Are shorts restricted when options are an option?

Evidence from SEC Rule 201

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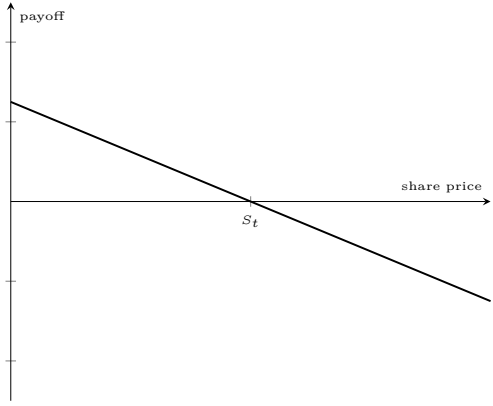
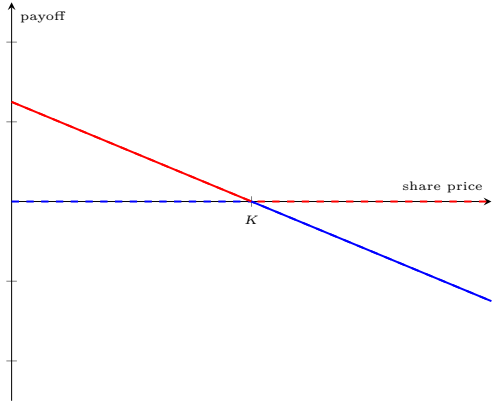
Motivation

- Currently in the US, short selling is regulated by a stock-specific, state contingent rule
- **SEC Rule 201** "*the alternative uptick rule*"
- The objective of this rule
  - prevent excessive downward price pressure on securities
  - decrease volatility, promote liquidity
  - maintain market quality and investor confidence

Does the regulation work?

Motivation





Motivation

- During the 2008 short sale ban traders **did not migrate** to options markets
- Grundy, Lim, and Verwijmeren (2012), Beber and Pagano (2013)

- More recently, under the predecessor regulation, traders **do migrate** to options markets in the presence of short selling constrains
- Chen, Chen, and Chou (2020), Allen, Haas, Nowak, Pirovano, and Tengulov (2021)

Motivation

- *Do traders migrate to the options market to circumvent short selling restrictions*?
- *If they do, how does this affect market quality in the equity market and the corresponding options market*?
- *Is the current regulation effective in curbing short selling and maintaining market quality*?

- In this paper, we investigate the effect of the current short selling Rule 201 on
  - short selling activity *and* options market activity
  - measures of market quality in the equity market and corresponding options market in the presence of trader migration

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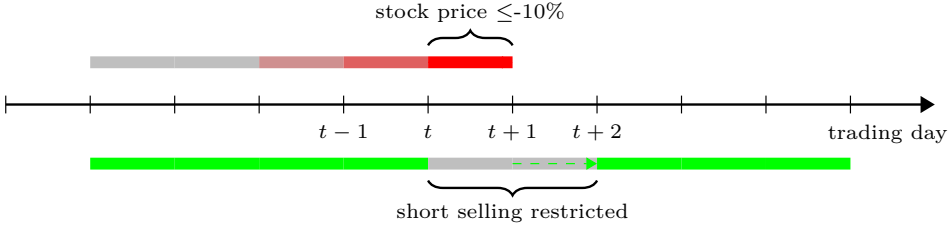
The working mechanism of SEC Rule 201



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1. SEC Rule 201 is triggered $\Rightarrow$ short loan quantity decreases
2. stocks with options $\Rightarrow$ increase / no increase in put option open interest and trading volume
   - informed trader bypass restrictions by trading options
   - options market makers pass through increased hedging costs
3. stocks with options $\Rightarrow$ lower decrease in short interest (compared to stocks without options)
   - options market makers hedge against increased put demand by shorting underlying
4. stocks with options $\Rightarrow$ increase in call option open interest and trading volume
   - informed traders fully replicate short position, write call options
   - traders express views for potential price rebounds
5. stocks with options $\Rightarrow$ increase / decrease in bid-ask spreads
   - less liquidity/competition increases equity bid-ask spreads
   - less adverse selection risk reduces equity bid-ask spreads
   - vice versa for options market makers

