EXECUTION = HFTs
WORST EXECUTION = RETAIL TRADERS



How Does Payment for Order Flow (PFOF) Work?

ALL TRADING IN THE U.S. *



5 day running average as of March 15, 2021 = 53.38% lit and 46.62% dark: https://www.cboe.com/us/equities/market_statistics/

NBBO determined based on only the 53% of the bids/offers on “lit” public exchanges but after (1) excluding 20% of the volume that trades through hidden orders and (2) excluding odd lots which are a significant percentage of the “lit” trading. Therefore, NBBO only based on ~40% of total bids/offers but even that amount of “lit” bids/offers likely manipulated because:

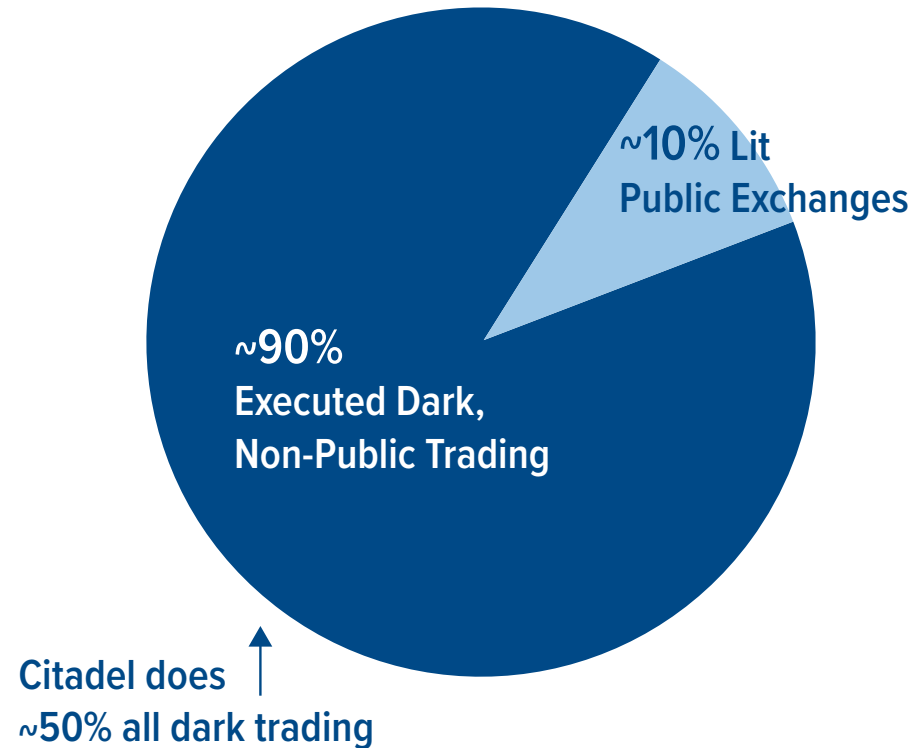
- 1 Executing Dealers/HFTs are active traders in “lit” and dark markets and able to influence spreads in the “lit” markets
- 2 Posting bids/offers of just 200-300 shares often can move price
- 3 Lit exchange prices also move based on undisclosed activity in derivatives, futures and bond markets, where HFTs are active as well

= NBBO not even close to best execution and should not be used as benchmark or reference price

* Approx. 12 billion shares traded per day in U.S. with average trade size ~100 shares; executed within milliseconds

How Does Payment for Order Flow (PFOF) Work?

Retail Trading in US =
as much as 1/3rd all Trading



- What's wrong with PFOF, you ask?
- It creates a clear conflict between the retail brokers' duty to get their customers the best execution for their trades
- With the retail brokers desire to maximize their own profits
- The retail broker wants the maximum amount of PFOF
- The way to do that is for the retail broker's customers to trade as much as possible

- **Worse, HFT's PFOF to retail brokers is greater for trades in small cap/less liquid stocks (think “meme stocks”) and riskier products like options**
 - They have wider spreads and the HFT firms make more money
- **PFOF is really little more than legal bribery**
 - The economics are straightforward—the more their clients trade, the more the broker gets paid, period.

