

# Fedyk (2022) - “This Time is Different: Investing Preferences in the Age of Robinhood”

Discussion by Ahmed Guecioueur (INSEAD)

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# Brief summary

## Focus on Robinhood investors' behavior

- ▶ Recent spike in retail trading activity, as this platform emerged
- ▶ 2 recent articles in the JF (Welch 2022; Barber et al. 2022)

## Fedyk (2022) overturns some received wisdom

- ▶ No preference for lottery-like, value, or small caps
- ▶ Attention-induced trading
- ▶ Novel buy-the-dip effect
- ▶ Correlation with r/WallStreetBets activity
- ▶  $\Rightarrow$  "This time is different"

# Robintrack data






## Strengths

- ▶ Intraday activity data
- ▶ Specifically, number of Robinhood users currently holding each ticker (stock/ETF)
  - ▶ Extensive margin (existence of a position)

## Limitations

- ▶ No intensive margin (size & sign of positions)
- ▶ No correlation or co-ownership information
  - ▶ Limits inference on portfolio choice
- ▶ Ends in Aug-2020

# r/WallStreetBets dictionary

Bullish	Bearish
Buy	Sell
Call	Put
Bull	Bear
Long	Short
YOLO	Get out
All in	Crash
To the moon	Down
Beat earnings	Miss earnings
Undervalued	Overvalued
  	 



- ▶ A key contribution by Fedyk (2022)
- ▶ Manually defined
- ▶ Used to create daily sentiment measure for each stock

# Comments

1. Buy-the-dip vs. chase-the-trend
2. Buy-the-dip “preference”: role of beliefs
3. Buy-the-dip “preference”: role of constraints
4. External validation of sentiment dictionary
5. More on pandemic and stimulus shocks
6. Expand the `r/WallStreetBets` part of the paper

# #1 Buy-the-dip vs. chase-the-trend

*“The essence of the buy-the-dip effect is the following: Robinhood investors prefer to invest in **large cap stocks** following extreme **negative returns**, and prefer to invest in **small cap stocks** following relatively more extreme **positive returns**.”*

## Two separate effects? Multiple mechanisms?

- ▶ Buy-the-dip for large caps
  - ▶ Suggested mechanism in paper is **brand affinity**, but not tested
  - ▶ To convince, **measure/proxy** brand visibility/familiarity
  - ▶ e.g. is the effect concentrated in the consumer retail industry?
- ▶ Chase-the-trend for small caps
  - ▶ Currently **no discussion** in the paper of the small-cap effect
  - ▶ Suggest **extrapolative beliefs** (Hong and Stein 1999; Greenwood and Shleifer 2014; Barberis et al. 2015)

## #2 & #3 Buy-the-dip “preference”?

*“The essence of the buy-the-dip effect is the following: Robinhood investors **prefer to** invest in large cap stocks following extreme negative returns, and **prefer to** invest in small cap stocks following relatively more extreme positive returns.”*

### Investor’s objective function

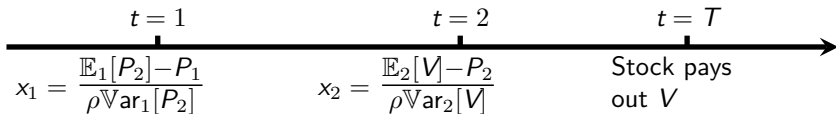
- ▶ Preferences
- ▶ Beliefs
- ▶ Constraints

### Any of the three could be driving observed actions

- ▶ Suggest a wider investigation of potential mechanisms
- ▶ Focus of my next two comments

## #2 Buy-the-dip “preference”: role of beliefs

- ▶ An investor maximizes CARA utility of final wealth at  $t = T$
- ▶ Picks between a risky stock, and a bond with unit gross return
- ▶ Stock price  $P_t$  s.t. shocks, investor holds portfolio share  $x_t$  of stock
- ▶ Myopic, no hedging component (Brown and Jennings 1989)



- ▶ Assume  $\text{Var}_1[P_2] = \text{Var}_2[V]$ , agent believes in persistent volatility
- ▶ Buy-the-dip for large caps if investor doesn't learn from the price drop:  $P_2 < P_1$  &  $\mathbb{E}_1[P_2] = \mathbb{E}_2[V] \Rightarrow x_2 > x_1$
- ▶ Buy-the-dip & chase-the-trend if investor learns (over-extrapolates?) from price rise:  $\mathbb{E}_2[V] - \mathbb{E}_1[P_2] > P_2 - P_1 \Rightarrow x_2 > x_1$
- ▶ Proxy for  $\mathbb{E}_t$  using the WSB sentiment scores?