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Data Sources

- Data sources:
  - NYSE (Short Sale Circuit Breaker)
  - Nasdaq (Short Sale Circuit Breaker)
  - IHS Markit (Buyside Analytics Equities)
  - Option Metrics (Ivy DB US)
  - CRSP
- Sample period:
  - February 28, 2011 - December 31, 2020 (Nasdaq listed stocks)
  - March 25, 2015 - December 31, 2020 (NYSE listed stocks)
- Frequency:
  - daily

Data Filters

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Research design

$$Y_{i,t} = \alpha + \boxed{\beta_1} Trigger_{i,t} + \beta_2 Option_{i,t} + \boxed{\beta_3} Trigger_{i,t} \times Option_{i,t} + \beta_4 Controls_{i,t} + FE + \varepsilon_{i,t}$$

$$Y_{i,t} = \alpha + \boxed{\beta_1} Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

- Controls: (similar to Grundy, Lim, and Verwijmeren 2012, Chen, Chen, and Chou 2020)
  - daily trading volume of stock (in millions)
  - daily stock return
  - CBOE Volatility index VIX
  - market capitalization of the firm
  - Amihud's illiquidity measure (Amihud 2002)
- Industry fixed effects (4 digit SIC-code), time fixed effects
- Standard errors are clustered by firm and year (Petersen 2009)

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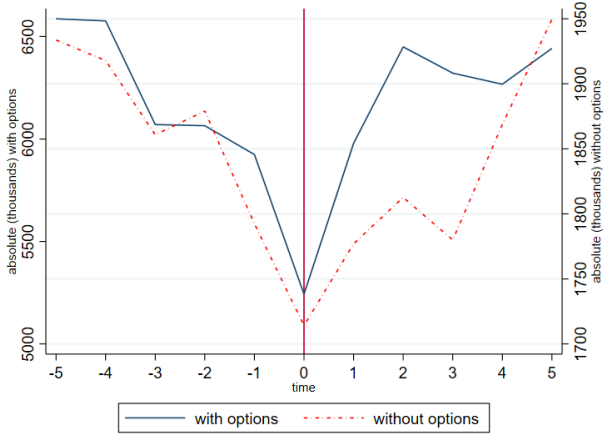
Short loan quantity around Rule 201 trigger events



