

# Covid-19 and corporate India

Aakriti Mathur (Bank of England)  
Rajeswari Sengupta (IGIDR, Mumbai)

CMI-FRG Field Workshop on Firm Finance/Behaviour  
September 9, 2020

Disclaimer: All views expressed are solely those of the authors and cannot be taken to represent those of the Bank of England or to state Bank of England policy.

# Introduction



Jan-Feb, 2020:  
Firms declare  
quarterly results

0.003%  
(end-Feb)



March 11, 2020:  
WHO declares  
a pandemic

0.04%



March 24, 2020:  
India lockdown

0.13%



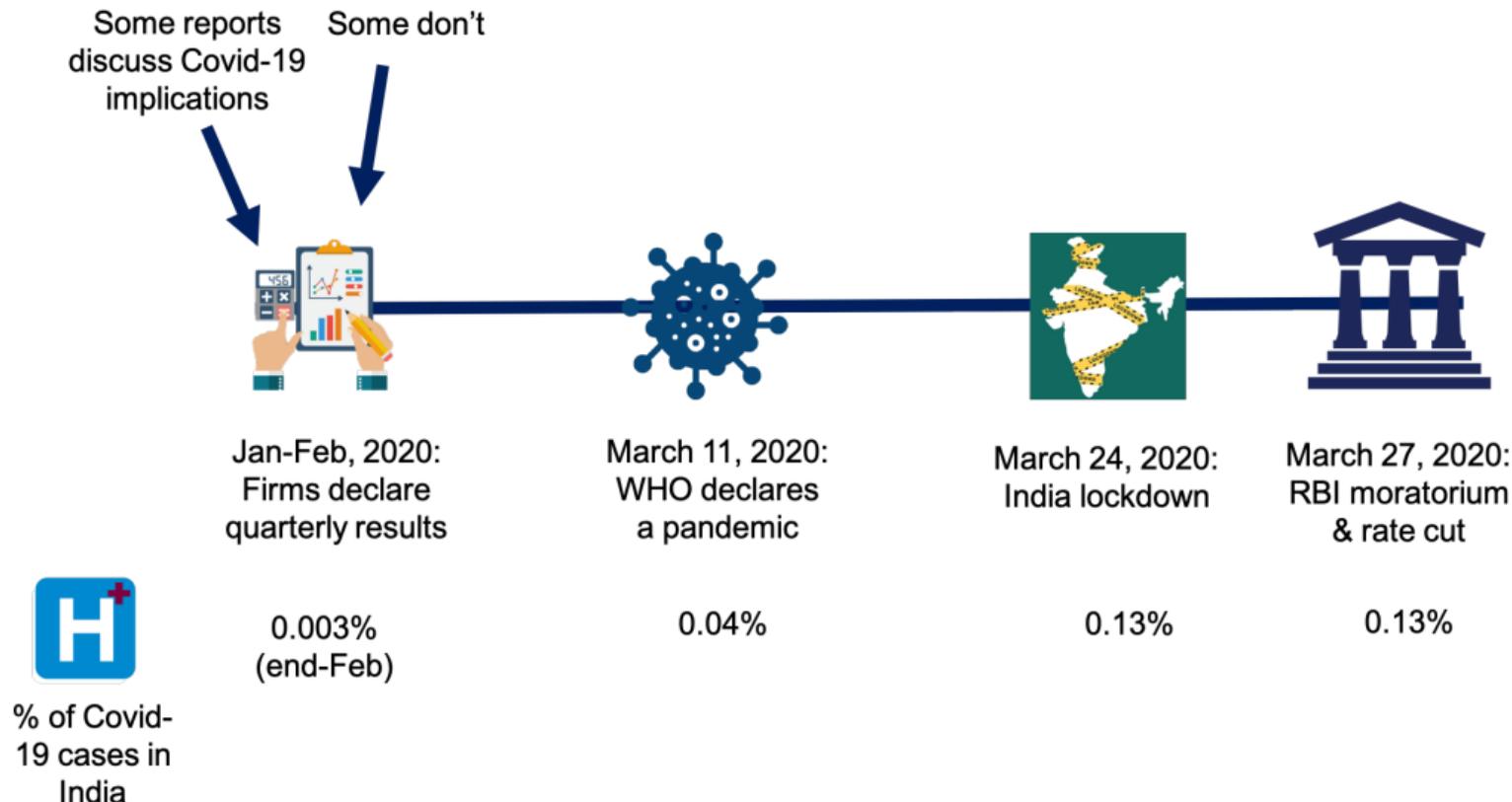
March 27, 2020:  
RBI moratorium  
& rate cut

0.13%

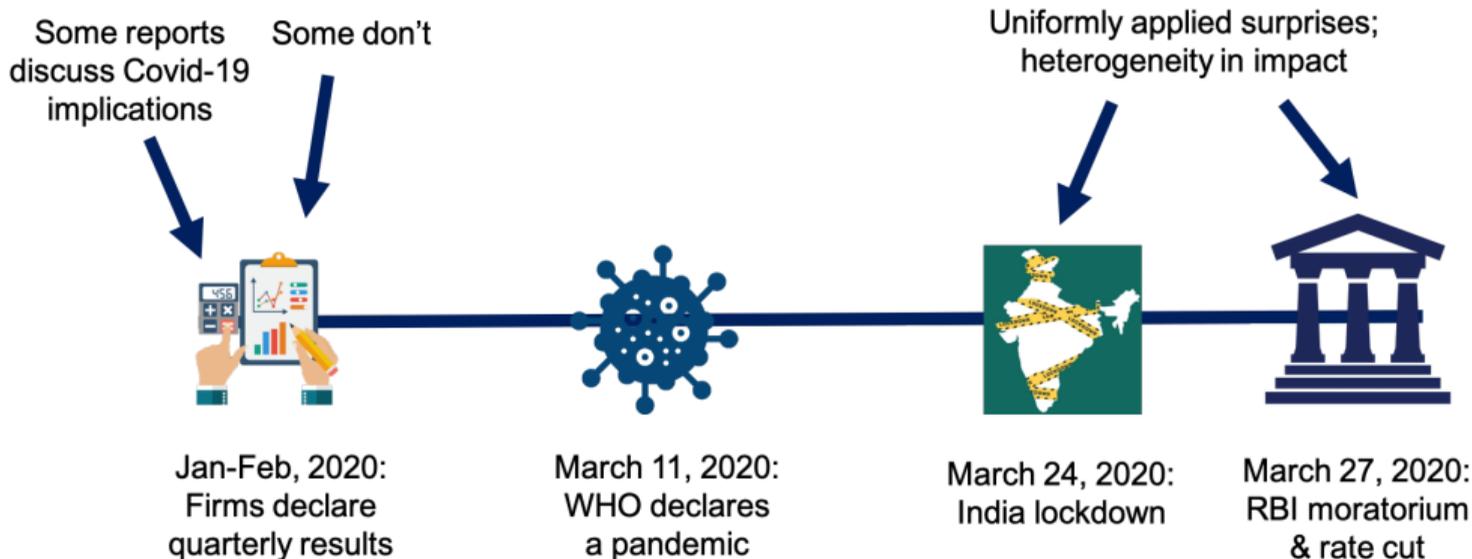


% of Covid-  
19 cases in  
India

# Introduction



# Introduction



% of Covid-19 cases in India

0.003%  
(end-Feb)

