GameStop, Short Squeezes, and Predatory Trading

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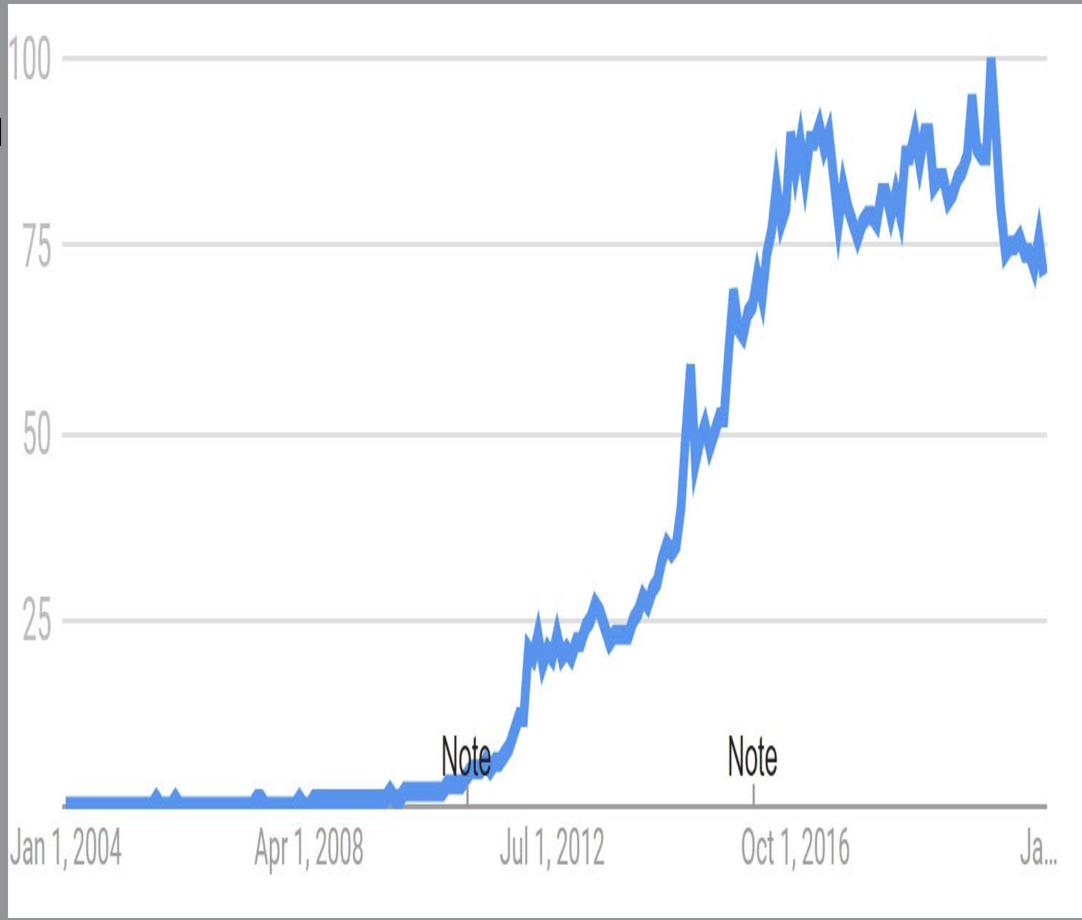
Short Squeezes in history

- Special form of predatory trading
  - … Pump and dump
- Examples:
  - 1901 Northern Pacific Railroads
  - 1923 Piggly Wiggly (supermarket)
  - 1980 Silver short squeeze by Hunt brothers
  - 2008 Volkswagen (attempted takeover by Porsche)
- Policy questions:
  - Transparency of short-positions
  - Limited to a fraction of the outstanding shares or free-float?
- "He who sells what isn't his’n, must buy it back or go to pris'n." (Daniel Drew)

Meme investing

- What’s new?
  Combination with social media to coordinate + "meme investing“
- Meme
  - an idea that is passed from one member of society
    to another, not in the genes but often by people copying it



- Rumors, Echo chambers

2 views

- Meme investing – introduce predatory trading
- David vs. Goliath
  - Leveling of playing field
- Plumbing of the trading has to be improved

GameStop

- payment for order flow
- best execution and best, best execution.
- gamification of high frequency trading.
- Why is brokers capital posted and
  not the customers' capital posted?

Poll Questions

- Who are the predators?
  a. Short-sellers
  b. Crowd of small investors
  c. Clearing house
  d. WallStreetBet
- Should we regulate predatory trading behavior and meme-investing?
  a. No, it just balances the power wrt. hedge funds
  b. No
  c. Yes, since it makes markets less efficient
- Will predatory traders win out at the end?
  a. Yes
  b. No
- Are speculative excesses around GameStop
  a. Just the tip of the iceberg?
  b. An occasional special phenomenon when market is irrational?

GameStop and Predatory Trading

Lasse Heje Pedersen

AQR Capital Management, Copenhagen Business School, CEPR

Outline of the Talk

- What is predatory trading?

- GameStop:
  - What happened: retail buying and short squeeze
  - Why did Robinhood restrict trading?
  - Why did many short sellers liquidate their positions?
  - Why did the price rise and why did it fall?

- What do we learn more broadly?

What is Predatory Trading?

What is Predatory Trading

From the abstract

Predatory trading:

- trading that induces and/or exploits the need of other investors to reduce their positions
- leads to price overshooting
- the market is illiquid when liquidity is most needed
- crisis can spill over across traders and across markets

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Predatory Trading

MARKUS K. BRUNNERMEIER and LASSE HEJE PEDERSEN*

ABSTRACT

This paper studies *predatory trading*, trading that induces and/or exploits the need of other investors to reduce their positions. We show that if one trader needs to sell, others also sell and subsequently buy back the asset. This leads to price overshooting and a reduced liquidation value for the distressed trader. Hence, the market is illiquid when liquidity is most needed. Further, a trader profits from triggering another trader's crisis, and the crisis can spill over across traders and across markets.

LARGE TRADERS FEAR A FORCED LIQUIDATION, especially if their need to liquidate is known by other traders. For example, hedge funds with (nearing) margin calls may need to liquidate, and this could be known to certain counterparties such as the bank financing the trade. Similarly, traders who use portfolio insurance, stop loss orders, or other risk management strategies can be known to liquidate in response to price drops; a short-seller may need to cover his position if the price increases significantly or if his share is recalled (i.e., a "short squeeze"); certain institutions have an incentive to liquidate bonds that are downgraded or in default; and, intermediaries who take on large derivative positions must hedge them by trading the underlying security. A forced liquidation is often very costly since it is associated with large price impact and low liquidity.

We provide a new framework for studying the strategic interaction among large traders who have market impact. Traders trade continuously and limit their trading intensity to minimize temporary price impact costs. Some of the traders may end up in financial difficulty, and the resulting need to liquidate is known by the other strategic traders.

Our analysis shows that if a distressed large investor is forced to unwind his position (i.e., when he needs liquidity the most), other strategic traders initially trade in the *same* direction. That is, to profit from price swings, other traders

*Brunnermeier is affiliated with Princeton University and CEPR; Pedersen is at New York University and NBER. We are grateful for helpful comments from Dilip Abreu, William Allen, Ed Altman, Yakov Amihud, Patrick Bolton, Menachem Brenner, Robert Engle, Stephen Figlewski, Gary Gorton, Rick Green, Joel Hasbrouck, Burt Malkiel, David Modest, Michael Rashes, José Scheinkman, Bill Silber, Ken Singleton, Jeremy Stein, Marti Subrahmanyam, Peter Sørensen, Nikola Tarashev, Jeff Wurgler, an anonymous referee, and seminar participants at NYU, McGill, Duke University, Carnegie Mellon University, Washington University, Ohio State University, University of Copenhagen, London School of Economics, University of Rochester, University of Chicago, UCLA, Bank of England, University of Amsterdam, Tilburg University, Wharton, Harvard University, and New York Federal Reserve Bank as well as conference participants at Stanford's SITE conference and the annual meeting of the European Finance Association. Brunnermeier acknowledges research support from the National Science Foundation.

