The Costs of Silence: The Impact of Enforcing Misinformation Regulation on Finfluencers and Corporate Information Environment

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Research question

- How does the public enforcement of social media misinformation regulation affect
  - The behavior of finfluencers and
  - The stock price informativeness for affected stocks?

Motivation

- The controversies on the roles of social media in capital markets
- Does misinformation regulation help?
  - A key challenge: it is difficult to distinguish between legitimate and misinformation
  - Regulator capture concern
  - Net benefit of enforcing misinformation regulation is an empirical question

The 2023 Qinglang Operation

Public enforcement of China's Cyber Security Law issued in 2016

The Qinglang operation started in 2016

Before 2023, the Qinglang Operations focused on broad issues such as online vulgarity, privacy violations, and entertainment industry scandals.

Starting in 2023, the Qinglang Operation focused on corporate online information environment

- The Qinglang-we-media operation, covering March 2nd to early May 2023
- The Qinglang-business operation, covering March 28 to July 31, 2023
- Many local cyberspace administrations continued the enforcement beyond July 2023. For example, the Shanghai government extended the enforcement through October 2023, with a particular focus on platforms such as Eastmoney Guba

The sample and data sources

- Our sample covers the period from January 1, 2022 to November 30, 2023
- Data sources
  - Guba posts
  - Guber user profiles
  - Listed firms' financial data

Specific research questions

RQ1: Does the public enforcement have teeth?

RQ2: How does the public enforcement influence the behavior of finfluencers?

RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

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Definition of finfluencers (KOLs)

- User profiles have at least 10,000 views
  - At least 500 followers (plus deleted users with 0 followers)
  - At least one post per week on average since account registration (active); and
  - Have at least one original post since 1/1/2022

Definition of active regular users

- User profiles have less than 10,000 views
  - Less than 500 followers (plus deleted users with 0 followers)
  - At least one post per week on average since account registration (active); and
  - Have at least one original post since 1/1/2022

Final sample of Guba users

Finfluencers	N	%
Deleted	357	4%
Total	8,938	
Active regular users		
Deleted	277	0.60%
Total	49,645	

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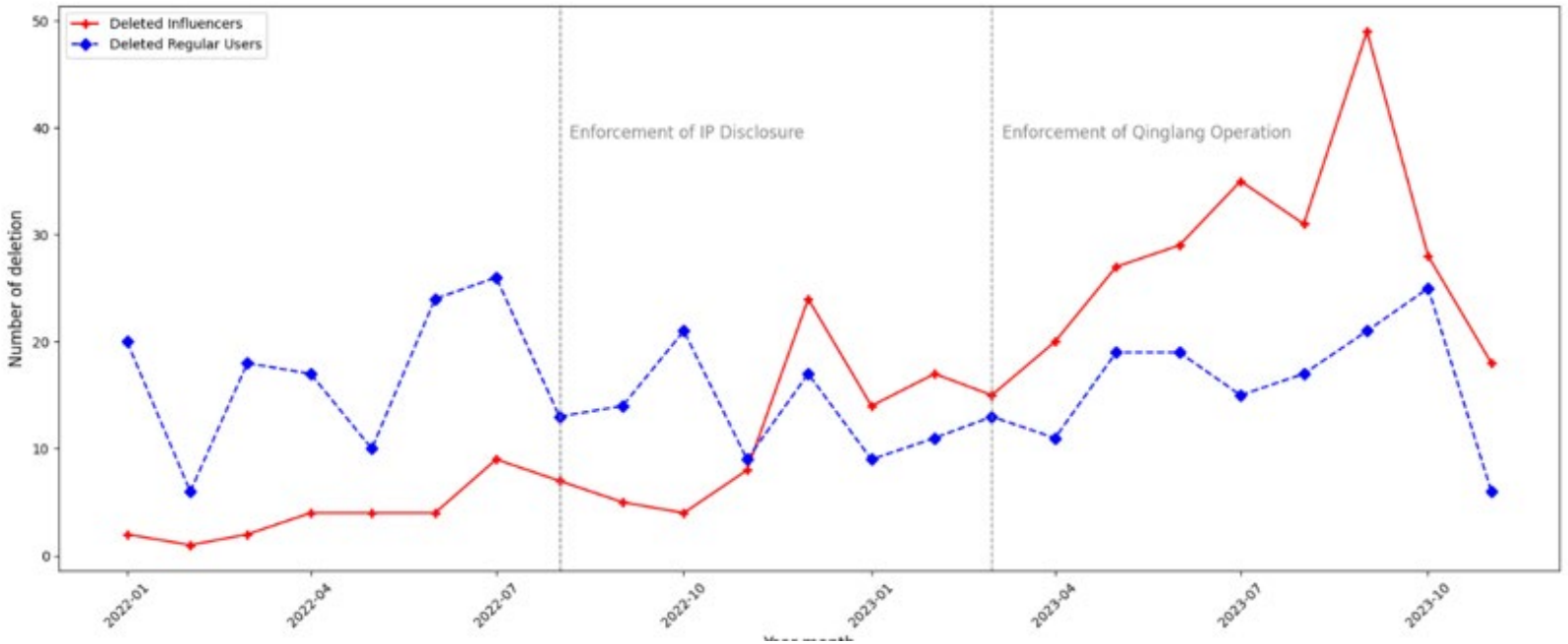
RQ1: Does the public enforcement have teeth?