0.04%

0.13%

0.13%

# Research questions

- ▶ Which firms were more exposed to the onset of the pandemic, and what was the effect of the March 24, 2020 lockdown announcement on these firms ?
  - ▶ Firms w/ reports that discuss Covid-19 early on – based on their earnings call reports – see significantly lower stock returns around lockdown announcement by about  $-3.5$  pp compared to similar firms in the same sector

# Research questions

- ▶ Which firms were more exposed to the onset of the pandemic, and what was the effect of the March 24, 2020 lockdown announcement on these firms ?
  - ▶ Firms w/ reports that discuss Covid-19 early on – based on their earnings call reports – see significantly lower stock returns around lockdown announcement by about  $-3.5$  pp compared to similar firms in the same sector
- ▶ What factors explain the firm-level heterogeneity in the lockdown impact?
  - ▶ Firms with *lower* financial flexibility and *lower* liquidity perform worse

# Research questions

- ▶ Which firms were more exposed to the onset of the pandemic, and what was the effect of the March 24, 2020 lockdown announcement on these firms ?
  - ▶ Firms w/ reports that discuss Covid-19 early on – based on their earnings call reports – see significantly lower stock returns around lockdown announcement by about  $-3.5$  pp compared to similar firms in the same sector
- ▶ What factors explain the firm-level heterogeneity in the lockdown impact?
  - ▶ Firms with *lower* financial flexibility and *lower* liquidity perform worse
- ▶ What has been the effect of the RBI announcement of March 27, 2020?  
In progress.

# What are we *trying* to understand?

- ▶ Effects of early experiences of the pandemic and the associated lockdown announcement on Indian non-financial firms
- ▶ What explains cross-sectional differences in firm returns; what contributes to resilience
- ▶ Is it in line with international experiences
- ▶ Effects of the central bank's announcement of the first policy package of the pandemic

## What are some of the *open questions*?

- ▶ Why were there Covid-19 related discussions in *some* firms in Jan-Feb '20 and not others (even within the same sector)? Two (inter-related) hypotheses:
  1. These firms are more *vulnerable*
  2. These firms are more *exposed*

## What are some of the *open questions*?

- ▶ Why were there Covid-19 related discussions in *some* firms in Jan-Feb '20 and not others (even within the same sector)? Two (inter-related) hypotheses:
  1. These firms are more *vulnerable* ?
  2. These firms are more *exposed*

## What are some of the *open questions*?

- ▶ Why were there Covid-19 related discussions in *some* firms in Jan-Feb '20 and not others (even within the same sector)? Two (inter-related) hypotheses:
  1. These firms are more *vulnerable* ?
  2. These firms are more *exposed* ✓

## What are some of the *open questions*?

- ▶ Why were there Covid-19 related discussions in *some* firms in Jan-Feb '20 and not others (even within the same sector)? Two (inter-related) hypotheses:
  1. These firms are more *vulnerable* ?
  2. These firms are more *exposed* ✓
- ▶ What kind of policy measures can help affected firms?
  - ▶ Understanding effect of the March 27, 2020 announcement can provide a guide

# Roadmap

- ▶ Existing literature
- ▶ Constructing a firm-level exposure measure to the pandemic
- ▶ Response of the “exposed” firms to the lockdown of March 24
  - ▶ Discussion
- ▶ Response of all listed firms to the lockdown
- ▶ Motivation of looking at the RBI announcement
- ▶ Conclusion

## Stock market performance of firms in response to the pandemic (incl. response to previous shocks)

- ▶ Role of *financial inflexibility*: Banerjee et al., 2020; Fahlenbrach et al., 2020; Ding et al., 2020; Bansal et al., 2020; Wang et al., 2009
  - ▶ Dash for *cash*: Acharya & Steffen, 2020; Joseph et al., 2019 [for India: Sane & Sharma, 2020]
  - ▶ Leverage: **Ramelli & Wagner, 2020**; Opler & Titman, 1994
- ▶ General uncertainty & disease dynamics: Alfaro et al., 2020
  - ▶ Resilience to social distancing rules: Pagano et al., 2020
  - ▶ Higher rated ES stocks: Albuquerque et al., 2020
- ▶ Pre-2020 *experience* with diseases: Hassan et al., 2020

## Use of earnings call reports

- ▶ Literature focuses on the tone and sentiment of these reports and their implications for stock market returns, trading volumes (Frankel et al., 1999; Bushee et al., 2003, 2004), and options pricing (Borochin et al., 2018)

- ▶ **Format:**

- ▶ Earnings calls follow the presentation of a firm's quarterly results
- ▶ Calls are attended by senior management of the firm (e.g., CEO, CFO, MD, etc), who present short, prepared remarks, then open the floor to questions from analysts
- ▶ → the calls are more **spontaneous**

- ▶ **Informational content:**

- ▶ Fundamental financial information and **forecasts** for the upcoming quarters
- ▶ Reflect **opinions** of analysts and managers about the firm (Borochin et al., 2018) in a timely fashion

- ▶ Access to call reports of 196 firms in January-February 2020, out of 500 firms on the NSE NIFTY500

- ▶ Construct **two types of measures**:

(A) Broad measure =  $\frac{\text{No. of times Covid-19 related words mentioned}}{\text{No. of words in report}}$