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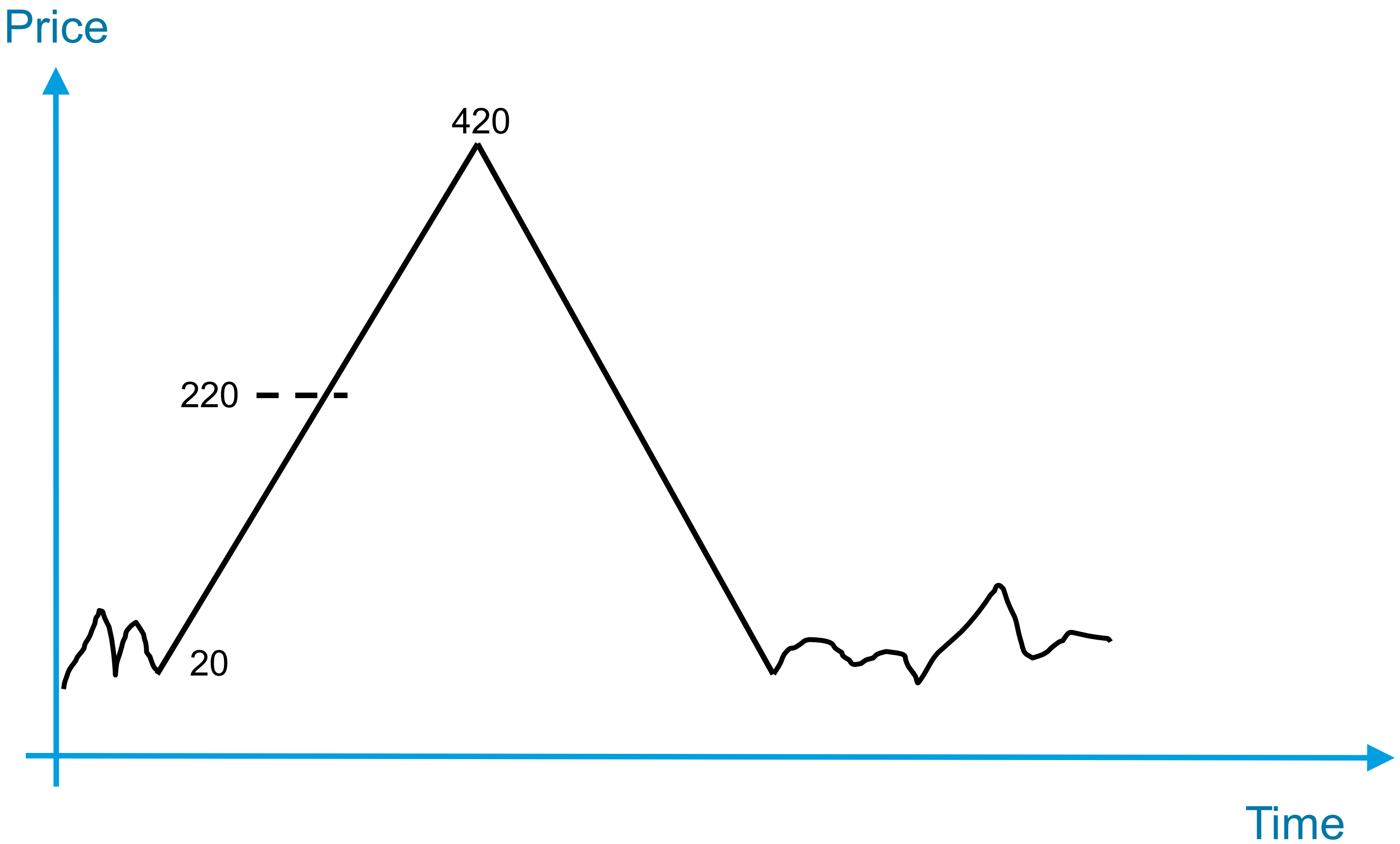
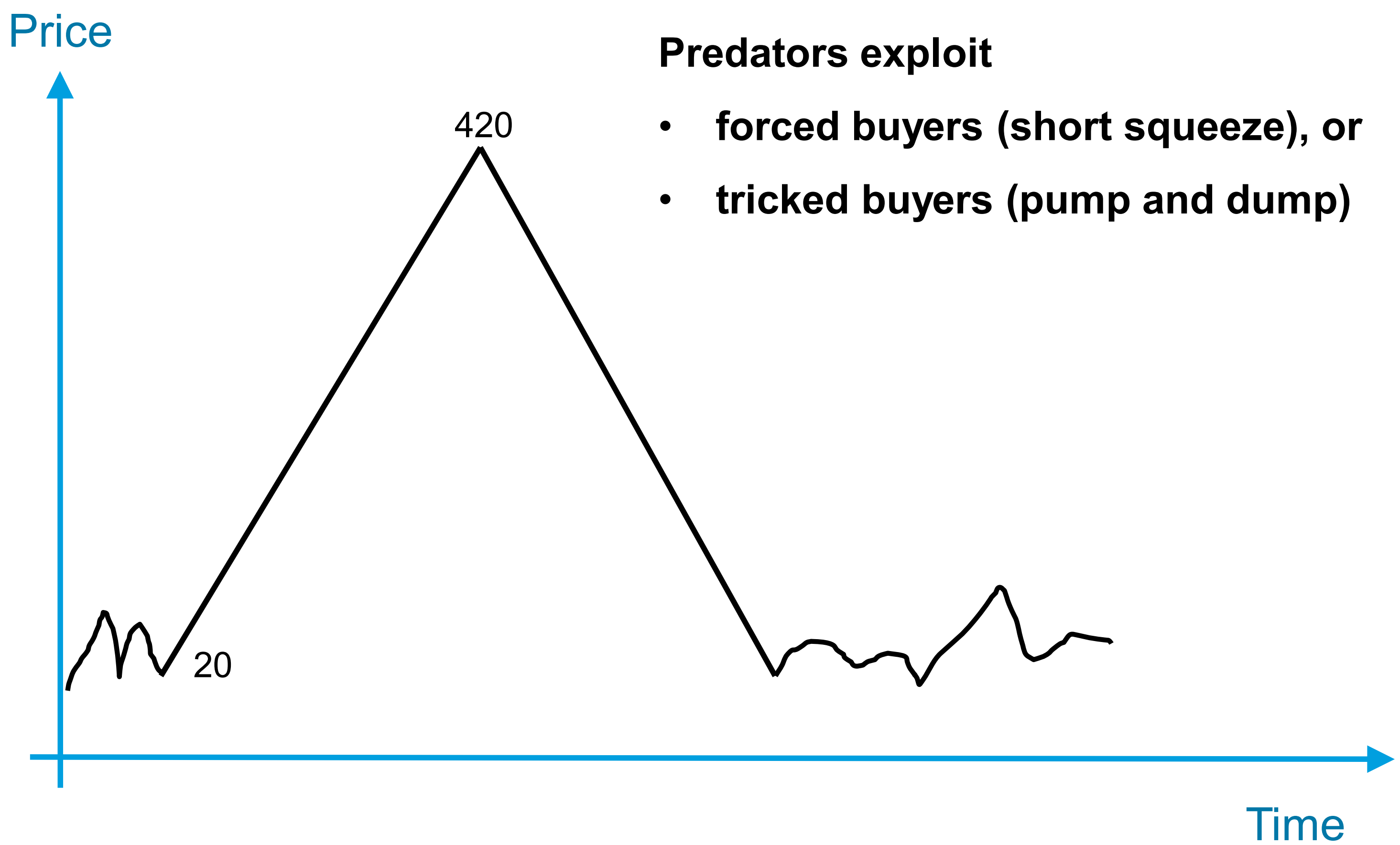
How Predatory Trading Does *Not* Work