Option markets activity around Rule 201 trigger events

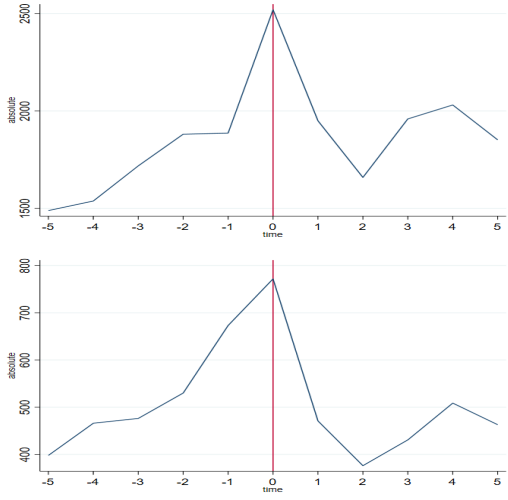


Figure: **Δ-OI and Volume Puts**

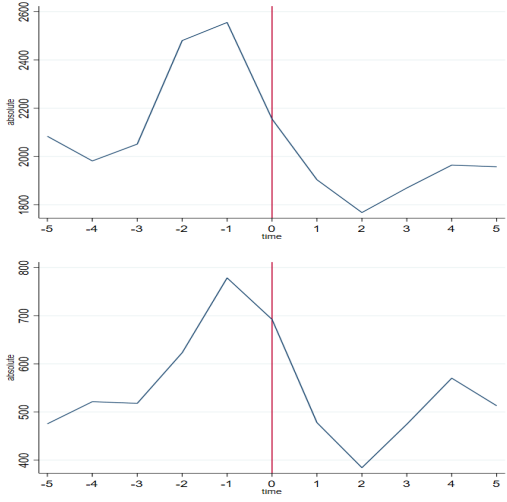


Figure: **Δ-OI and Volume Calls**

Option bid-ask spreads around Rule 201 trigger events

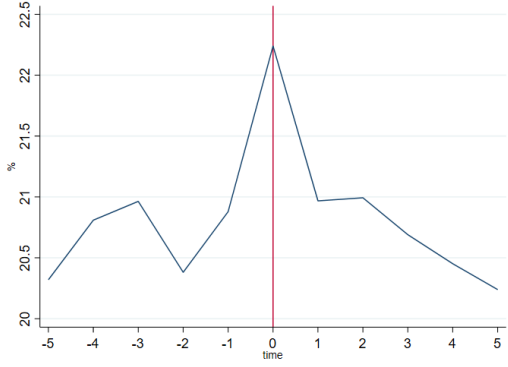


Figure: **Puts**

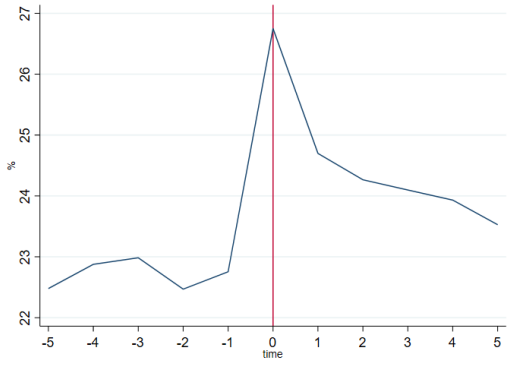


Figure: **Calls**

Equity spreads, price dispersion around Rule 201 trigger events

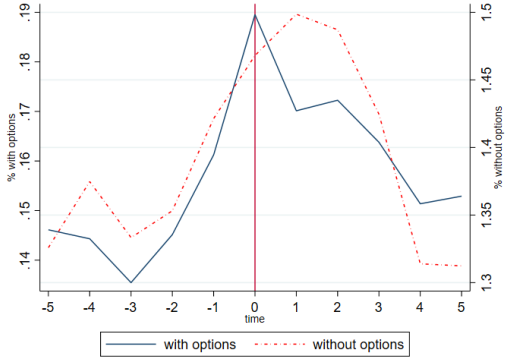


Figure: Equity bid-ask spread

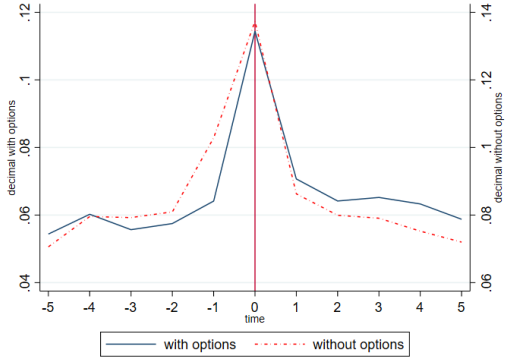


Figure: Equity price dispersion

Summary of the effects of SEC Rule 201

$$Y_{i,t} = \alpha + \boxed{\beta_1} Trigger_{i,t} + \beta_2 Option_{i,t} + \boxed{\beta_3} Trigger_{i,t} \times Option_{i,t} + \beta_4 Controls_{i,t} + FE + \varepsilon_{i,t}$$

$$Y_{i,t} = \alpha + \boxed{\beta_1} Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

Stocks	w/o options	w options
Short Loan Quantity	-54.2%	-6.5%
Equity Bid-Ask Spread	+109.3%	+117%
Equity Price Dispersion	+184.2%	+142.4%

Options	Calls	Puts
Open Interest	+37.0%	+62.3%
Trading Volume	+62.9%	+24.7%
Option Bid-Ask Spread	+17.5%	+11.4%
IV Spread		+600%

Our interpretation of the effects of SEC Rule 201

when SEC Rule 201 becomes binding:

- short sellers migrate from the equity market to options markets
  - decrease in shorting activity
  - increase in options market activity
  - increase in demand pressure for put options
- option market makers increase their hedging activity
  - shorting activity decreases less for optionable stocks
- options market makers face an increase in adverse selection costs
  - increase in options bid-ask spread
- equity *and* options market quality deteriorates
  - disclosure of options positions in addition to equity short position could increase transparency

