

# How do hedge funds affect stocks that they trade? Evidence from hedge fund closures

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# Properties of Hedge Funds

Hedge funds are:

1. *Motivated to make profits*
  - Management fee: 2% of AUM
  - Incentive fee: 20% of profits

# Properties of Hedge Funds

Hedge funds are:

1. *Motivated to make profits*
2. *Able to limit investor withdrawals/redemptions*
  - 74% of NAV may be subjected to a suspension\*
  - 47% of NAV may be subjected to material restrictions (“gates”)\*

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\*For Qualifying Hedge Funds (Form PF, 2020q2)

# Properties of Hedge Funds

Hedge funds are:

1. *Motivated to make profits*
2. *Able to limit investor withdrawals/redemptions*
3. *Active traders*
  - Account for 85% of total shorting volume\*
  - Use leverage

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\*"Hedge fund trend monitor" (Goldman Sachs, 2009)

# Properties of Hedge Funds

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1. *Motivated to make profits*
2. *Able to limit investor withdrawals/redemptions*
3. *Active traders*

*"Hedge funds are among the most sophisticated investors – probably closer to the ideal of "rational arbitrageurs" than any other class of investors."*

Brunnermeier and Nagel (2004)

# Properties of Hedge Funds

Hedge funds are:

1. *Motivated to make profits*
2. *Able to limit investor withdrawals/redemptions*
3. *Active traders*
4. A growing industry:
  - \$0.2 trillion in 2000Q1 → \$4.3 trillion in 2021Q2 (BarclayHedge)

## How do hedge funds affect stocks that they trade?

Collect information → improve stock price efficiency

**Importance:** stock price efficiency → real efficiency

Supporting references:

T: Bond et al (2010), Edmans et al (2015)

E: Edmans et al (2012), Dessaint et al (2020), Bennett et al. (2020)

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Collect information → reduce liquidity

**Importance:** worse liquidity → higher trading costs

Supporting references:

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**Caveat:** Endogeneity!

# Current paper

I use hedge fund closures to overcome endogeneity concerns

Following a closure of a hedge fund:

1. Liquidity improves
  - Price impact decreases
2. Stock price efficiency declines
  - Negative information gets slower in the stock prices

# Contribution

1. Effect of market participants on liquidity:  
Aragon and Strahan (2012), Kelly and Ljungqvist (2012), Peress and Schmidt (2020)

**The presence of hedge funds reduces stock liquidity**

# Contribution

1. Effect of market participants on liquidity:  
Aragon and Strahan (2012), Kelly and Ljungqvist (2012), Peress and Schmidt (2020)

**The presence of hedge funds reduces stock liquidity**

2. Effect of market participants on stock price informativeness:  
Bennett et al. (2020), Chen et al. (2020)

**The presence of hedge funds improves stock price efficiency**

# Roadmap

1. Data
2. Results

## Identification of closed hedge funds

Sources of hedge fund closures:

- Termination of registration with SEC because of closure (ADV-W)

**Item 2 Status of Advisory Business**

A. Have you ceased conducting advisory business in the jurisdictions from which you are withdrawing?  
If yes, provide the date you ceased conducting advisory business in the jurisdictions checked in the status section, above:

*If you ceased conducting advisory business in these jurisdictions on different dates, you must submit a different Form ADV-W for each different date on which you ceased conducting advisory business.*

B. Reasons for withdrawal:

No longer conducting advisory activities

Other:

Yes  No

Date  
MM/DD/YYYY

Also: *"No longer in business or closing business"*  
and Other mentioning closure (e.g., *"Closed funds."*)

## Identification of closed hedge funds

Sources of hedge fund closures:

- a. Termination of registration with SEC because of closure (ADV-W)
- b. Media articles

*"William Collins is shutting his \$300 million hedge-fund firm, Brencourt Advisors, and will begin returning clients' money next month ..."*

(The Wall Street Journal, 27Sep2012)

## Identification of closed hedge funds

Sources of hedge fund closures:

- a. Termination of registration with SEC because of closure (ADV-W)
- b. Media articles
- c. 13F filings notes

*“As of October 18, 2013, Karsch Capital Management, LP has stopped all trading and no longer exercises investment discretion over 13(f) securities. This will be the last Form 13F submitted by Karsch Capital Management, LP.”*

(13F for 30Sep2013)



## Identification of closed hedge funds

Sources of hedge fund closures:

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- b. Media articles
- c. 13F filings notes
- d. Key employees switch jobs + stop reporting 13F filings