How Predatory Trading Works

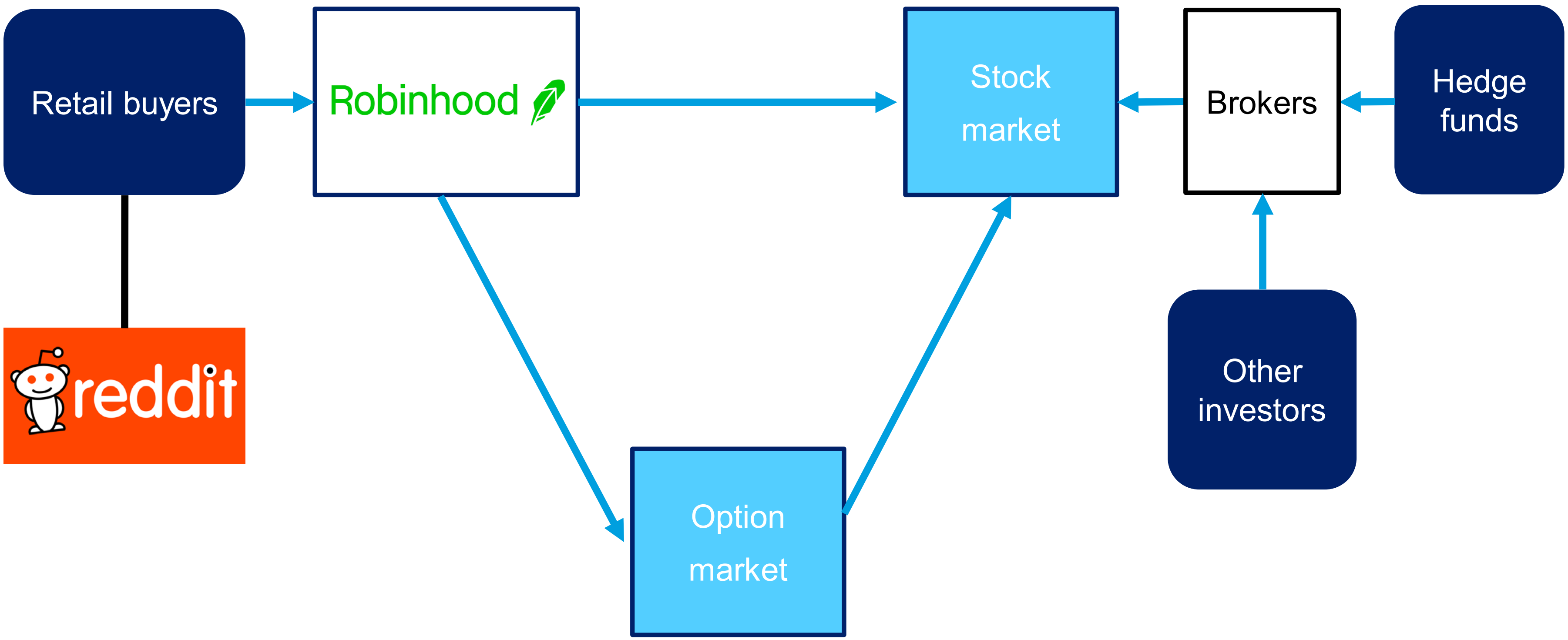


Predators exploit

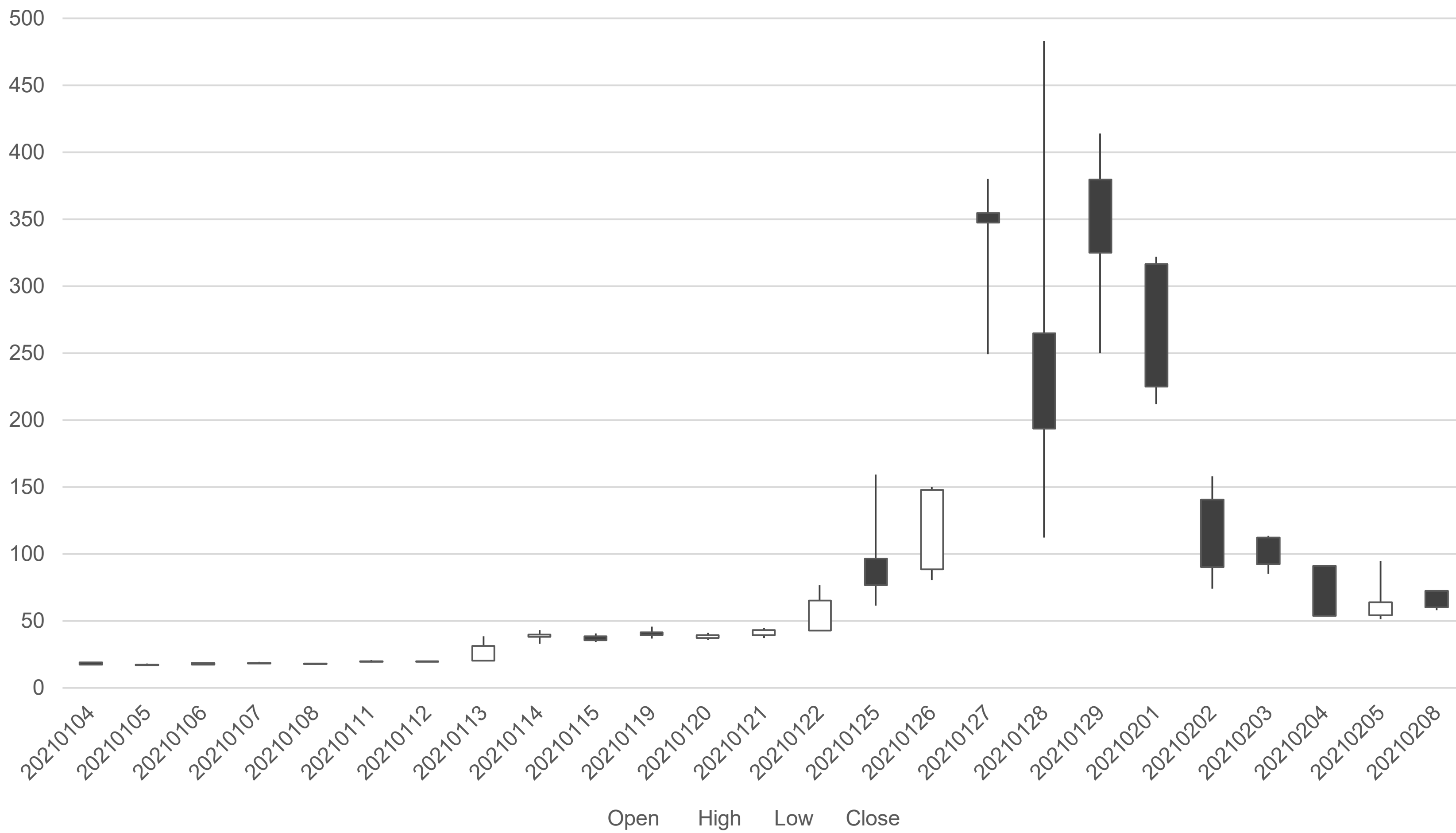
- **forced buyers (short squeeze), or**
- **tricked buyers (pump and dump)**

GameStop:
What Happened?