- **So, “commission free trading” suggesting “free trading” is**
 - Nothing more than a slick marketing gimmick
 - It is misleading if not fraudulent
 - The intent and/or effect is to lure in new, unsuspecting customers
 - Then induce them to trade as much as possible
 - After all, it’s “free”!

- **Ok, that's how the legalized bribery works, but how do the platforms get their customers to trade as much as possible?**
- **That's where the other claims of “democratization” come in:**
 - Ease of access
 - Ease of use
 - “Delightful” experience

“Tech developers, like slot machine designers, strive to maximize the user’s ‘time on device.’ They do so by designing habit-forming products—products that draw consciously on the same behavioral design strategies that the casino industry pioneered.”

As another commenter put it, trading platforms like Robinhood are:

“Built on a Silicon Valley playbook of behavioral nudges and push notifications”

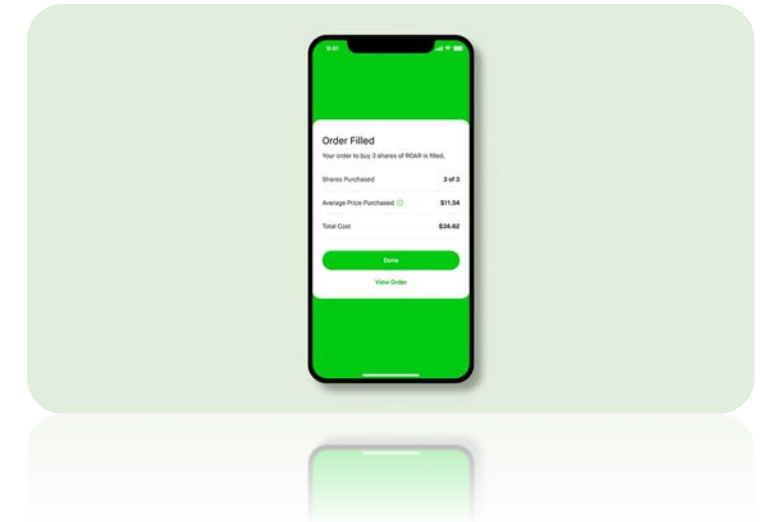


Again, who does that sound like?



A distinctive feature of Robinhood and other trading platforms is the use of “gamification”, which entails the design and deployment of features designed to trigger more thoughtless and risky trading. For example:

- Celebrations for trading, including celebratory graphics
- Games and contests w/ leaderboards and prizes
- Social networking tools with mimic trading of “finfluencers”
- Notifications and nudges via email or text
- Suggested trading strategies such as option and trading on margin



These features are often addictive, endorphin-engendering features akin to what one might find in a video game, slot machine or gambling den

- Ok, but why is all that so bad?
- After all, Main St investors can now buy stock and get rich
- That's what the rich have been doing
- Why not me too?

- **Because**

- Ease of access
- Ease of use
- “Delightful” experience

Often results in platform customers being manipulated and exploited to engage in excessive trading that is costly and harmful to them, but lucrative to the platforms

- **How do the platforms do that?**
 - The gamification mentioned earlier
- **For example, what do you get if you trade frequently?**

What Do Frequently Trading Retail Traders Get

BETTER
MARKETS



- What do *the platforms get* if you trade frequently?

What Do The Platforms Get From Frequent Trading?

BETTER
MARKETS



In stark contrast, what do **you get** if you

- buy,
- hold,
- the stock goes up, and
- you get rich?

What Do Buy and Hold Retail Traders Get

BETTER
MARKETS



- What do the platforms get if you **do not** trade frequently?

What Do Platforms Get From Buy and Hold Traders



- Sure, that happens sometimes, but how bad can it be?