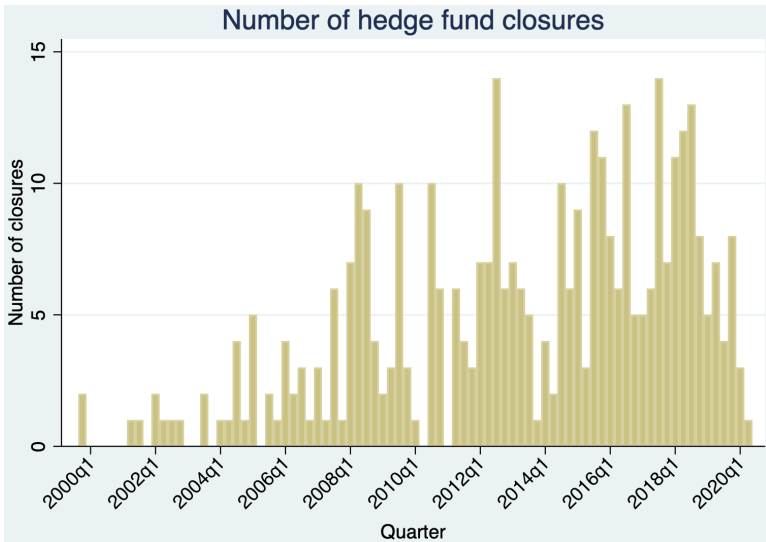
## Identification of closed hedge funds

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→ 351 closed hedge funds

# Distribution of hedge fund closures in time



## Summary statistics of closed hedge funds

Variable	Mean	St.Dev.	p10	p50	p90
Age (quarters)	25.2	17.5	8	20	50
Size (\$ mln)	535	1 115	46	180	1 178
# stocks	45.7	124	3	18	75
% equity	58.2	27.5	16	63	91

Focus on stocks with long-term interest and large holdings:  
→ 203 hedge funds with 988 treated stock-quarters

# Roadmap

1. Data

**2. Results**

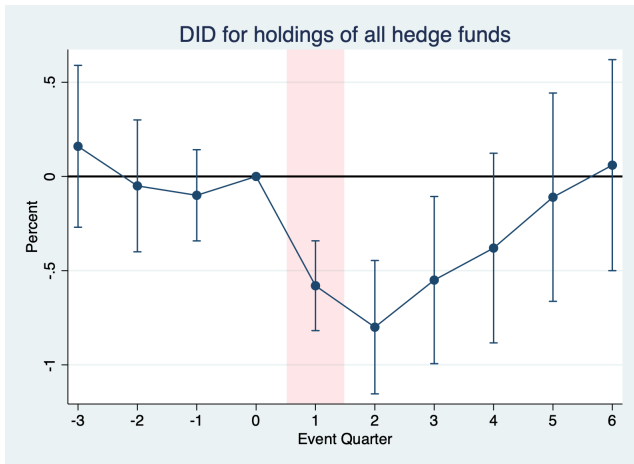
**2.1. Evidence of the treatment**

2.2. Behavior of other institutional investors

2.3. Effect on liquidity

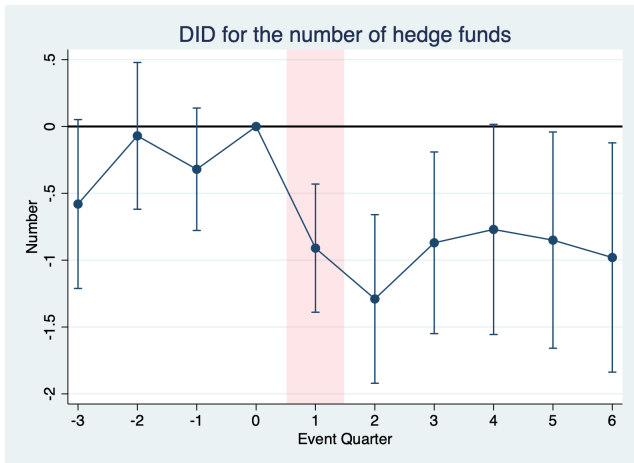
2.4. Effect on stock price informativeness

## Holdings of all hedge funds



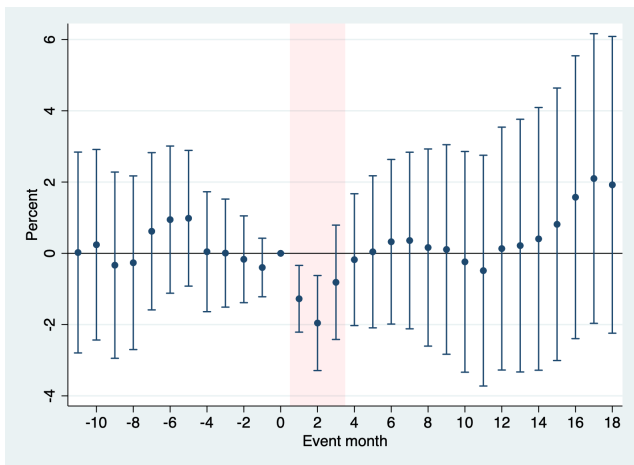
1. Significant drop on 0.6% in quarter 1
2. Economic significance: -5.1% of overall hedge fund holdings
3. Hedge fund holdings fully recover by quarter 5