What Happened: Retail Buying and Short Squeeze

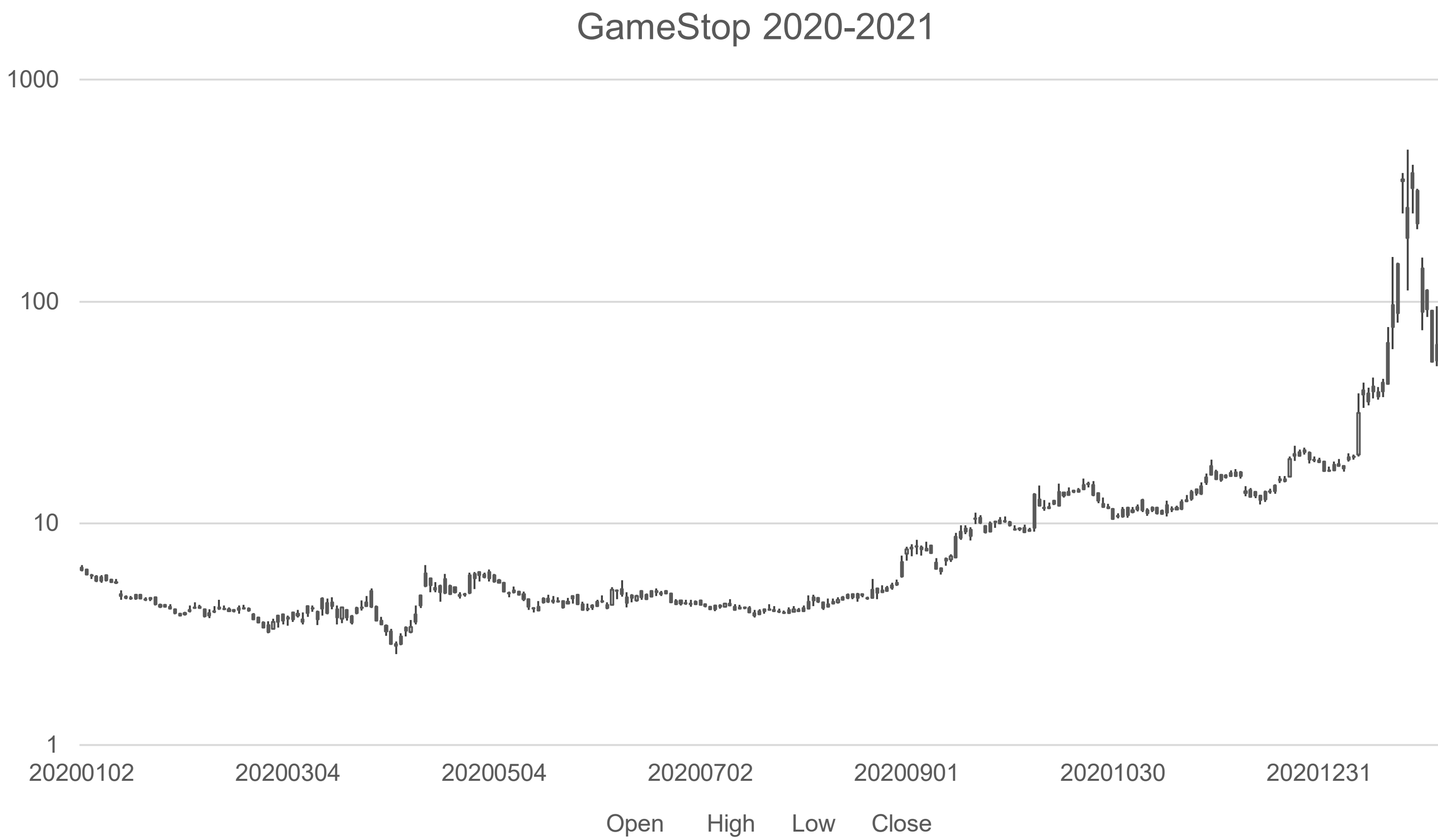


GameStop: Price 2021

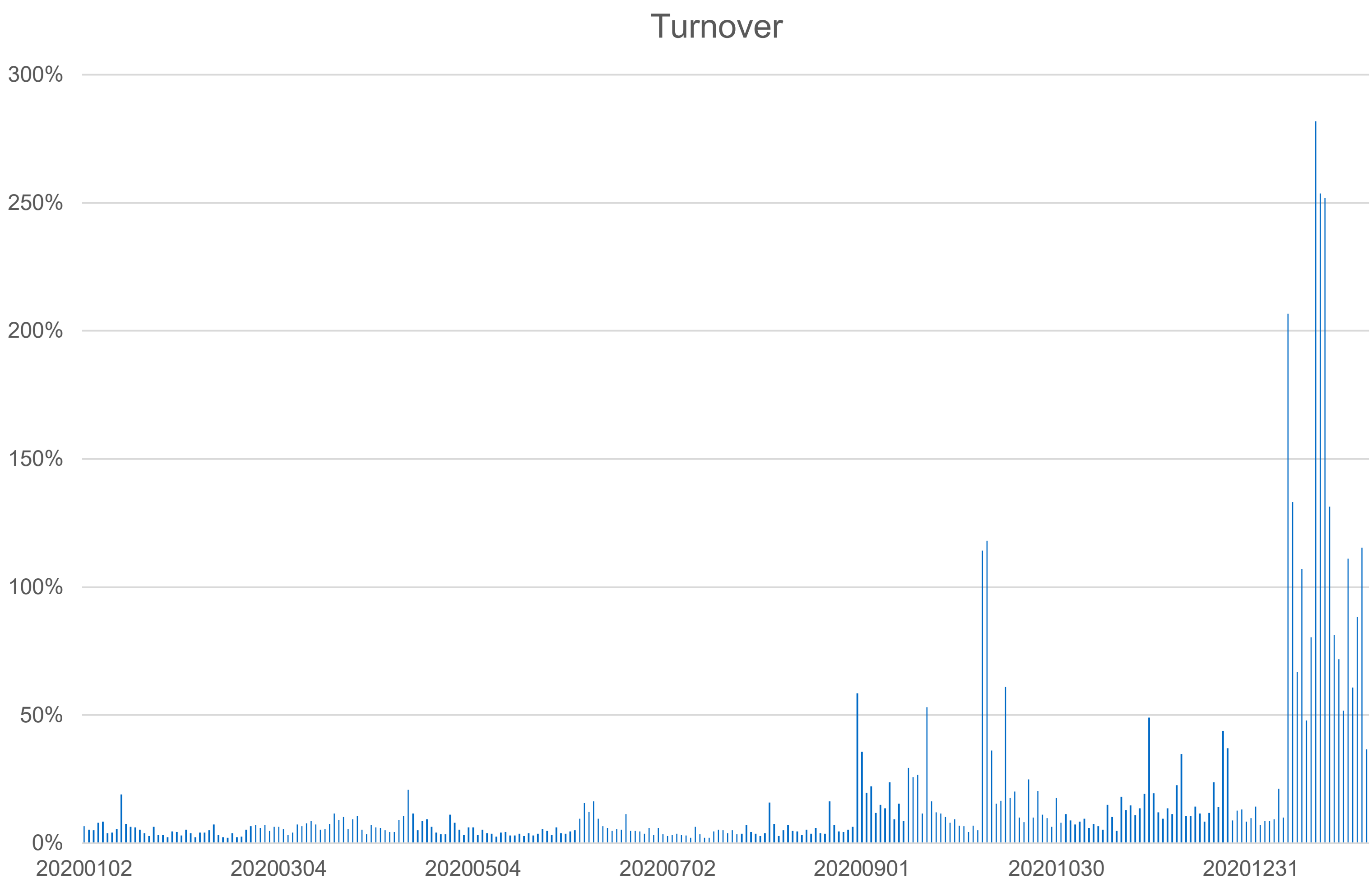


E.g., Thursday, January 28: High 483, Low 112.25

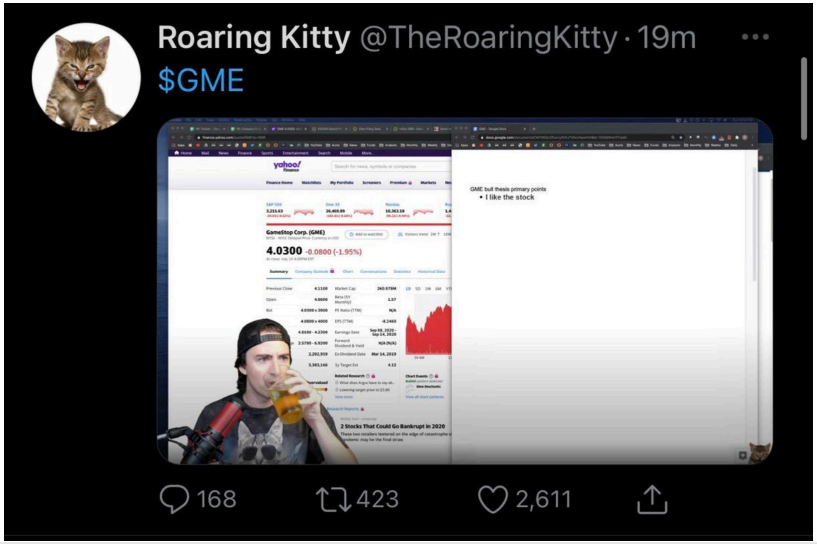
GameStop: Price 2020-2021, Log-Scale



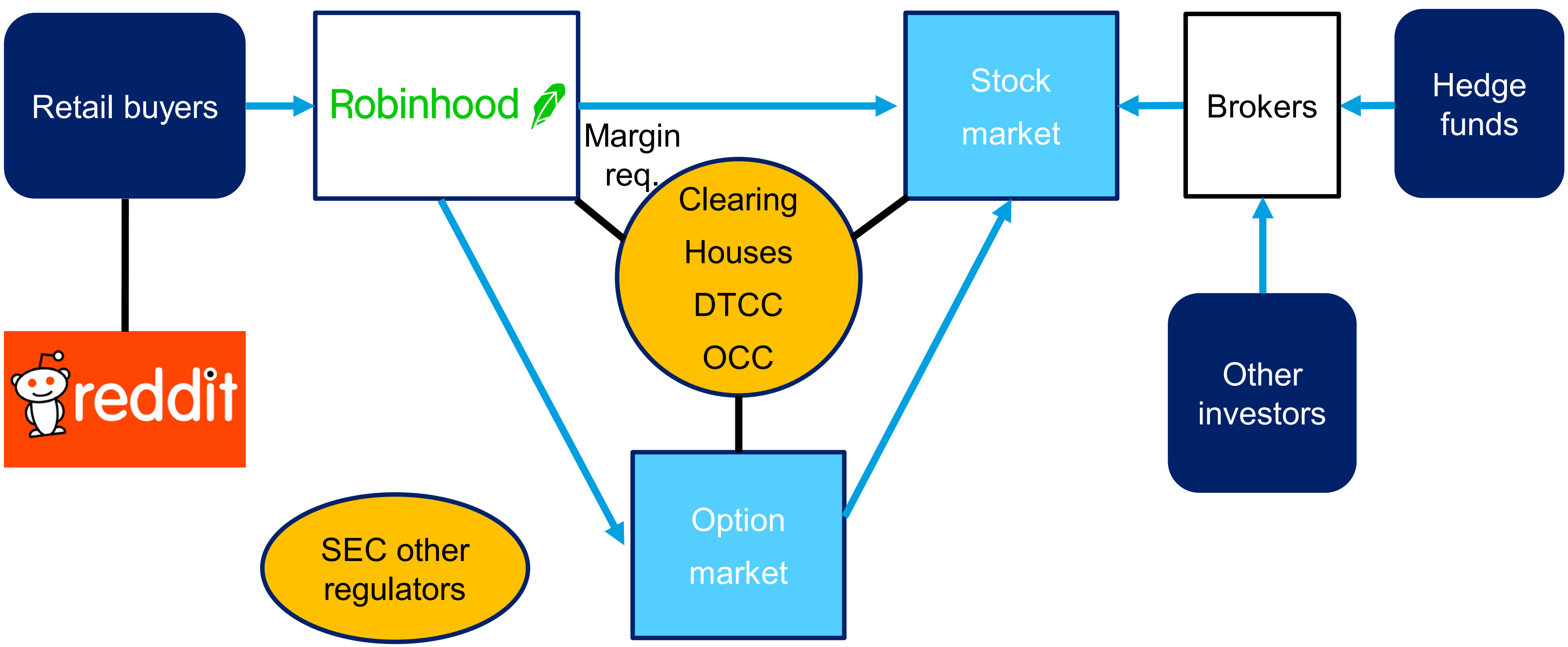
GameStop: Turnover 2020-2021



Why Retail Buying? Reddit, WallStreetBets



Why Did Robinhood Restrict Trading?



Market manipulation is illegal

- Trading to squeeze shorts illegal?
- Halting trading illegal?

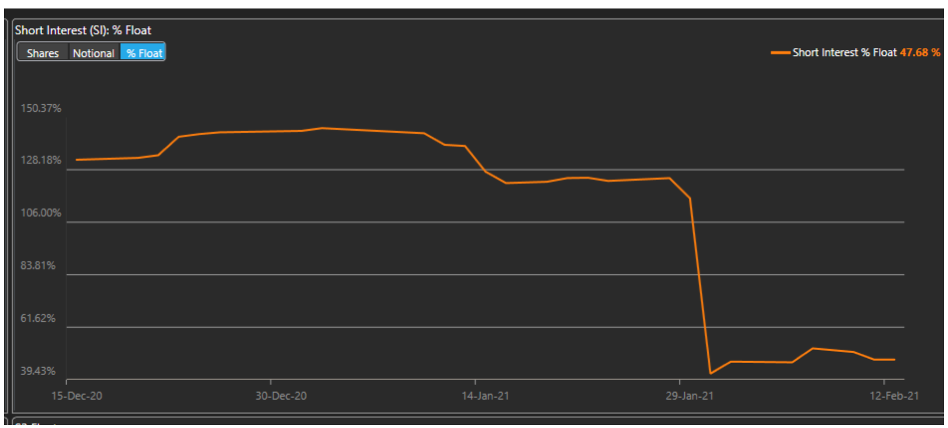