▶ Keywords

▶ Sample sentences

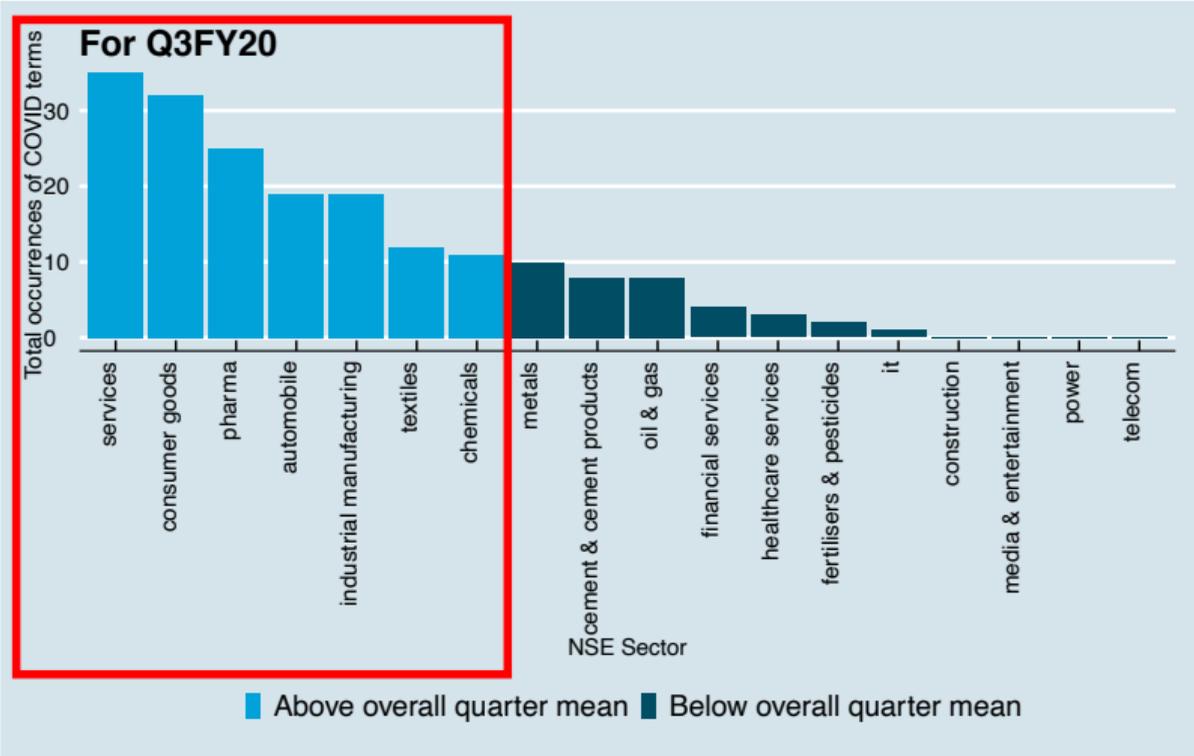
(B) Narrow measures =  $\frac{\text{No. of **supply** or **demand** or **uncertainty** words in Covid-19 sentences}}{\text{No. of words in report}}$

▶ Keywords

▶ Sample sentences

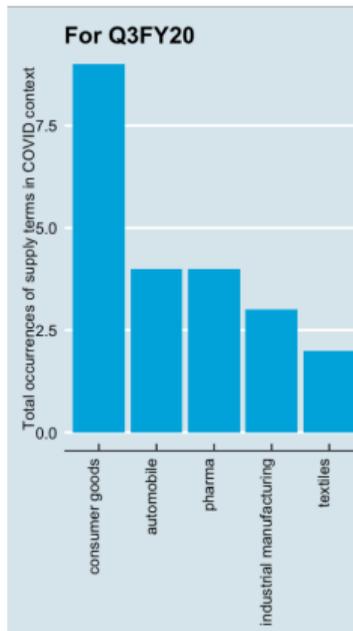
# Which firms were talking about Covid-19 in Jan-Feb 2020?

Sector-wise distribution of Covid-19 related occurrences

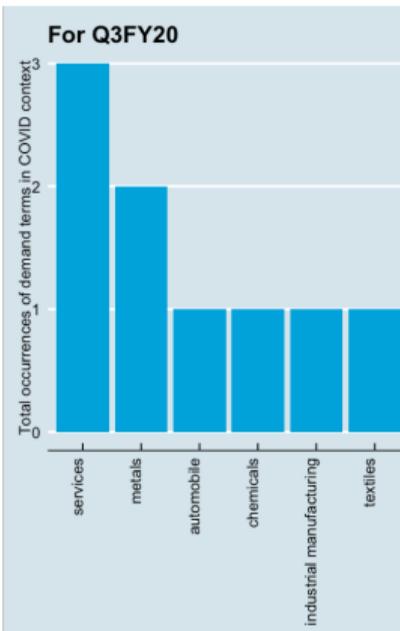


# In what context were firms talking about Covid-19 in Jan-Feb 2020?

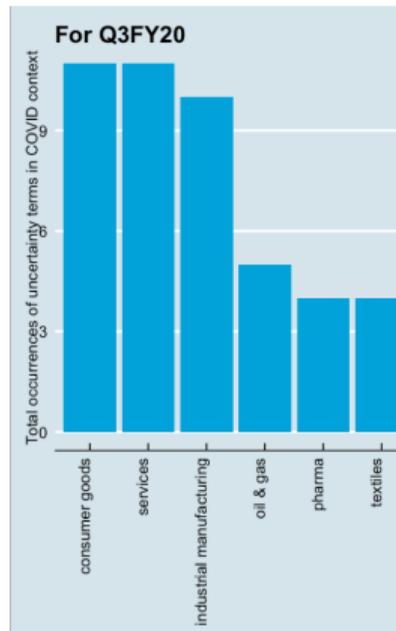
Sectors with above-average occurrences of terms in Covid-19 sentences



Supply-related mentions



Demand-related mentions



Uncertainty-related mentions

# Which firms were more affected by lockdown announcement?



Around the lockdown announcement:

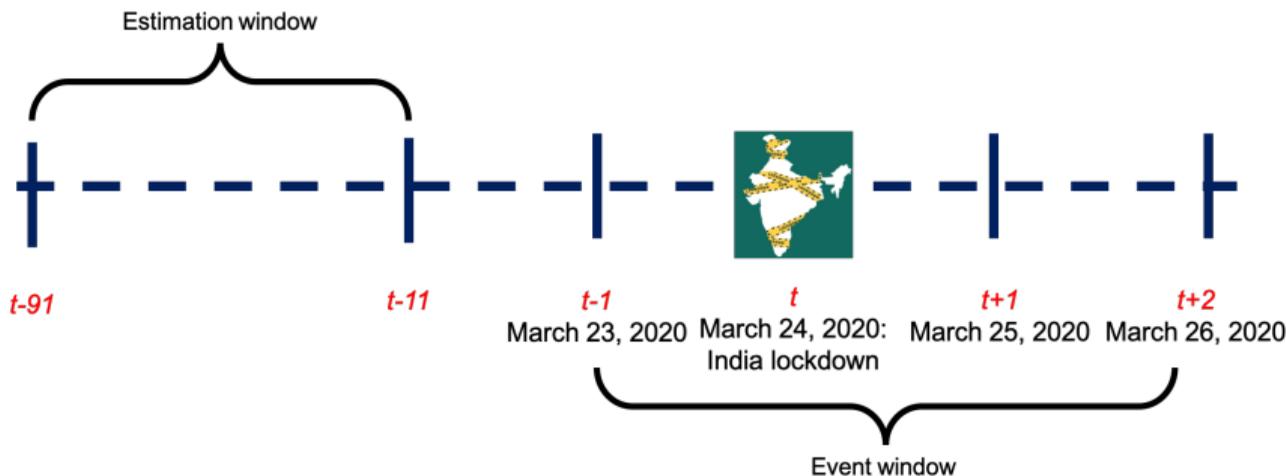
**H1:** **Treated** firms fared worse than the **control** firms

**H2:** Pre-pandemic characteristics were important drivers of stock-market returns

## Step I: Estimate stock market returns using a *market model*

$$R_{i,t} = \alpha + \beta R_t + \epsilon_{i,t} \quad (1)$$

- ▶  $R_{i,t}$ : Daily returns for firm  $i$  on day  $t$
- ▶  $R_t$ : Daily return on Nifty50
- ▶  $\epsilon_{i,t}$ : Used to obtain cumulative abnormal returns ( $CAR_i$ ) over event window



## Step II: Diff-in-diff setup

$$CAR_i = \alpha + \gamma_s + \beta_1 D.Covid_i + \beta_2 X_i + \epsilon_i \quad (2)$$

- ▶ Data: Pre-pandemic data until March 31, 2019
- ▶  $CAR_i$ : Cumulative abnormal returns around event window
- ▶  $\gamma_s$ : NSE sector fixed effects
- ▶  $D.Covid_i$ : Whether firm mentions Covid-19 related words in Jan-Feb '20 report
- ▶  $X_i$ : Balance sheet characteristics, profitability (+), FX earnings (-), inventories (-), operating expenses (-), trade credit (-). Always control for age and size.

▶ Differences between the two groups

▶ Summary statistics

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

<i>Dependent variable:</i>							
Cumulative abnormal returns around first lockdown announcement (24/03/2020)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Wild bootstrap standard errors clustered at firm-level in parentheses.

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

	<i>Dependent variable:</i>						
	Cumulative abnormal returns around first lockdown announcement (24/03/2020)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Cash/TA		2.326					
		(9.172)					
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Wild bootstrap standard errors clustered at firm-level in parentheses.

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

	<i>Dependent variable:</i>						
	Cumulative abnormal returns around first lockdown announcement (24/03/2020)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Cash/TA		2.326					
		(9.172)					
PBDITA/TA			9.405**				
			(3.917)				
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Wild bootstrap standard errors clustered at firm-level in parentheses.

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

<i>Dependent variable:</i>							
Cumulative abnormal returns around first lockdown announcement (24/03/2020)							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Cash/TA		2.326					
		(9.172)					
PBDITA/TA			9.405**				
			(3.917)				
FX earnings/Total income				-7.538*			
				(4.334)			
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Wild bootstrap standard errors clustered at firm-level in parentheses.

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

	<i>Dependent variable:</i>						
	Cumulative abnormal returns around first lockdown announcement (24/03/2020)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Cash/TA		2.326					
		(9.172)					
PBDITA/TA			9.405**				
			(3.917)				
FX earnings/Total income				-7.538*			
				(4.334)			
Inventories/TA					-24.179*		
					(14.300)		
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild bootstrap standard errors clustered at firm-level in parentheses.

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

	<i>Dependent variable:</i>						
	Cumulative abnormal returns around first lockdown announcement (24/03/2020)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Cash/TA		2.326					
		(9.172)					
PBDITA/TA			9.405**				
			(3.917)				
FX earnings/Total income				-7.538*			
				(4.334)			
Inventories/TA					-24.179*		
					(14.300)		
Operating expenses/total income						-12.941**	
						(5.105)	
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild bootstrap standard errors clustered at firm-level in parentheses.

# Results

Sample restricted to non-financial sectors as per NSE classification (WIP: Qregs)

	<i>Dependent variable:</i>						
	Cumulative abnormal returns around first lockdown announcement (24/03/2020)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Firm mentions COVID dummy	-3.054*	-3.020*	-3.611*	-4.157**	-2.801*	-3.645*	-3.215*
	(1.778)	(1.751)	(1.869)	(1.861)	(1.667)	(1.864)	(1.866)
Cash/TA		2.326					
		(9.172)					
PBDITA/TA			9.405**				
			(3.917)				
FX earnings/Total income				-7.538*			
				(4.334)			
Inventories/TA					-24.179*		
					(14.300)		
Operating expenses/total income						-12.941**	
						(5.105)	
Trade receivables/TA							-15.712**
							(7.015)
Observations	151	151	150	128	151	151	151
Adjusted R <sup>2</sup>	0.198	0.193	0.213	0.247	0.243	0.221	0.219
Sector FE	Y	Y	Y	Y	Y	Y	Y
Age + size	Y	Y	Y	Y	Y	Y	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

Wild bootstrap standard errors clustered at firm-level in parentheses.

# Explaining *why* some reports had discussions of Covid-19 in Jan-Feb '20

## 1. H1: Treated firms are more *vulnerable*

- ▶ Except for age, we do not find significant differences in the balance sheet characteristics of the two sets of firms at the 5% level, based on pre-pandemic data

▶ Show

## 2. H2: Treated firms are more *exposed*

- ▶ Treated firms also face significantly lower CARs around the dates of their earnings calls
- ▶ Show: ES   ▶ Show: Reg
- ▶ Controlling for mentions of “supply” and “demand”, or “uncertainty” related words does not change the results qualitatively
  - ▶ Several ways to see if “international linkages” drive the differences. Construct measures as:
    - ▶ Word counts of country name mentions (similar to Hoberg & Moon 2017; 2018)
    - ▶ Add one-year  $\beta$ s of firms to (a) Shanghai Composite and (b) MSCI World

⇒ On balance, it seems that (2) is more likely.