RQ1: Does the public enforcement have teeth?

	(1)	(2)	(3)
Dep. Variable	# deleted KOLs	# deleted active regular users	(# deleted KOLs - # deleted active regular users)
$Post_m$	16.714***	2.444	14.270***
	(3.79)	(1.03)	(3.41)
IP_m	7.571**	3.000	4.571
	(2.59)	(1.44)	(1.26)
Constant	3.714***	9.000***	-5.286**
	(3.77)	(6.19)	(-2.70)
R-squared	0.676	0.217	0.580
No. of observations	23	23	23

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RQ2: How does the public enforcement influence the behavior of finfluencers?

Account deletion

Posting behavior of non-deleted finfluencers

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RQ2: How does the public enforcement influence the behavior of finfluencers?

Focusing on account deletion

H1: Compared to the pre-regulation period, finfluencers with more negative tones are more likely to be targeted for deletion post-regulation

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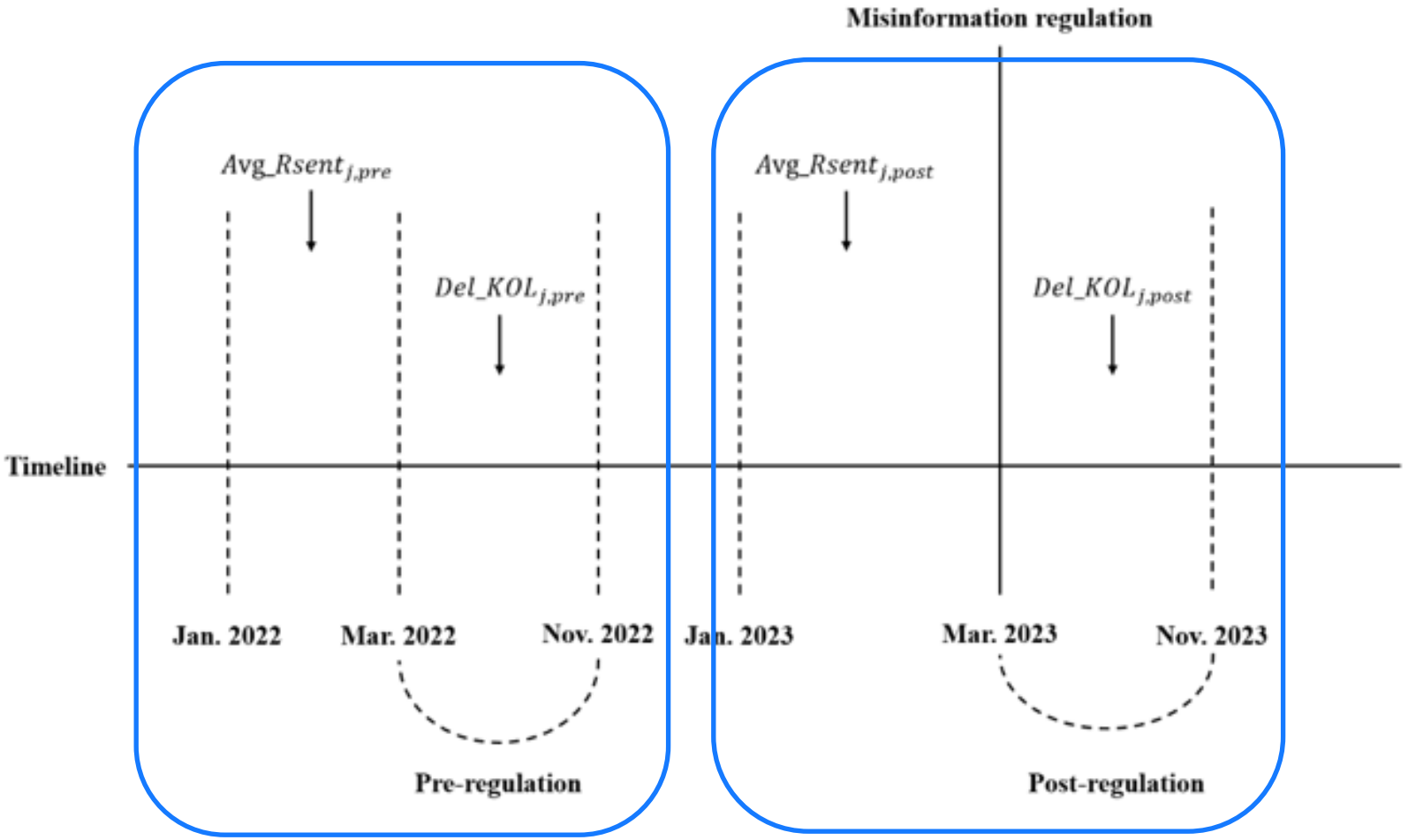
Post sentiment for user j in moth m