Why Did Shortsellers Liquidate their Positions?

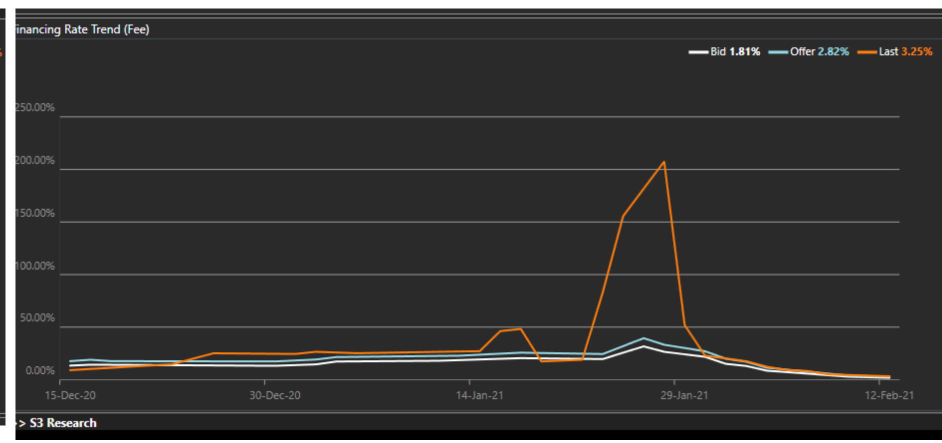
In some cases, a short squeeze happens for “technical” reasons

- Shares are recalled and short sellers are literally forced to close their positions (or fail to deliver)

In the case of GameStop

- Price of shorting was affected, especially for new short sellers
- Securities lending markets affected by high turnover, but largely remained “open”
- Anecdotally, short sellers eventually could not sustain further losses
    - their own short covering exacerbated the problem





Why did the Price Eventually Fall?