Traders phone up gambling helplines as game-like broker apps spread

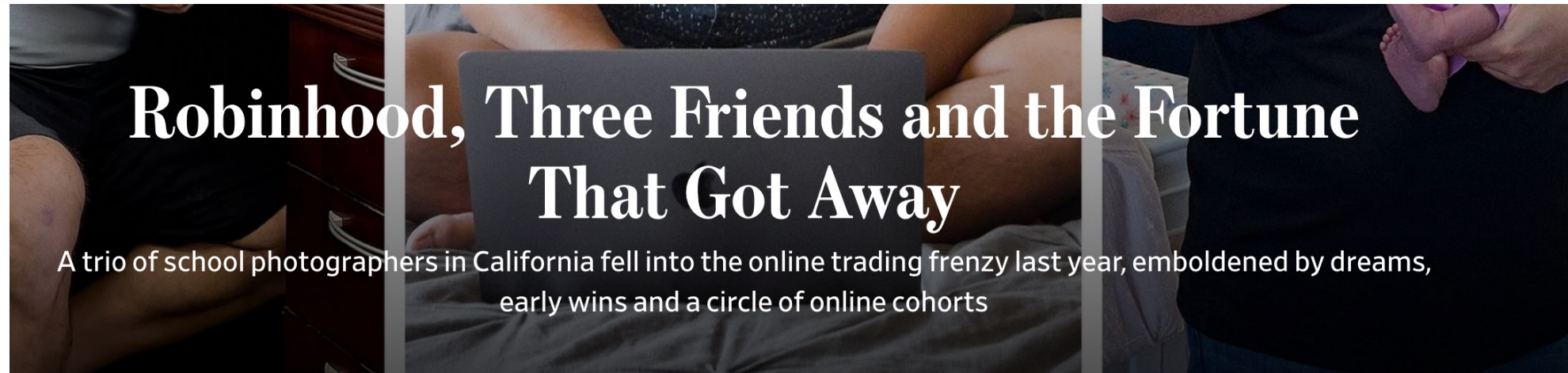
By Madison Darbyshire, Financial Times
OCTOBER 6, 2021

Helplines of gambling addiction recovery groups have been ringing with a new kind of caller: [day traders](#).

The rise of mobile brokerage applications outfitted with prompts, animations, rewards and digital flourishes have brought the feel of investing platforms closer to online sports betting and gambling.

“The user experience is converging and the line between gambling and investing, which was already pretty fluid, has almost been completely erased,” said Keith Whyte, executive director of the National Council on Problem Gambling, among the groups reporting more calls from stock traders to their help lines.

What does that really mean?



By Rachel Louise Ensign, Wall Street Journal
April 22, 2021

“Do u have more than 1k on RH,” Mr. Ela texted Mr. Garcia, asking about the balance of his Robinhood account. “If so I recommend using margin.”

“Yeah, and no idea wth that is,” Mr. Garcia responded, using an acronym for “what the hell.”

Mr. Ela's 30th birthday was the next day. He checked his account when he woke up and saw CCIV opened down 39% from the prior close—leaving him, on paper, about \$50,000 poorer. The plunge prompted Robinhood to ask him for money to pay down the margin loan, a demand known as a margin call. He had to sell stock to make the payment.

“I just wanna throw up,” he texted his friends.

Messrs. Norkin and Garcia also took losses on CCIV and other electric-vehicle stocks over the next two weeks. Facing their own margin calls, they realized they hadn't fully understood the debt they took on. The app prominently features a metric called “buying power” that includes margin. But they had a hard time finding any similar disclosure of what they might owe if their bets on stocks soured and triggered margin calls.