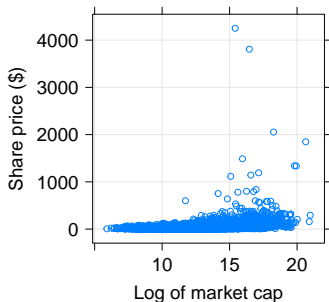


### #3 Buy-the-dip “preference”: role of constraints

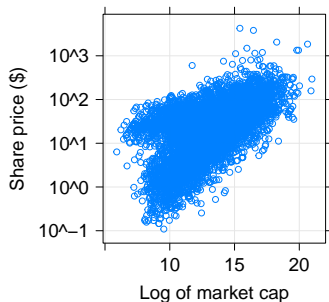
What role do Robinhood investors’ financial constraints play?

- ▶ “Average size of a Robinhood investor is very small, at just \$3,500.”
- ▶ Rank-correlation of market cap with stock price is 0.53

Robintrack tickers, Dec-2019



Same, with log-scaled y-axis



- ▶ Does the buy-the-dip effect for **large caps** weaken after Robinhood introduced fractional share ownership in Dec-2019? (Myhre and Henriksen 2020)

## #4 External validation of sentiment dictionary

### Current procedure

- ▶ Highly transparent in the paper
- ▶ Sensible
- ▶ Manual

### Suggestion

- ▶ Check correlation with sentiment score from an external vendor (on a sample)
- ▶ Or pay MTurkers or RAs to manually classify sentiment, and check it correlates with your own classification
  - ▶ See Abis (2020)

### Bonus suggestion for citations

- ▶ Post a panel of stock-date sentiment & mentions online later

## #5 More on pandemic and stimulus shocks

- ▶ Large increase in investor counts during pandemic lockdowns
- ▶ Pandemic lockdowns gave everyone more time to trade
- ▶ Current findings are about Robinhood investors in general

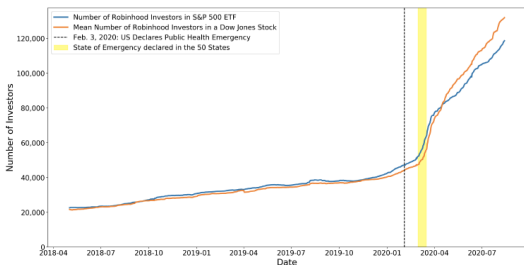
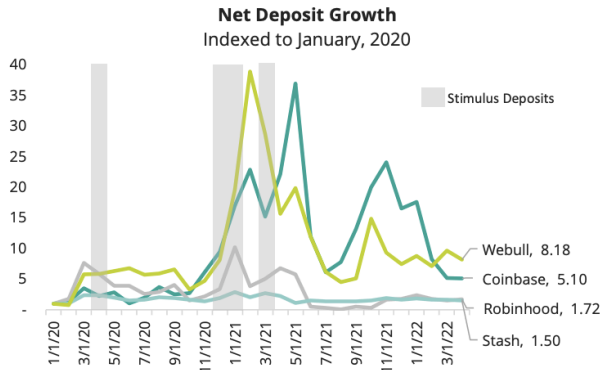


Figure 8: Pandemic Shock to Robinhood Ownership

- ▶ Stimulus payments were made only to those with income  $<$  \$60,000
- ▶  $\Rightarrow$  stimulus shocks should be particularly informative about low-income investor behavior

## #5 More on pandemic and stimulus shocks

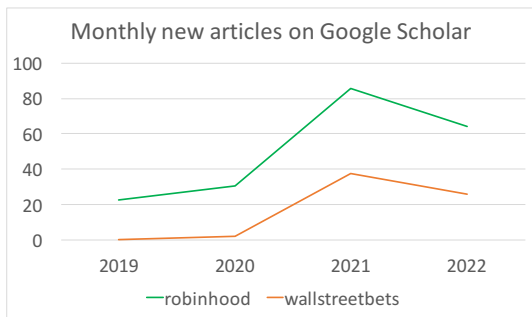


- ▶ Alternative data (above) suggests the effect would be concentrated around the 2nd & 3rd stimulus payments<sup>1</sup>
- ▶ Since Robintrack sample ends in Aug-2020, can you **use your r/WSB data to draw inferences** here? Change in pattern of r/WSB activity?

1. Earnest Research case study: [https://6513813.fs1.hubspotusercontent-na1.net/hubfs/6513813/Case%20Study\\_Analyzing%20BrookDealer%20Performance%20using%20Shopper%20Behavior%20Data%20\(1\).pdf](https://6513813.fs1.hubspotusercontent-na1.net/hubfs/6513813/Case%20Study_Analyzing%20BrookDealer%20Performance%20using%20Shopper%20Behavior%20Data%20(1).pdf)

## #6 Expand the r/WallStreetBets part of the paper

- ▶ Claim of “peer effects” in the Abstract is too strong
  - ▶ Need causal identification to deal with reflection problem, &c...
- ▶ Valuable dataset, currently only 4.5 pages in the paper
- ▶ Relevant work only scratches the surface: Wang et al. (2022), Anand and Pathak (2022), and Cahill, Liu, and Smales (2022)



- ▶ As mentioned, can help deal with limitations of Robintrack data

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Good luck!

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