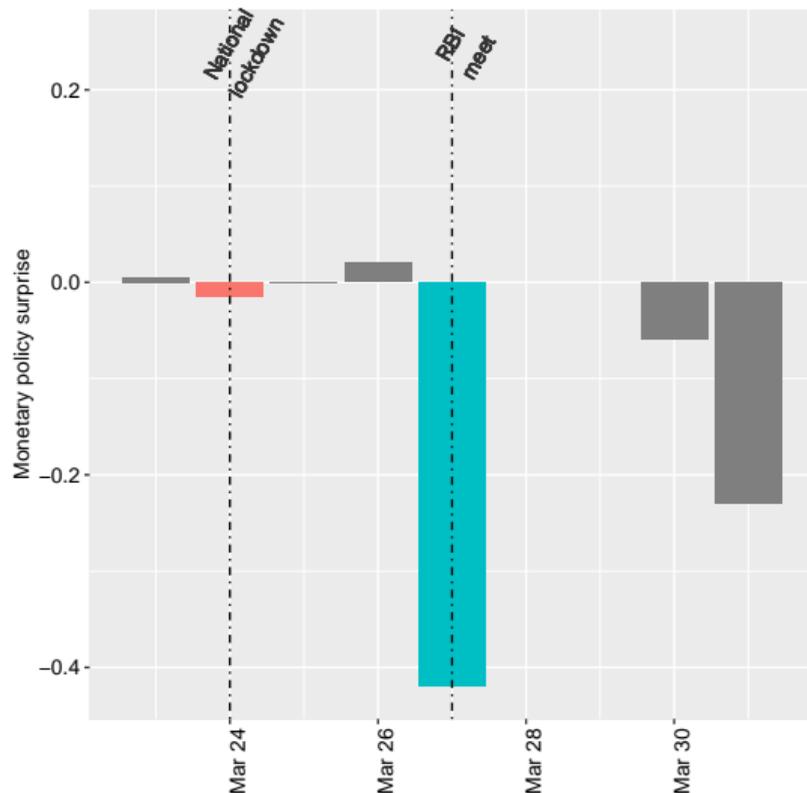
# Do the results on balance sheet chars. hold with a larger sample of firms?

- ▶ Expand sample of firms to all listed firms on NSE & BSE; left with approx. 1800 firms with continuous data Dec 2019 onwards [▶ Data cleaning](#)
- ▶ Check to see if previous results on balance sheet characteristics hold around lockdown. A few differences:
  - ▶ **Cash:** Cash becomes significantly important on average (firms w/  $1\sigma$  higher cash holdings experienced  $0.09\sigma$  higher CARs, compared to firms in same sector). Significant non-linearities: Firms at the top 10% of distribution out perform those at bottom 10%.
  - ▶ **Collateral:** Firms with  $1\sigma$  higher collateral saw  $0.047\sigma$  higher CARs, compared to firms in same sector
  - ▶ **Profits:** No longer significant on average, albeit with the correct sign

[▶ Show summary stats](#)

# Motivation for studying RBI announcement I

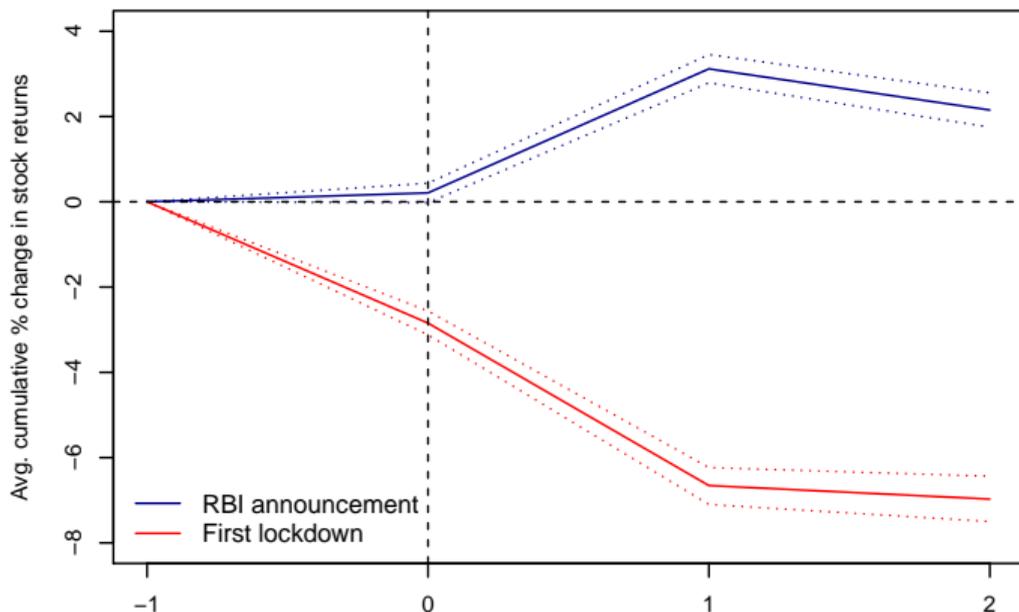
Monetary policy surprise for the RBI announcement on March 27, 2020



- ▶ Use daily change in overnight indexed swap (OIS) to construct *monetary policy surprises* as in Mathur & Sengupta (2019)
- ▶ March 27, 2020 largest surprise since October '16
- ▶ Unscheduled monetary policy announcement where:
  - ▶ short-term policy interest rate cut by 75 bps to 4.40%
  - ▶ loan moratorium announced

# Motivation for studying RBI announcement II

Event study results comparison between lockdown and RBI announcement



- ▶ Similar methodology as before, but with sample of all listed firms on NSE & BSE

## Take aways and Next steps

- ▶ Using information from earnings call reports, we construct firm-specific measures of “exposure” to early onset of the pandemic
- ▶ Firms who were *more exposed* performed worse during the lockdown announcement
- ▶ Firms who were *more financially inflexible* and had *lower liquidity* performed worse during the lockdown announcement
- ▶ In progress:
  - ▶ *What* was so special about these firms (H: external exposure)
  - ▶ Role of policy
  - ▶ Role of additional factors such as financial health & constraints

Thank you!