Robinhood Has Lured Young Traders, Sometimes With Devastating Results

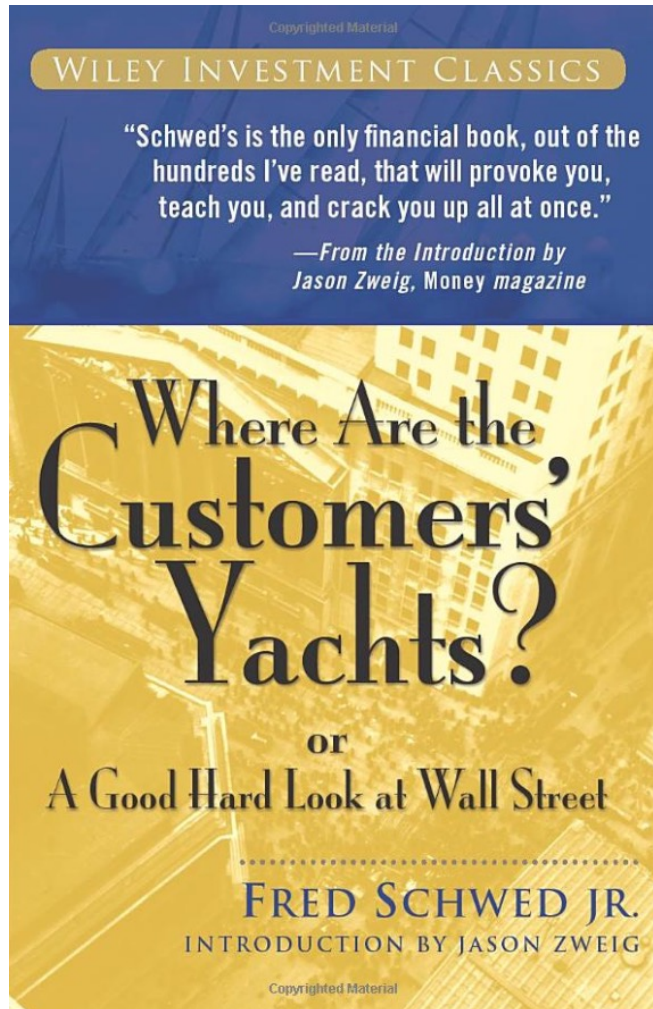
Its users buy and sell the riskiest financial products and do so more frequently than customers at other retail brokerage firms, but their inexperience can lead to staggering losses.

By Nathaniel Popper, New York Times
July 8, 2020

Robinhood Duo Ride Trading Frenzy to Billionaire Riches

By **Anders Melin**, Bloomberg
July 29, 2021

This is an old and well-known story



Where Are the Customers' Yachts?

Published 1940

The Platform Is Rigged Before Trading Begins

- Virtually everyone in the stock trading industry are sophisticated, highly educated professionals (i.e., math & computer science PhDs) with years of experience using the most advanced technology money can buy
- Virtually all the amateur retail traders (regardless of ethnicity, age, etc.) are new to trading, have few resources, have no technology other than a laptop, cell phone and maybe a chat room
- The playing field is not level
- **That's before the gamification** tricks and traps are embedded in the platforms

- The trading platform (the “playing field”) is not level
- Think of it like a local men’s baseball league playing the Houston Astros for money
- The local players may get a hit occasionally or even get on base
- But, who’s gonna win the game?

Local Spring 2021 Season Champs in a Local VA County



Houston Astros – World Champions (Again?)

BETTER
MARKETS



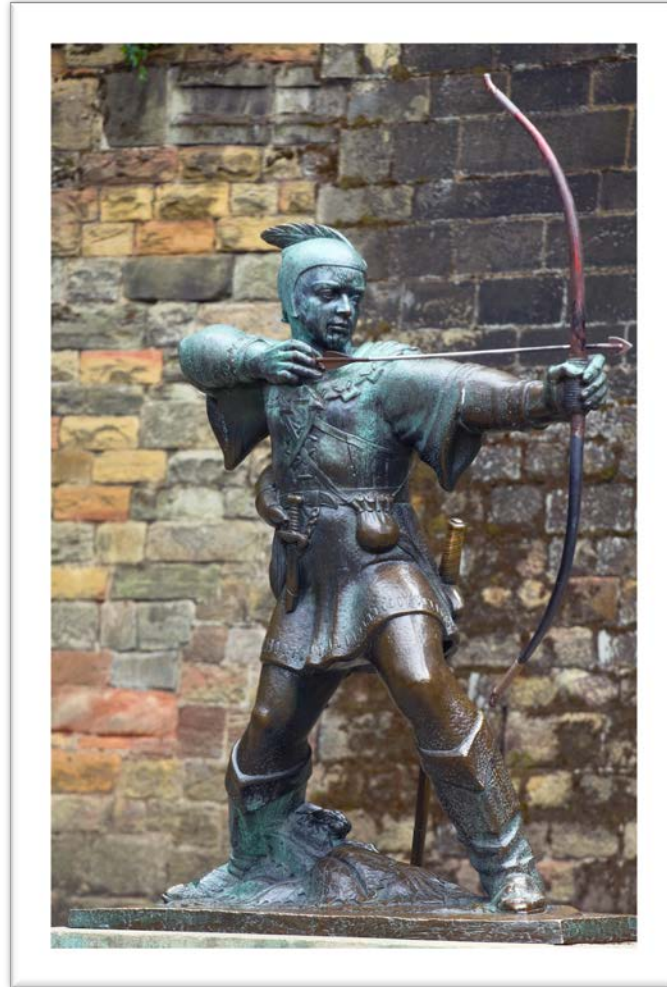
No one would seriously argue about who would win that contest