# Number of Hedge Funds



1. Significant drop on almost 1 hedge fund in quarter 1
2. The number of hedge funds doesn't recover by quarter 5

# Stock returns



1. Significant drop on 2% by the second month
2. Quick recovery



# Roadmap

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## 2. Results

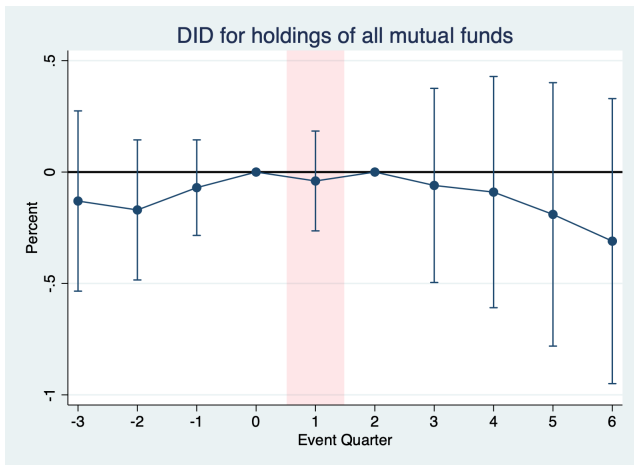
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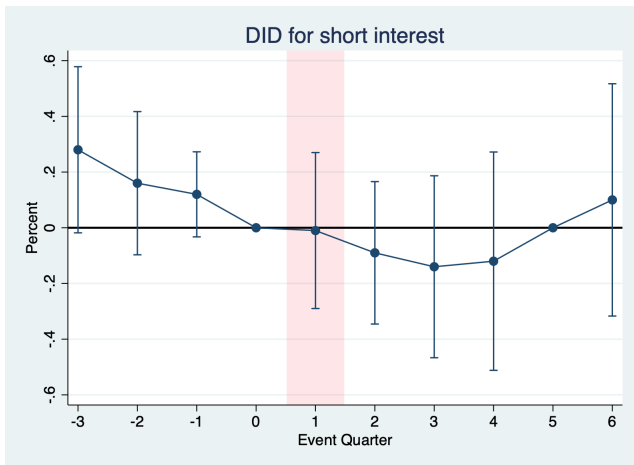
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## Holdings of mutual funds



1. No significant changes after hedge fund closures
2. No dependence on the size of liquidated position [not shown]

## Short interest



1. No significant changes after hedge fund closures
2. No dependence on the size of liquidated position [not shown]

# Roadmap

1. Data
- 2. Results**
  - 2.1. Evidence of the treatment
  - 2.2. Behavior of other institutional investors
  - 2.3. Effect on liquidity**
  - 2.4. Effect on stock price informativeness

## (log) Price impact

Quarter	<i>Const</i>	<i>HF<sub>hold</sub></i>
-3	-1.19 (-0.78)	0.08 (0.07)
-2	0.20 (0.16)	0.06 (0.07)
-1	0.86 (0.86)	-0.29 (-0.41)
1	-2.59** (-2.31)	-1.20 (-1.49)
2	-1.23 (-0.76)	-2.42** (-2.31)
3	-0.66 (-0.36)	-1.36 (-1.22)

t-stat in parentheses

1. Significant drop in quarter 1
2. The drop remains significant in quarter 2 for large liquidations

# Roadmap

## 1. Data

## 2. Results

2.1. Evidence of the treatment

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## Earnings announcements

Qtr	Bottom #1 - #3	Middle #4 - #8	Top #9 - #11	M vs B	T vs M	T vs B
-3, -2, -1	0.75* (1.55)	0.38 (1.37)	0.07 (0.28)			
0	-0.81 (-1.05)	0.15 (0.36)	-1.24*** (-2.74)	1.33 (1.42)	-1.10 (-1.63)	0.23 (0.24)
1	2.28*** (2.78)	-0.62 (-1.30)	0.01 (0.02)	-2.54** (-2.54)	0.94 (1.34)	-1.60 (-1.59)
2	-0.27 (-0.31)	-0.72 (-1.52)	-0.05 (-0.12)	-0.08 (-0.07)	0.97 (1.31)	0.89 (0.81)
3, 4	0.42 (0.71)	0.59** (2.12)	-0.42 (-1.24)	0.54 (0.66)	-0.70 (-1.26)	-0.17 (-0.20)
5, 6	0.63 (1.14)	0.00 (0.01)	0.02 (0.06)	-0.26 (-0.34)	0.28 (0.49)	0.02 (0.03)

1. Significantly smaller reaction on EA day to negative earnings surprises in quarter 1
2. Hedge funds liquidate their portfolios on EA days in quarter 0

# Conclusion

Following a closure of a hedge fund:

1. Liquidity improves
2. Stock price informativeness declines

*Thank you!*