Mathur: [aakriti.mathur@bankofengland.co.uk](mailto:aakriti.mathur@bankofengland.co.uk)

Sengupta: [rajeswari.sen@gmail.com](mailto:rajeswari.sen@gmail.com)

# Appendix

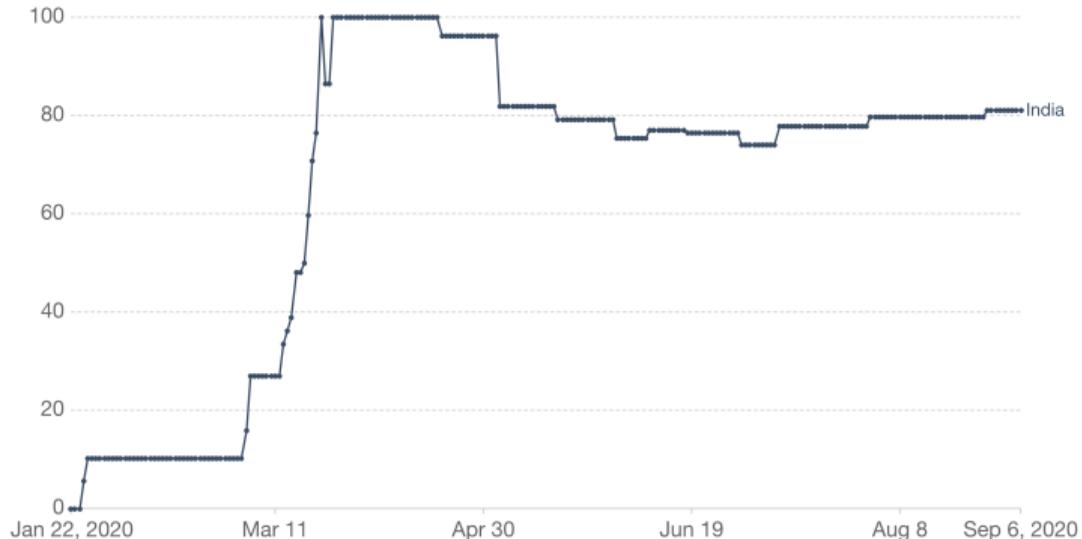
# Focus on the first lockdown on 24 March, 2020 (I)

Source: Our World in Data and Oxford Covid-19 Government Response Tracker

## COVID-19: Government Response Stringency Index

Our World  
in Data

This is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.



Source: Hale, Webster, Petherick, Phillips, and Kira (2020). Oxford COVID-19 Government Response Tracker – Last updated 7 September, 04:30 (London time)

Note: This index simply records the number and strictness of government policies, and should not be interpreted as 'scoring' the appropriateness or effectiveness of a country's response.

OurWorldInData.org/coronavirus • CC BY

# Focus on the first lockdown on 24 March, 2020 (II)

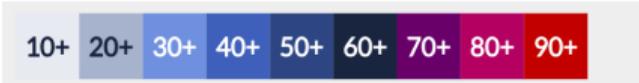
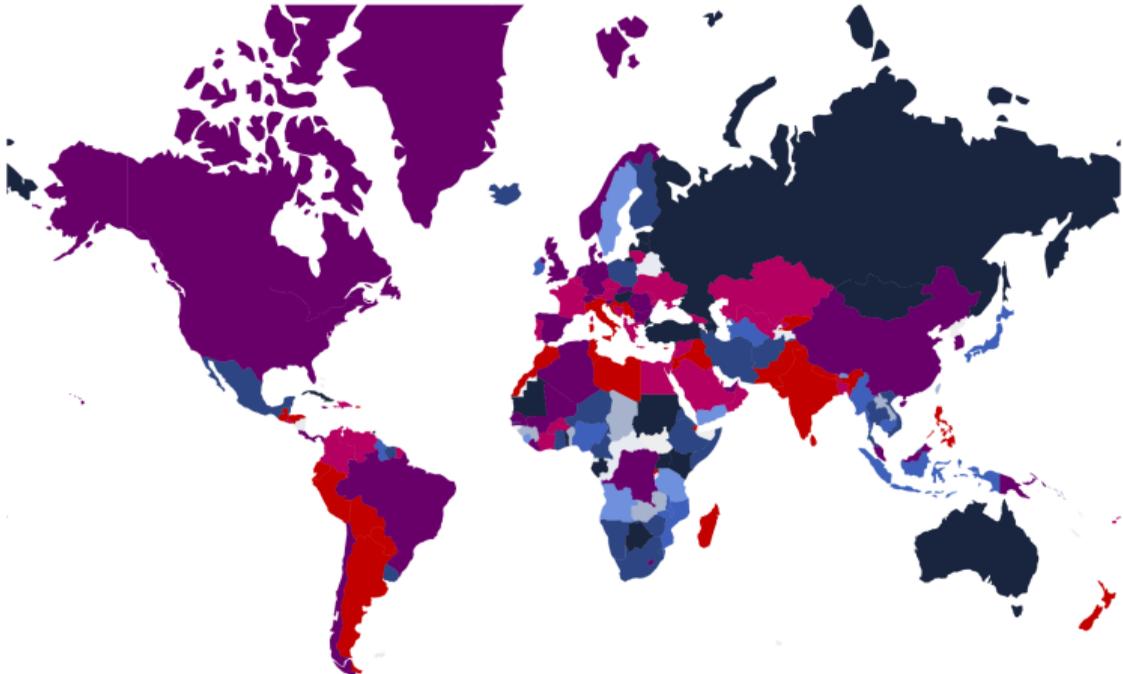
Source: Google trends



**Note:** Trends in searches of the terms “Coronavirus” (blue), “Covid19” (red) and “Covid-19” (yellow) for India, year-to-date. The week of the lockdown is marked by the box. On 25 March, 2020 there were

# Focus on the first lockdown on 24 March, 2020 (III)

Source: Oxford Government Response Tracker as on 25 March, 2020



# Keywords for broad measure

In the earnings call reports:

- ▶ First convert everything to lower case and remove any special characters
- ▶ Then search for the following keywords: *“covid”, “covid19”, “covid-19”, “corona”, “coronavirus”, “virus”, “pandemic”, “epidemic”, “outbreak”, “disease”, “contagion”, “tragedy”, “infection”, “lockdown”, “quarantine”, “self\_isolation”, “containment”, “social\_distancing”, “first\_wave”, “second\_wave”, “ncov”, “sarscov”*.
- ▶ Tradeoff of adding keywords: signal-to-noise ratio

▶ Back

## Example of Covid-19 related sentences from the earnings reports

**Aegis logistics** *It's difficult to really comment on it because no one knows, to be honest, the impact of [coronavirus](#).*