Contribution to the related literature on trader migration

- Grundy, Lim, and Verwijmeren (2012), Battalio and Schultz (2011) during the short sale ban 2008 put options did not emerge as substitutes for equity short sales
- Blau and Brough (2015), DeLisle, Lee, and Mauck (2016) short demand variables in equity and options market positively related
- Li, Zhao, and Zhong (2016) no change in option trading volume for designated pilot stocks (Reg SHO pilot program)

- Chen, Chen, and Chou (2020) put options did substitute for short selling during Reg SHO pilot program
- Allen, Haas, Nowak, Pirovano, and Tengulov (2021) short sellers migrated to the options market during 2021 meme stock short squeeze
- Hayunga, Lung, and Nishikawa (2010), Cakici, Goswami, and Tan (2018), Ni and Pan (2020) call-put parity violations are more frequent when short selling is restricted

* large sample evidence for trader migration under current Rule 201

Contribution to the related literature on market quality

- Beber and Pagano (2013) 2008, 2009 short selling bans increased equity bid-ask spreads in 30 equity markets
- Boehmer, Jones, and Zhang (2013) significant increase in equity bid-ask spreads (for all but small stocks) during 2008 US short-sale ban

- Diether, Lee, and Werner (2009) suspension on short selling restrictions during Reg SHO pilot program increases equity bid-ask spreads for pilot stocks
- Jain, Jain, and McInish (2012), Barardehi et al. (2023) equity bid-ask spreads decrease for stocks that trigger Rule 201
- Crane et al. (2019) no clear impact of short selling restrictions on market quality in Hong Kong.

* equity *and* options bid-ask spreads increase when Rule 201 becomes binding

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Conclusions

- we investigate the effect of Rule 201 on
  - short selling activity and market quality
- we document
  - decrease in equity short selling
  - increase in synthetic short selling
  - increase in option bid-ask spreads
  - increase in equity bid-ask spreads
- our findings are consistent with the conjecture that
  - informed short sellers migrate to the options market
  - adverse selection risk decreases for equity market makers
  - adverse selection risk (and hedging) increases for options market makers
  - disclosure requirements should include options positions (transparency)

Thank you!

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A brief history of short selling regulation in the US

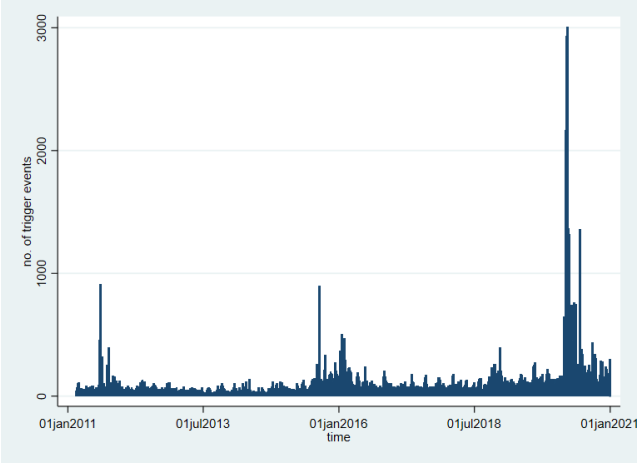
Appendix

Data Filters: (Grundy, Lim, and Verwijmeren 2012, Lin and Lu 2016, Barardehi et al. 2023, Chen, Chen, and Chou 2020)

- exclude firms that
  - do not have data during whole sample period
  - changed listing venue
  - were involved in merger or acquisition
- exclude obs. with zero open interest / trading volume
- exclude obs. $ask < bid$
- exclude obs. that violate no-arbitrage bound
  - $bid > \max[Ke^{-r_f T} - S, 0]$
- exclude obs. with $ask \leq 0$ and $bid \leq 0$
- exclude obs. with bid-ask spread > 0.5
- exclude options with $T > 365$
- exclude options with contract size $\neq 100$

◂ Data Sources

Sample distribution of Rule 201 short halts through time



- $\approx$ 250,000 trigger events
- $\hat{=}$ 3% of total observations
- $\Rightarrow \approx$ 100 trigger events / day