- Relative sentiment ($RSent_{j,m}$) measures the average sentiment of user j's posts in month m, which sentiment is computed using fine tuned FinBert and ranges from -0.5 to 0.5. 0 is relatively neutral, and 0.5/-0.5 is the most positive/negative sentiment, respectively

$$RSent_{j,m} = \frac{1}{|P_{j,m}|} \sum_{p \in P_{j,m}} Sentiment_p$$

Research design



Results for H1

	Logistic model		Logistic model in rare event	
	Pre-regulation	Post-regulation	Pre-regulation	Post-regulation
	(1)	(2)	(3)	(4)
Dep. Variable	$Del\_KOL_{j,pre}$	$Del\_KOL_{j,post}$	$Del\_KOL_{j,pre}$	$Del\_KOL_{j,post}$
Avg_Rsent_j	-2.044**	-3.063***	-2.025**	-3.052***
	(-2.06)	(-6.60)	(-2.05)	(-6.58)
$Star\_KOL_j$	-1.249***	-1.260***	-1.225***	-1.257***
	(-3.57)	(-8.08)	(-3.53)	(-8.07)
Constant	-4.128***	-2.226***	-4.111***	-2.224***
	(-11.46)	(-14.47)	(-11.47)	(-14.47)
Diff. in Coef. of Avg_Rsent_j	-1.019**		-1.028*	

RQ2: How does the public enforcement influence the behavior of finfluencers?

- Focus on sentiment and volume (negative and positive) of the posts by non-deleted finfluencers
- The impact is unclear
  - Deterrence hypothesis
  - Substitution hypothesis

RQ2: How does the public enforcement influence the behavior of finfluencers?