**Aurobindo Pharma** *In view of the [coronavirus](#), what is the impact do we expect for the company?*

**UPL Ltd.** *So my question is regarding what is the impact that you perceive of the [coronavirus](#) in various geographies or products of yours?*

**Voltas** *To sum up, truth be told, most industries face substantial challenges in the near-term future, exposed as they are to the environmental headwinds and the economic implications of a possible spread of [disease](#).*

**Hindalco** *Look, I don't think that there has been any upstream aluminum smelting capacity shutdown because of the [coronavirus](#).*

▶ Back

# Keywords for narrow measures

In the earnings call reports:

- ▶ First obtain Covid-19 related sentences based on previous set of keywords
- ▶ Then search for the following keywords for uncertainty: *"uncertainty", "uncertainties", "uncertain", "risk", "risks", "risky", "threat", "threats", "unknown", "fear", "exposed", "unclear", "possibility", "possibilities", "doubt", "doubts", "predict", "unpredictable", "unpredictability", "variable", "chance", "pending", "variability", "instability", "prospect", "danger", "dangeours", "likelihood", "queries", "vary", "varying", "probability", "probabilities", "tricky", "fluctuate", "fluctuating", "reservation", "speculative", "speculation", "dilemma", "unsure", "debatable", "hesitant", "hesitancy", "unstable", "hazardous", "unsafe", "halting", "hairy", "jeopardize", "unforseeable", "question", "questions", "difficult", "difficulties", "concern", "concerns", "concerned", "affected", "effect", "wait and see", "ambiguous", "dubious", "precarious", "undecided", "undetermined", "unresolved", "unsettled", "concern", "anxiety", "anxieties", "unclear", "have to see", "worry", "worries", "remains to be seen", "no idea"* (Sandile 2016 & others)
- ▶ Then search for the following keywords for supply/demand: *"supply chain(s)", "supply", "supplies", "import(s)", "export(s)", "suppliers" & "demand(s)"*

## Example sentences for narrow measures

**Great Eastern Shipping co. Ltd.** *On - really on virus, we just have **no idea** what's - it's going to depend how that virus plays out.:*

**Mphasis Ltd.** *I think there are parts of the business that are sensitive to the uncertainty, especially interest rates, elections, global macro, of course, the new **uncertainty** that got introduced with global growth concerns around the outbreak with the China.*

**Symphony Ltd.** *VP Sir, my first question is just asking regarding the impact of this coronavirus on the GSK operations, because not only it would impact GSK but also **supplies** to IMPCO.:*

**Grasim Industries** *Because of the whole Coronavirus issue, there is no **supply** coming out from China.:*

**Hindalco** *However, the full impact of the coronavirus outbreak on copper **demand** is not yet clear.*

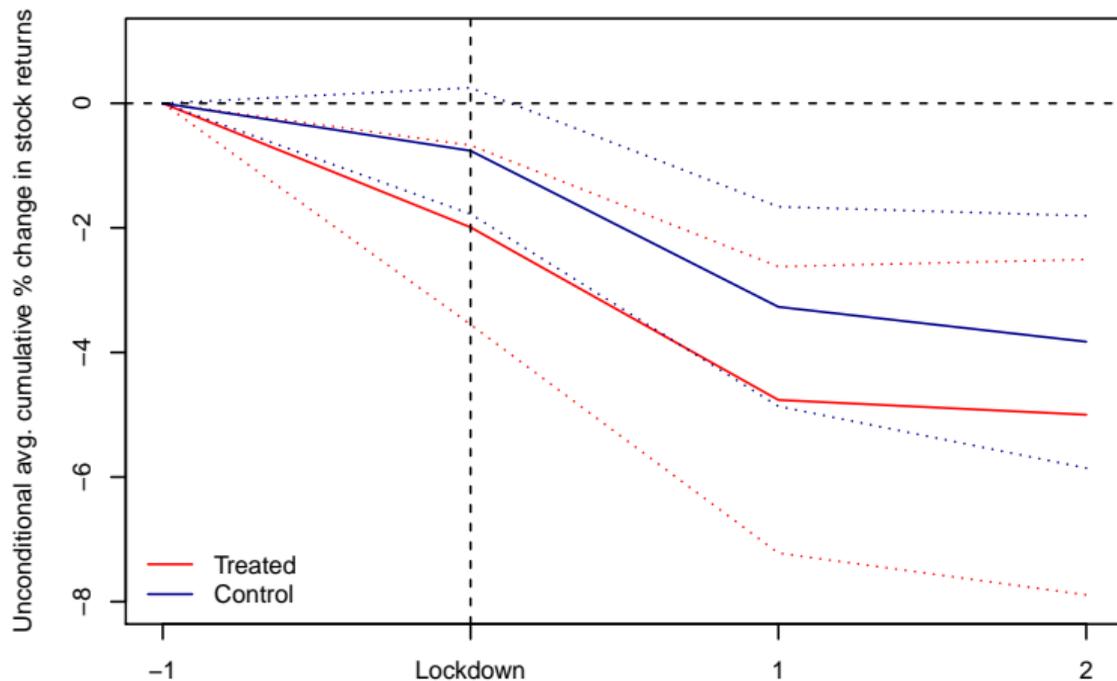
▶ Back

# Summary statistics for the earnings call reports sample

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Covid-19 word count	156	1.186	2.225	0	0	1	12
Scaled Covid-19 word count	156	0.009	0.016	0.000	0.000	0.011	0.098
Supply mentions	60	0.433	0.673	0.000	0.000	1.000	3.000
Uncertainty mentions	60	0.950	1.171	0.000	0.000	1.000	5.000
Demand mentions	60	0.150	0.515	0.000	0.000	0.000	3.000
Age	155	38.387	22.280	3.000	24.000	51.500	112.000
Size	155	11.163	1.411	8.020	10.124	11.923	15.372
Leverage	133	0.153	0.141	0.0001	0.030	0.247	0.562
Profit ratio	154	0.248	0.177	0.026	0.139	0.289	1.201
FX ratio	132	0.286	0.325	0.0002	0.032	0.532	0.989
Cash ratio	155	0.063	0.089	0.0002	0.009	0.076	0.451
Trade receivables ratio	152	0.138	0.111	0.001	0.045	0.192	0.574
Collateral	154	0.371	0.236	0.00004	0.181	0.530	1.083
Inventories ratio	133	0.120	0.117	0.00000	0.038	0.154	0.676
St-borrowings ratio	133	0.468	0.370	0.000	0.124	0.858	1.000
Tangibles ratio	153	0.293	0.197	0.0002	0.123	0.448	0.872
Operating expenses ratio	155	0.766	0.153	0.123	0.711	0.867	1.017
Trade ratio	5	0.236	0.368	0.029	0.082	0.088	0.892
Imports ratio	2	0.168	0.056	0.128	0.148	0.188	0.207