Sample construction

	Option-Day Obs.	Δ	Unique Firms w/ Options	Δ	Unique Firms w/o Options	Δ
OptionMetrics - CRSP	320,275,096		3,237		10,412	
Option Filters		-247,147,317		-68		0
	73,127,779		3,169		10,412	
Shorthalt Data		-13,680,235		-25		0
	59,447,544		3,144		10,412	
IHS Markit		-17,534,940		-802		-3,435
	41,912,604		2,342		6,977	
Firm level aggregation		-34,016,892		0		0
	Firm-Day Obs.					
Final full sample	**7,895,712**		2,342		6977	

Sample summary statistics

	Full Sample			with Options			without Options		
	Obs.	Mean	SD	Obs.	Mean	SD	Obs.	Mean	SD
Delta Open Interest (% Shares) Puts	2,032,157	.183	.490	2,032,157	.183	.490	-	-	-
Delta Open Interest (% Shares) Calls	2,260,733	.295	.690	2,260,733	.295	.690	-	-	-
Equity Price Dispersion	8,230,842	.037	.034	2,482,298	.033	.026	5,748,544	.038	.036
Illiquidity	8,230,486	0	0	2,482,297	0	0	5,748,189	0	0
Implied Volatility Spread	21,810,430	-0.001	0.031	21,810,430	-0.001	0.031	-	-	-
Open Interest (% Shares) Puts	2,032,256	.418	.686	2,032,256	.418	.686	-	-	-
Open Interest (% Shares) Calls	2,260,733	.566	.888	2,260,733	.566	.888	-	-	-
OVS Puts	2,032,157	1,993.519	11,855.65	2,032,157	1,993.519	11,855.65	-	-	-
OVS Calls	2,260,733	1674.672	5536.257	2,260,733	1674.672	5536.257	-	-	-
Relative Equity Spread	8,230,823	.524	.951	2,482,298	.100	.173	5,748,525	.708	1.082
Relative Option Spread Puts	2,032,157	19.191	7.913	2,032,256	19.191	7.913	-	-	-
Relative Option Spread Calls	2,260,733	20.664	9.735	2,260,733	20.664	9.735	-	-	-
Short Loan Quantity	8,212,714	2,439,335	6,535,491	2,476,307	4,582,952	8,852,205	5,736,407	1,513,973	4,948,103
Short Loan Quantity (% Shares)	8,212,572	2.656	4.690	2,476,307	3.963	5.533	5,736,265	2.091	4.150
Size (Market Cap)	8,230,842	4,800,526	1.48e+07	2,482,298	1.24e+07	2.40e+07	5,748,544	1,524,143	5,345,298
Stock Return	8,230,507	0	.027	2,482,297	.001	.027	5,748,210	0	.028
Stock Trading Volume in Mio.	8,230,823	1.077	3.638	2,482,298	2.214	5.434	5,748,525	.586	2.325
Triggered	8,233,202	.03	.171	2,482,298	.021	.142	5,750,904	.034	.182
VIX	8,233,202	17.689	7.72	2,482,298	17.600	8.078	5,750,904	17.728	7.560

The effect of SEC Rule 201 on short loan quantity

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Option_{i,t} + \beta_3 Trigger_{i,t} \times Option_{i,t} + \beta_4 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1)	(2)	(3)
VARIABLES	Short Quantity	Short Quantity	Short Quantity
Trigger	-0.404***	-0.831***	-0.780*** [-54.2%]
	(-11.590)	(-29.570)	(-27.642)
Option	0.823***	0.484***	0.551***
	(21.456)	(14.256)	(15.807)
Trigger×Option	-0.256***	0.164***	0.162*** [-6.5%]
	(-5.826)	(4.523)	(4.579)
Constant	13.895***	13.835***	13.830***
	(357.424)	(475.153)	(608.687)
Observations	8,211,999	8,194,159	8,194,159
Adjusted R^2	0.566	0.689	0.697
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

The effect of SEC Rule 201 on put Δ-open interest as % of shares

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1) Delta OI % Shares	(2) Delta OI % Shares	(3) Delta OI % Shares
Trigger	0.125***	0.096***	0.114*** [+62.3%]
	(6.419)	(6.277)	(6.720)
Constant	0.193***	0.190***	0.180***
	(15.688)	(17.853)	(24.021)
Observations	2,032,255	2,032,157	2,032,157
Adjusted R^2	0.068	0.212	0.221
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