Yet that's similar to what retail traders are trying to do every day

- “Robinhood” taps into the childhood fantasy of good guys slaying bad guys (and, yes, back then they were all guys)
- Taking from the predatory rich and giving to the victimized poor
- Now, that’s justice
- So, call your platform Robinhood
 - Use a feather from Robinhood’s cap as a logo
- And your name and image convey
 - They are on my side
 - They aren’t like the others
 - They want me to get rich

Robinhood 

The Real Robinhood: Rob From the Rich, Give to the Poor



Today's Robinhood: Make Self Rich Preying On Non-Rich

BETTER
MARKETS



It Looks Like Robinhood is the Sheriff of Nottingham

BETTER
MARKETS



- The ultimate predatory act is to prey on people's hopes and dreams
- Manipulate them
- Hide and disguise what you're doing and the costs
- Get them to risk what little money they have
- When you have rigged the game against them
- To move money from their pockets to yours

- That is not “democratization”
- That is manipulation
- That is exploitation
- The result
 - Massive transfer of wealth from new, inexperienced traders to experienced sophisticated and already rich financial professionals
 - Who are now even richer
 - Often billionaires

- Better Markets supports the genuine “democratization of finance” via finance platforms
- More people should be able to participate in the stock market
- That could and should include
 - Lower costs; Ease of access; Ease of use; even a “Delightful” experience
- But it must be done by ***properly informed*** retail traders
- Who are told the actual costs and risks of their trading
- Who are not manipulated to engage in excessive trading of the most costly and highest risk products
- Done right, this “democratization” can result in broad-based wealth accumulation

1. The SEC recently issued a Request for Information (RFI) on gamification which it calls “Digital Engagement Practices” (DEPs)

- Better Markets and tons of others filed comment letters
 - Ours available on our website: www.bettermarkets.org
 - All of them are available on the SEC website: www.sec.gov
- The SEC will likely propose a rule to better regulate such practices

2. The SEC’s most recent regulatory agenda includes items to address

- PFOF, conflicts of interest, etc.

3. The SEC already has tools in its disposal to address the harmful if not illegal conduct posed by finance platforms:

- The laws already prohibit manipulation and fraud
- And require full and proper disclosure
 - That’s why the SEC fined Robinhood \$65 million last December and FINRA fined it \$70 million in April (its largest ever fine!) and the Massachusetts case is still pending

4. There is also the recently enacted Regulation Best Interest which the SEC can and should apply

- It applies whenever a broker makes “a recommendation of any securities transaction or investment strategy involving securities (including account recommendations) to a retail customer.”

- **As I said at the start, these events raised numerous issues**
 - I've only talked about a few of those
 - I invite you to go to our website for lots more detail
 - My written testimony for the March 17, 2021 before the House Financial Services Committee GameStop hearing is long and detailed
 - Lots of fact sheets, reports, summaries
 - www.bettermarkets.org



BETTER MARKETS

Better Banks

Better Businesses

Better Jobs

Better Economic Growth

Better Lives

Better Communities™