# Event study plot for treated vs. control firms around first lockdown

151 non-financial firms, using market model, based on call reports



# Differences between treated and control firms

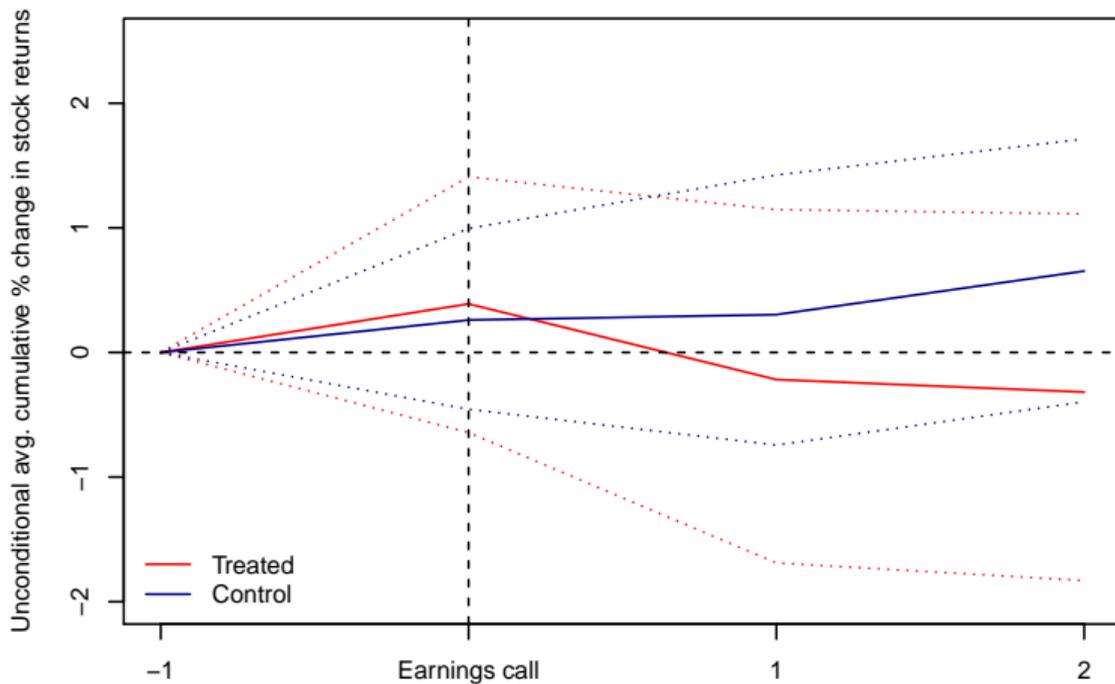
Variable	Mean of firms with no COVID mentions "Control" N = 96	Mean of firms with COVID mentions "Treated" N = 60	p-value
Covid word-count	0	3.083	0
Scaled COVID word-count	0	0.023	0
Age	35.011	43.733	0.014
Size	11.187	11.125	0.787
Leverage	0.149	0.158	0.734
Profit	0.256	0.234	0.458
Trade ratio	0.490	0.066	0.483
FX ratio	0.300	0.265	0.514
Capital ratio	0.573	0.600	0.378
Cash ratio	0.071	0.049	0.117
Trade receivables ratio	0.139	0.129	0.538
Inventories ratio	0.114	0.127	0.535
Short-term borrowings ratio	0.491	0.432	0.369
Operating expenses ratio	0.758	0.780	0.350
Collateral	0.365	0.381	0.661

▶ [Back to DID setup](#)

▶ [Back to discussion](#)

# Is talk cheap? (1/2)

151 non-financial firms, using market model around respective earnings call dates



## Is talk cheap? (2/2)

	<i>Dependent variable:</i>			
	Cumulative abnormal returns around earnings call dates in Jan-Feb '20			
	(1)	(2)	(3)	(4)
Firm mentions COVID dummy	-0.971 (0.921)	-1.585* (0.955)	-1.700* (0.945)	-1.749* (0.979)
Observations	151	151	151	151
R <sup>2</sup>	0.008	0.054	0.070	0.072
Sector FE	N	Y	Y	Y
Age + size	N	N	Y	Y
Additional controls	N	N	N	Y

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01  
Wild bootstrap standard errors clustered at firm-level in parentheses.

## Data cleaning steps for the larger event study

- ▶ Stock market dataset merged with CMIE balance sheet data ( $N = 4096$ )
- ▶ Drop all financial and government firms ( $N = 3269$ )
- ▶ Use only firms with continuous trading data between 24 December 2019 and 31 March 2020 ( $t = 90$ ) ( $N = 1746$ )
- ▶ For balance sheet data, we exclude firms with negative assets, sales, age, tangibles ratio, operating expenses, leverage ratio (also values more than 1000). This drops total of 80 observations

▶ Back

## Summary statistics for the larger sample of firms

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
CAR (+2) around lockdown	1,746	-6.963	11.508	-93.874	-13.916	0.251	32.208
Age	1,804	35.683	20.975	1	24	40	156
Size	1,804	8.489	1.766	-0.916	7.313	9.664	15.575
Leverage	1,611	0.308	1.379	0.00003	0.085	0.354	51.368
Profit ratio	1,797	0.089	4.318	-112.000	0.071	0.222	107.727
FX ratio	1,246	0.261	0.692	0.00001	0.023	0.386	22.514
Collateral	1,785	0.435	0.372	0.00003	0.184	0.604	5.068
Cash ratio	1,802	0.052	0.092	0.0001	0.007	0.053	1.000
Trade receivables ratio	1,774	0.187	0.153	0.00004	0.070	0.254	0.987
Inventories ratio	1,631	0.169	0.143	0.00000	0.062	0.236	0.908
St-borrowings ratio	1,611	0.468	0.354	0.000	0.124	0.787	1.000
Tangibles ratio	1,760	0.397	0.227	0.000	0.214	0.575	1.306
Operating expenses ratio	1,802	0.863	0.467	0.018	0.783	0.938	17.654
Trade ratio	28	0.310	0.325	0.006	0.038	0.654	0.919
Imports ratio	13	0.194	0.164	0.006	0.066	0.240	0.644