▸ Moneyness/Maturity Splits

The effect of SEC Rule 201 on call Δ-open interest as % of shares

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1) Delta OI % Shares	(2) Delta OI % Shares	(3) Delta OI % Shares
Trigger	0.097***	0.029	0.109*** [+37.0%]
	(2.759)	(0.968)	(4.097)
Constant	0.695***	0.684***	0.599***
	(24.299)	(29.322)	(35.176)
Observations	2,260,732	2,260,586	2,260,586
Adjusted R^2	0.137	0.318	0.340
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

▸ Moneyness/Maturity Splits

The effect of SEC Rule 201 on put option trading volume

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1) Put Volume	(2) Put Volume	(3) Put Volume
Trigger	542.897***	415.072***	492.918*** [+24.7%]
	(6.505)	(5.436)	(5.844)
Constant	418.074***	359.962***	348.611***
	(7.417)	(6.870)	(8.579)
Observations	2,032,255	2,032,157	2,032,157
Adjusted R^2	0.422	0.500	0.504
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

▸ Moneyness/Maturity Splits

The effect of SEC Rule 201 on call option trading volume

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1) Call Volume	(2) Call Volume	(3) Call Volume
Trigger	977.442***	668.622***	1,053.123*** [+62.9%]
	(4.295)	(3.186)	(5.053)
Constant	694.283***	667.155***	641.538***
	(4.898)	(5.047)	(6.204)
Observations	2,260,732	2,260,586	2,260,586
Adjusted R^2	0.397	0.489	0.498
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

▸ Moneyness/Maturity Splits

The effect of SEC Rule 201 on put option bid-ask spreads

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1) Put Bid-Ask Spread	(2) Put Bid-Ask Spread	(3) Put Bid-Ask Spread
Trigger	2.774***	2.400***	2.190*** [+11.4%]
	(12.991)	(12.162)	(15.314)
Constant	17.736***	17.853***	20.087***
	(101.484)	(118.802)	(257.072)
Observations	2,032,255	2,032,157	2,032,157
Adjusted R^2	0.178	0.253	0.301
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

The effect of SEC Rule 201 on call option bid-ask spreads

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

	(1) Call Bid-Ask Spread	(2) Call Bid-Ask Spread	(3) Call Bid-Ask Spread
Trigger	4.316***	3.596***	3.608*** [+17.5%]
	(19.108)	(17.724)	(22.199)
Constant	17.776***	17.786***	21.536***
	(89.476)	(105.315)	(212.477)
Observations	2,260,732	2,260,586	2,260,586
Adjusted R^2	0.209	0.290	0.319
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

The effect of SEC Rule 201 on equity bid-ask spreads

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Option_{i,t} + \beta_3 Trigger_{i,t} \times Option_{i,t} + \beta_4 Controls_{i,t} + FE + \varepsilon_{i,t}$$

VARIABLES	(1) Equity Bid-Ask Spread	(2) Equity Bid-Ask Spread	(3) Equity Bid-Ask Spread
Trigger	0.905***	0.764***	0.774*** [+109.3%]
	(35.735)	(33.104)	(35.208)
Option	-0.088***	-0.144***	-0.134***
	(-9.726)	(-13.620)	(-11.948)
Trigger×Option	-0.653***	-0.557***	-0.523*** [+117%]
	(-25.208)	(-21.612)	(-21.449)
Constant	-0.085***	-0.095***	0.076***
	(-6.175)	(-7.248)	(8.201)
Observations	8,230,467	8,212,574	8,212,574
Adjusted R^2	0.313	0.394	0.401
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

The effect of SEC Rule 201 on equity price dispersion

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Option_{i,t} + \beta_3 Trigger_{i,t} \times Option_{i,t} + \beta_4 Controls_{i,t} + FE + \varepsilon_{i,t}$$