Focusing on the sentiment and post volume of non-deleted users

H2a: The misinformation regulation does not affect the sentiment intensity of non-deleted finfluencers.

H2b: The misinformation regulation does not affect the number of non-deleted finfluencers' negative posts

H2c: The misinformation regulation does not affect the number of non-deleted finfluencers' positive posts

Results of RQ2

Dep. Variable	(1) $RSent_{j,m}$	(2) $Ln(1+Neg\_Article)_{j,m}$	(3) $Ln(1+Pos\_Article)_{j,m}$	(4) $Ln(1+Articles)_{j,m}$
$KOL_j * Post_m$	0.015***	-0.011***	-0.076***	-0.070***
	(12.96)	(-3.55)	(-9.64)	(-8.62)
Calendar year-month FE	Yes	Yes	Yes	Yes
User FE	Yes	Yes	Yes	Yes
R-squared	0.318	0.316	0.429	0.429
# Unique non-deleted KOLs	8,581	8,581	8,581	8,581
# Unique non-deleted active regular users	49,368	49,368	49,368	49,368
No. of observations	1,332,827	1,332,827	1,332,827	1,332,827

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RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

H3a: The misinformation regulation does not affect ERC.

H3b: The misinformation regulation does not affect FERC.

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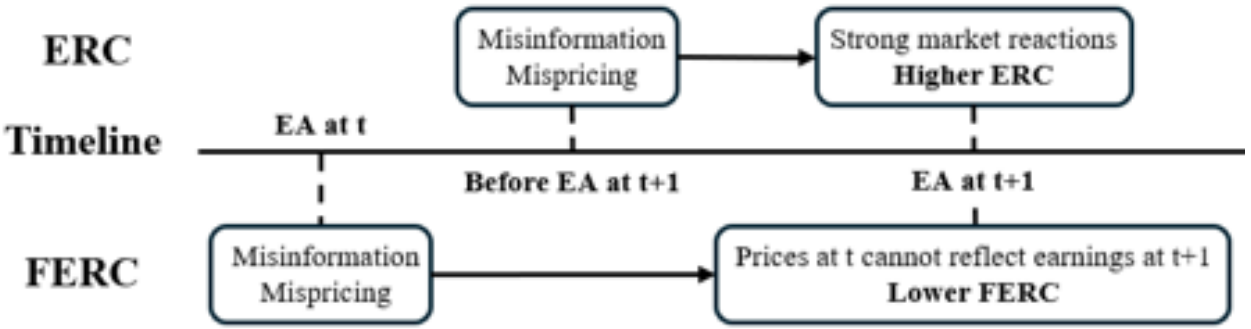
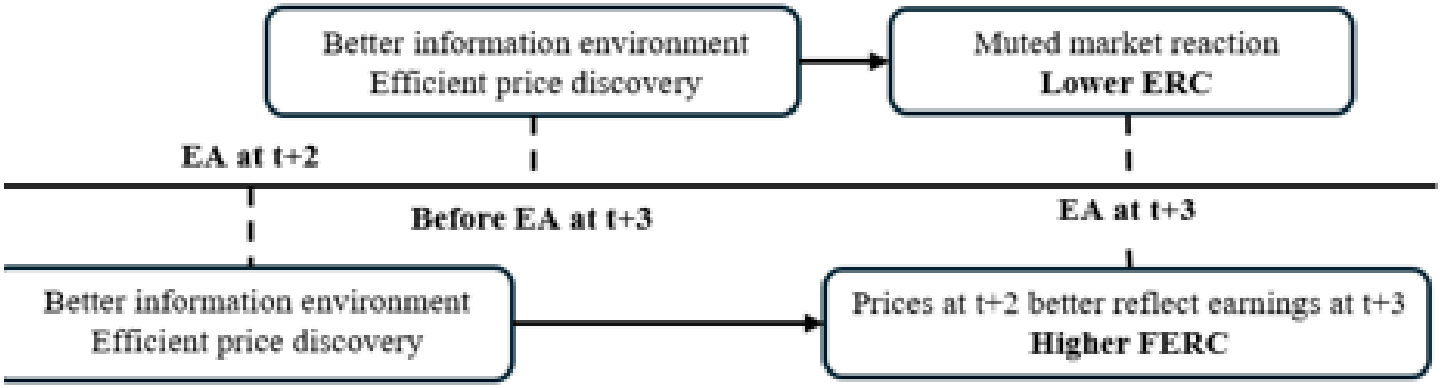
RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

a. Effective regulation **Pre-regulation**



RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

a. Effective regulation **Post-regulation**



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RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