- Recent buyers know that keeping the stock in their portfolio at $400 is not a good idea
  - Sign of bubble and/or predatory trading

- New short sellers

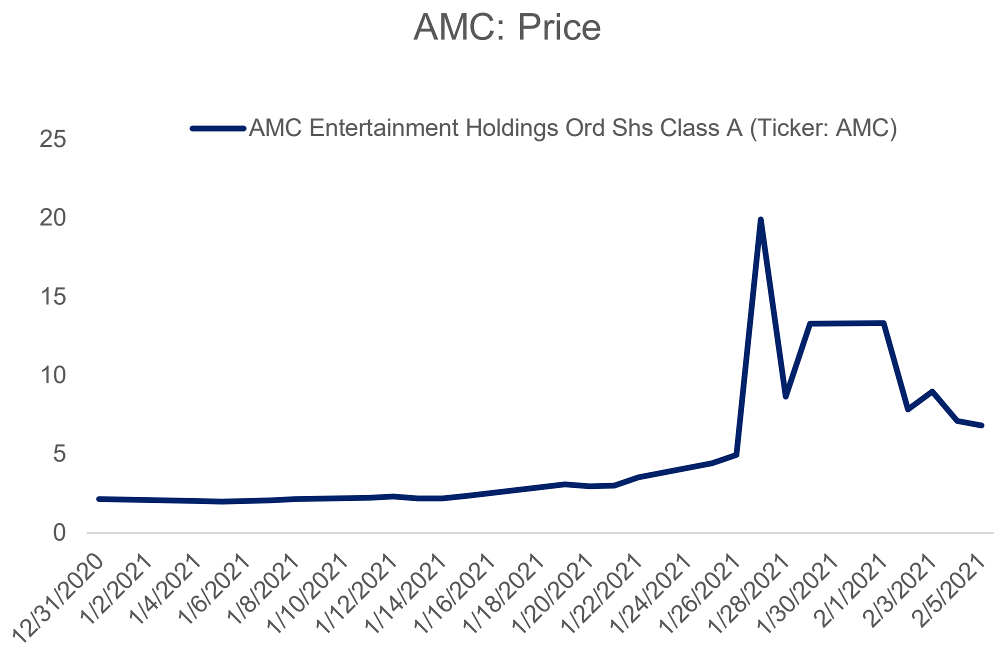
- Owners who believed in the company at $20 may want to sell at $400

- **Price drop was a matter of time – with or without short sellers**

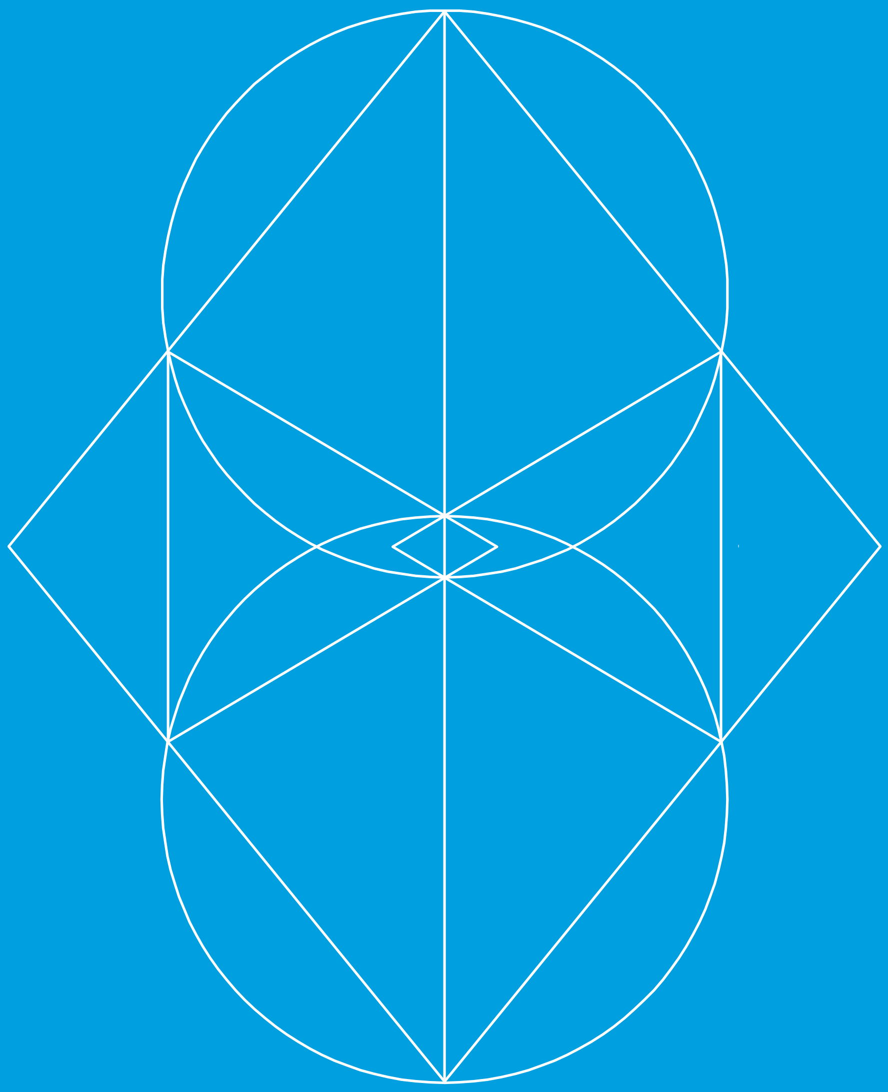
GameStop: Spreading to Other Markets

A number of other stocks also affected, e.g. AMC

Silver: not a big move



What Do We Learn?



What Do We Learn

Reinforcing old lessons:

- **Demand moves prices – for socks and stocks**
  - Market is not perfectly liquid, e.g. Shleifer (1986)
- **Demand from (retail) investors can be irrational**
  - Behavioral finance, excess volatility, Shiller, Thaler, etc.
  - Repeat news, Huberman and Regev (2001) Tetlock (2011)
  - Name confusion
- **Shorting is more difficult than buying**
  - Market efficiency requires both positive and negative news reflected in prices
  - "Securities Lending, Shorting, and Pricing," Duffie, Garleanu, and Pedersen (2002)
- **Predatory trading:**
  - Price-destabilizing speculation
  - Market manipulation

What is new:

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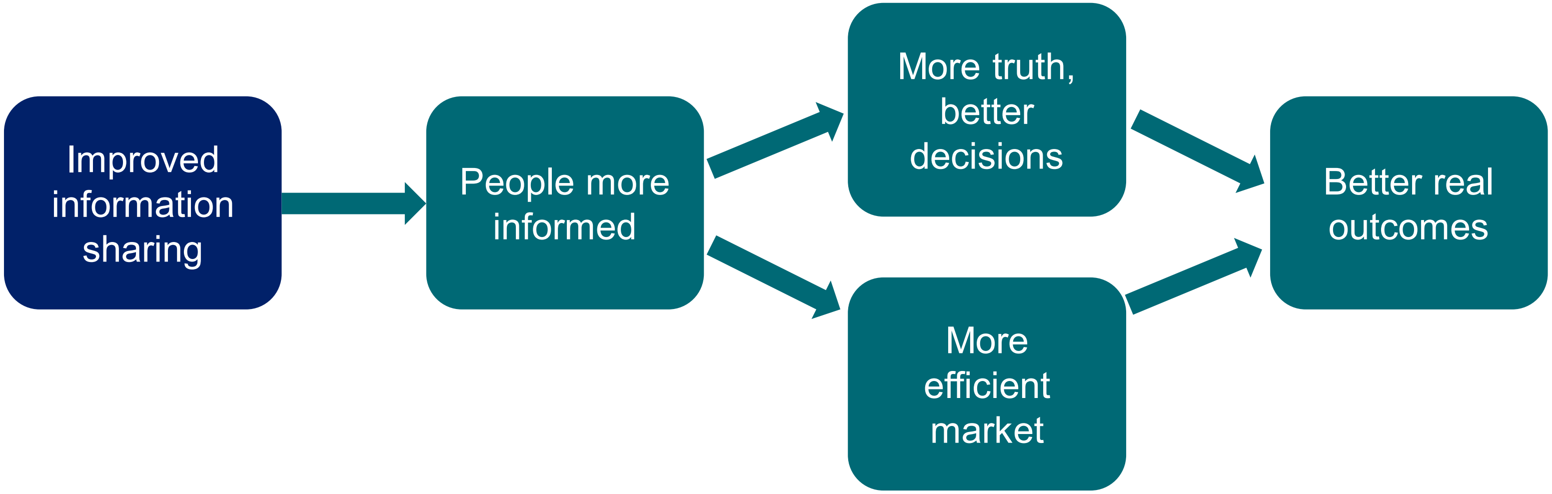
What is new:

- **Social media and innovations in IT**

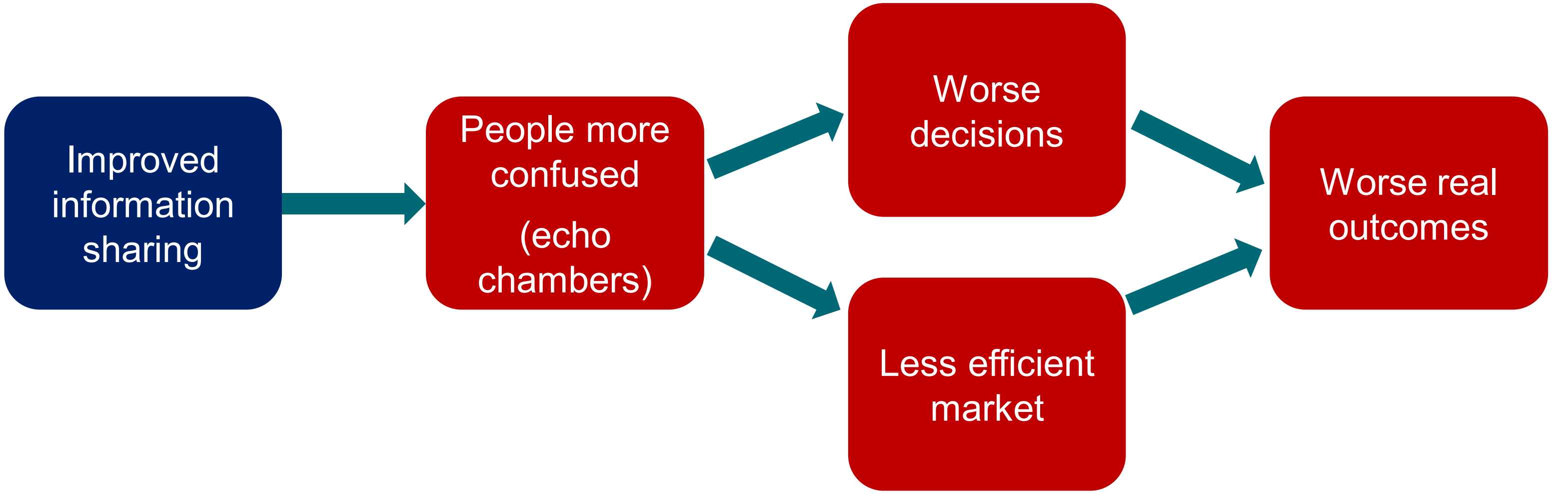
Implications of Improved Information Technology

The hope:



Implications of Improved Information Technology

The fear:



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What is new:

- **Social media and innovations in IT**
- **The "predators" are caught on tape**
- **Predators viewed as moral?**
- **Very large effect, at least in percent**
- **But how large more broadly?**

How Big is the Effect?

- **GameStop: Percent change**
  - 2315% price increase from \$20 to \$483 (high on Jan. 28)
  - (Shorting from \$483 to \$20 is only a 96% return.)

- **GameStop: Market capitalization**
  - Jan. 4, 2021: \$1.2B
  - High on Jan. 28: \$34B
  - 0.07% of US equities

- **Real effects**
  - No issuance by GME - zero-sum among investors

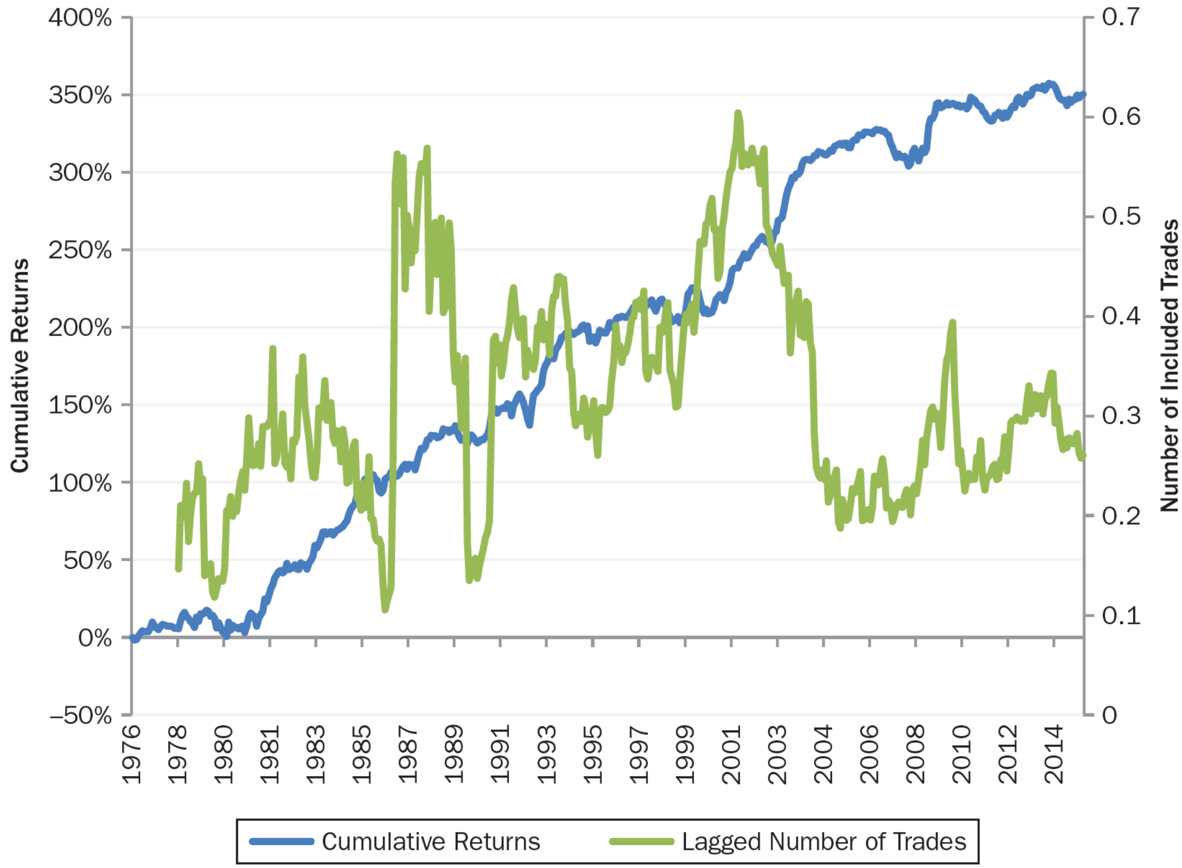
  - Issuance by AMC:
    - Increased #shares by 75%, raising about \$600m
    - At-the-market offering – selling directly into the market (i.e., to retail rather than institutional bookbuilding)

- **Tip of the iceberg or the entire iceberg?**

Deep Value

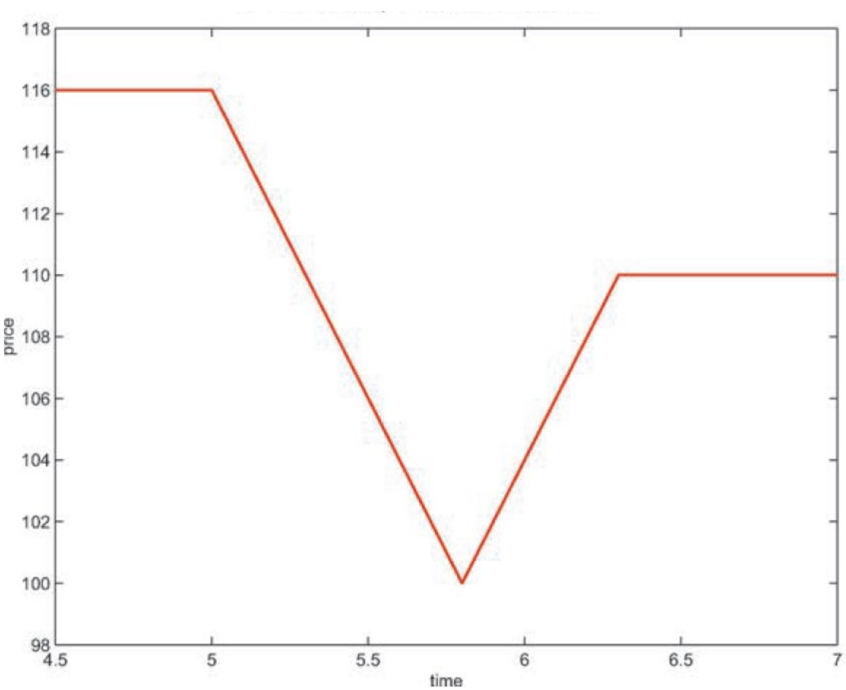
Deep Value, Asness, Liew, Pedersen, and Thapar, forthcoming

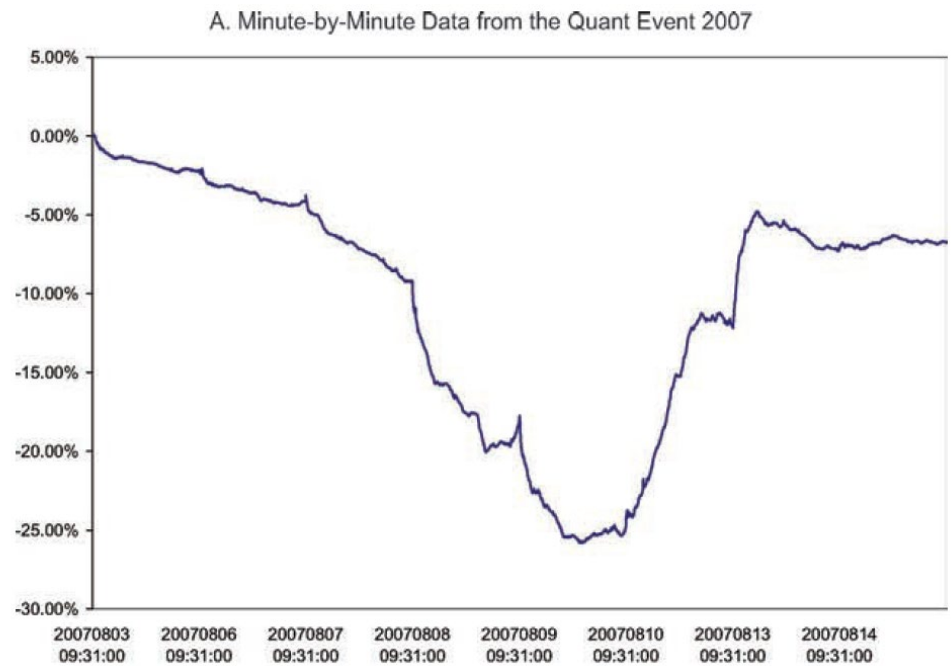
- Price dislocations not uncommon, related to fundamentals, but over-reaction, limited arbitrage incl. by firms themselves



When Every Runs for the Exit

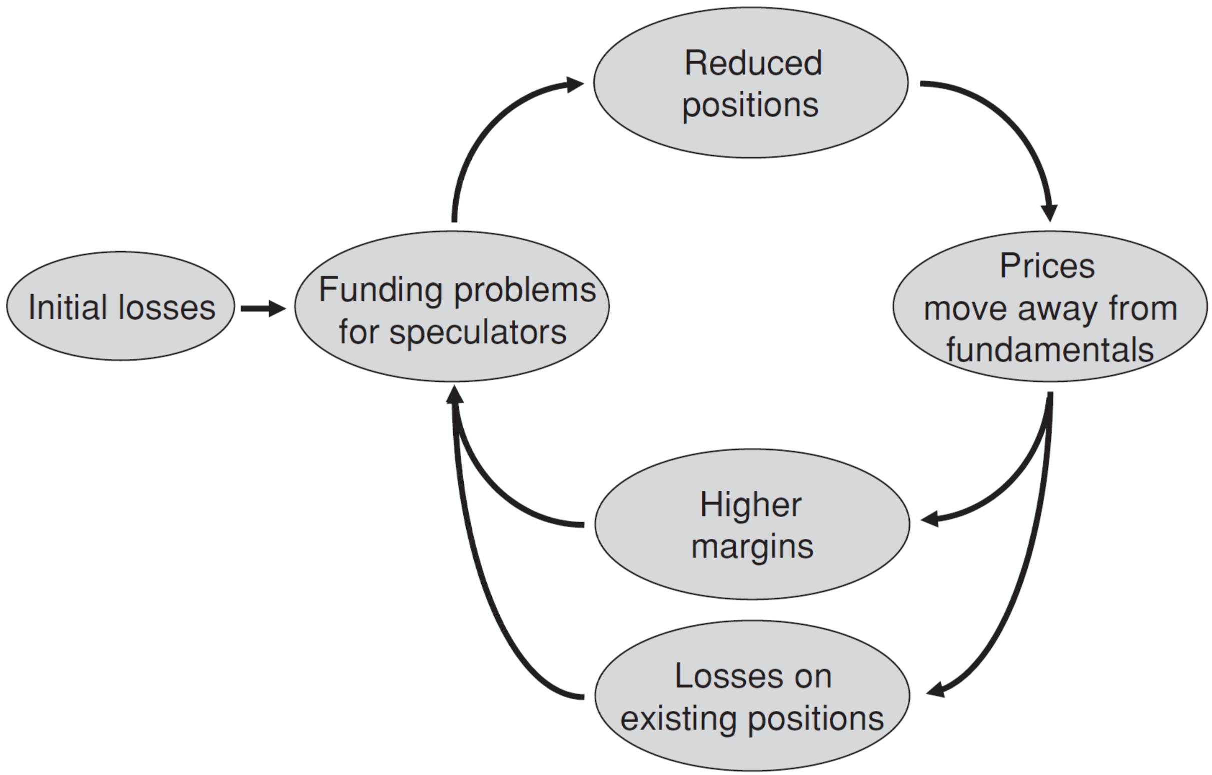
When Everyone Runs for the Exit, Lasse H. Pedersen (2009), The International Journal of Central Banking 5, 177- 199.





Close Cousin: Liquidity Spirals

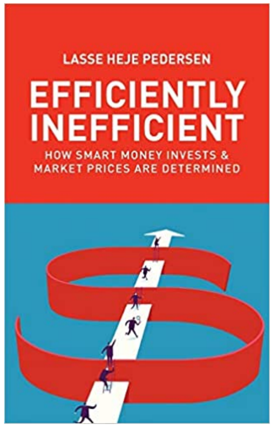
Market Liquidity and Funding Liquidity, Brunnermeier and Pedersen (2009), The Review of Financial Studies 22, 2201- 2238.



Pricing by Fundamentals or Memes?

Examples

- Bitcoin about $700B
- Tesla about $800B
- SPACs
- US equities: $50,000B



The market is **efficiently inefficient**

- Efficient enough that active investing is difficult,
- Inefficient enough that trying is just worthwhile for the marginal investor

- **On the Impossibility of Informationally Efficient Markets**, Grossman and Stiglitz (1980), American Economic Review, 70, 393–408.
- **Efficiently Inefficient Markets for Assets and Asset Management**, Garleanu and Pedersen (2018), The Journal of Finance, 73 (4), 1663-1712.