- Definition of treated firms using data in the pre-regulation period
  - Sentiment of KOL j: we measure Avg_Rsent_{j,pre_shock} by calculating the mean of $RSent_{j,m}$ for finfluencer j from January 1, 2022, to the end of February 2023
  - Treated KOL j: Finfluencers from the bottom half of Ln_visit-weighted Avg_Rsent_{j,pre_shock} are defined as finfluencers with more negative tones
  - Treated firm i: we count the number of the treated finfluencers on each firm's stock message board from January 1, 2022, to the end of Feb 2023. Finally, we rank firms according to this metric, defining the top half as treated firms ($Treat_i$ is 1, the cut-off value is 43) and the bottom half as control firms ($Treat_i$ is 0)
  - 1 to 1 nearest neighbor PSM w/o replacement (0.01 caliper):

$$Treat_i = \beta_0 + \beta_1 Size_{i,2022} + \beta_2 Roa_{i,2022} + \beta_3 BM_{i,2022} + \varepsilon_i \quad (4)$$

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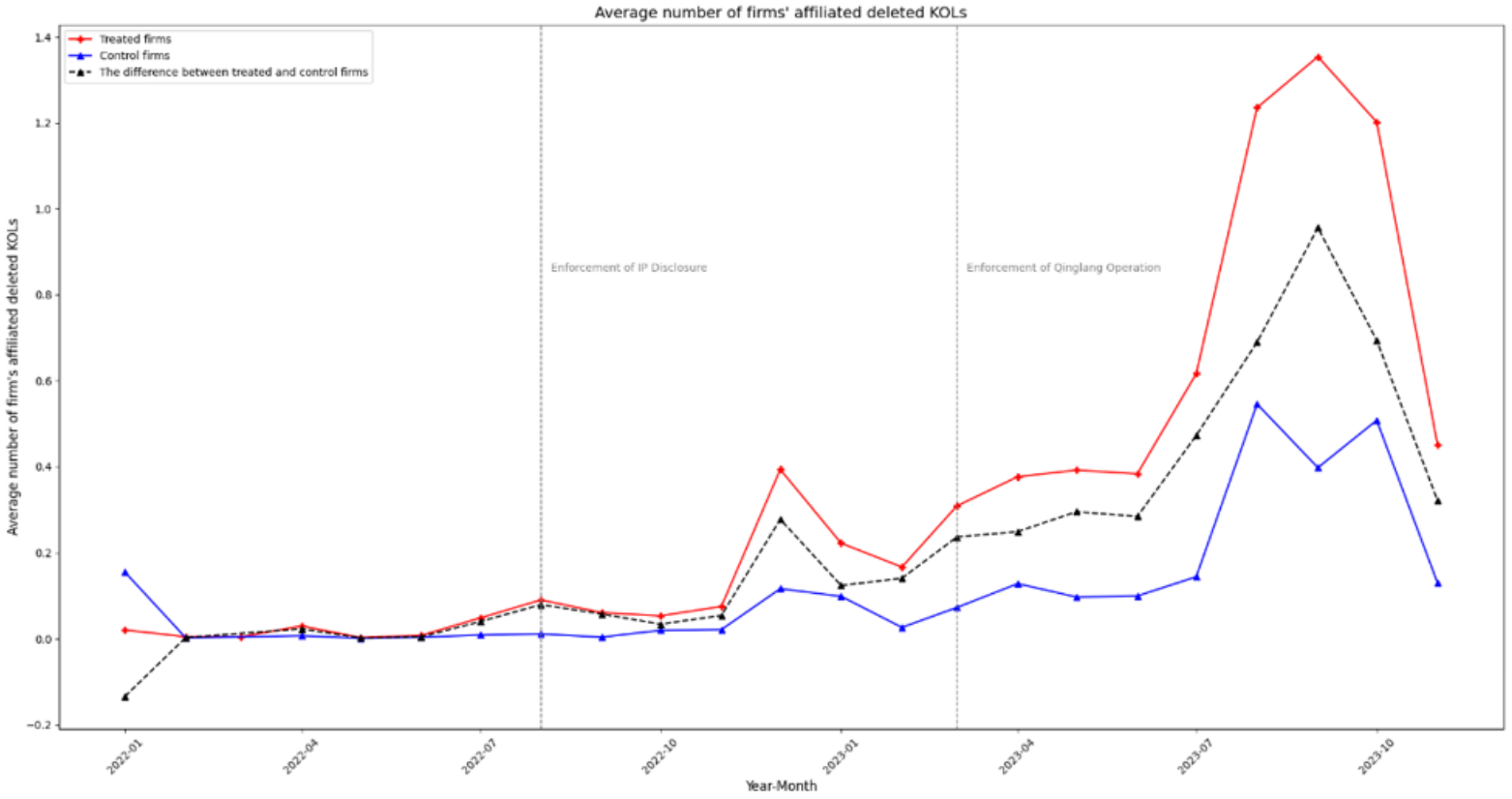
RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

- Validity check of treated firms:



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RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

- Sample:
- We choose 14 months for both the pre-regulation and post-regulation periods
  - Pre period: from January 1, 2022 to the end of February 2023
  - Post period: from March 1, 2023 to the end of April 2024

RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

Dep. Variable	(1) *RET*	(2) *RET_Mkt_Adj*
$Treat_i * Post_{fqtr,q} * Earn_{i,q+1}$	-0.555**	-0.560**
	(-2.41)	(-2.41)
Controls	Yes	Yes
Fiscal quarter FE	Yes	Yes
Calendar year-month FE	Yes	Yes
Industry FE	Yes	Yes
R-squared	0.123	0.025
# firms	2,378	2,378
No. of observations	15,859	15,859

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RQ3: What is the effect of the public enforcement on the information environment of China's financial markets?

Dep. Variable	(1) $CAR_{[-3,5]}$	(2) $CAR_{[-3,7]}$
$Treat_i * Post_{fqtr,q} * UE_{i,q}$	0.145***	0.150***
	(2.74)	(2.66)
Controls	Yes	Yes
Fiscal quarter FE	Yes	Yes
Calendar year-month FE	Yes	Yes
Industry FE	Yes	Yes
R-squared	0.034	0.034
# firms	2,378	2,378
No. of observations	18,074	18,074

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Summary of key results

The regulation led to the account deletion of many finfluencers, particularly those exhibiting a more negative tone

The non-deleted finfluencers post fewer messages and adopt a more positive tone in their posts

The regulation fails to improve the stock price informativeness of affected firms

Expected contributions

- Literature on social media misinformation in financial markets
  - The antecedents and consequences of misinformation to firms and capital markets
  - How to regulate misinformation
    - Crowley et al. (2025a) examines impact of misinformation regulations across countries on corporate disclosure behavior
    - Crowley et al. (2025b) find that China's Cyber Security Law in 2016 helps reduce fake social media posts
  - We provide complementary evidence by focusing on
    - The public enforcement of the Cyber Security Law
    - Impact on finfluencers (tone and volume of posts)
    - Impact on the stock price informativeness of affected firms

Expected contributions

- Literature on the regulation of media for capital markets
  - A long literature on the pros and cons of government regulation
  - Prior research focuses on the regulation of traditional media
  - Little research on the regulation of social media and we are among the first to investigate the consequences of regulating social media misinformation

Q&A