VARIABLES	(1) Equity Price Dispersion	(2) Equity Price Dispersion	(3) Equity Price Dispersion
Trigger	0.080***	0.072***	0.070*** [+184.2%]
	(103.185)	(93.677)	(112.910)
Option	-0.008***	-0.008***	-0.010***
	(-17.422)	(-20.000)	(-22.438)
Trigger×Option	-0.017***	-0.012***	-0.013*** [+142.4%]
	(-11.957)	(-8.859)	(-11.719)
Constant	0.027***	0.026***	0.044***
	(37.744)	(37.533)	(134.146)
Observations	8,230,486	8,212,593	8,212,593
Adjusted R^2	0.297	0.403	0.422
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

The effect of SEC Rule 201 on implied volatility spread

$$Y_{i,t} = \alpha + \beta_1 Trigger_{i,t} + \beta_2 Controls_{i,t} + FE + \varepsilon_{i,t}$$

VARIABLES	(1) IV Spread	(2) IV Spread	(3) IV Spread
Trigger	0.012***	0.011***	0.006*** [+600%]
	(83.959)	(80.012)	(53.947)
Constant	0.000***	0.000***	-0.000**
	(7.118)	(8.872)	(-2.372)
Observations	21,810,430	21,810,406	21,810,406
Adjusted R-squared	0.011	0.039	0.151
Industry Fixed Effects	NO	YES	YES
Time Fixed Effects	NO	NO	YES
Controls	YES	YES	YES

The effects of SEC Rule 201: additional robustness checks

- sample splits
  - NYSE, Nasdaq
  - option maturity and moneyness
- dependent variables:
  - short loan quantity, quantity on loan, value on loan, active utilisation
  - open interest, open interest/shares outstanding
  - put / call implied volatility
  - probability of put-call parity violations
  - iv-skew
  - different scaling of dependent variables

Appendix

	M1/T1	M1/T2	M2/T1	M2/T2	M3/T1	M3/T2	M4/T1	M4/T2	M5/T1	M5/T2
Triggered	0.016***	0.003	0.029***	0.007***	0.081***	0.038***	0.014***	0.003*	0.026***	0.007***
	(3.483)	(1.566)	(8.703)	(4.398)	(8.040)	(5.647)	(8.350)	(1.866)	(7.033)	(2.892)
Constant	0.075***	0.026***	0.041***	0.024***	0.072***	0.049***	0.027***	0.023***	0.025***	0.014***
	(31.982)	(34.722)	(28.426)	(23.818)	(15.430)	(14.799)	(35.430)	(33.138)	(22.602)	(17.391)
Observations	1,510,791	958,628	501,936	467,222	409,017	368,696	1,021,856	1,012,503	850,441	758,622
Adjusted R^2	0.229	0.146	0.116	0.097	0.103	0.106	0.168	0.160	0.149	0.158
Industry Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table: The effect of Rule 201 on **Put** open interest as % of shares outstanding, moneyness/maturity splits

◂ Results: Put Open Interest

Appendix

	M1/T1	M1/T2	M2/T1	M2/T2	M3/T1	M3/T2	M4/T1	M4/T2	M5/T1	M5/T2
Triggered	0.004	0.007**	0.017***	0.011***	0.054***	0.035***	0.017***	0.010***	0.065***	0.045***
	(0.598)	(2.194)	(4.645)	(3.989)	(5.344)	(5.350)	(6.268)	(4.121)	(7.946)	(8.413)
Constant	0.117***	0.046***	0.060***	0.039***	0.081***	0.052***	0.042***	0.036***	0.056***	0.048***
	(32.602)	(39.229)	(36.311)	(31.401)	(21.687)	(18.848)	(33.030)	(36.157)	(20.747)	(21.522)
Observations	1,667,157	1,232,530	723,803	716,133	633,147	593,231	990,622	1,184,602	781,284	860,270
Adjusted R^2	0.255	0.164	0.152	0.137	0.129	0.136	0.152	0.149	0.129	0.158
Industry Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table: The effect of Rule 201 on **Call** open interest as % of shares outstanding, moneyness/maturity splits

◂ Results: Call Open Interest

Appendix

	M1/T1	M1/T2	M2/T1	M2/T2	M3/T1	M3/T2	M4/T1	M4/T2	M5/T1	M5/T2
Triggered	454.106***	53.763**	138.854***	23.663**	142.182***	29.217***	363.230***	68.598**	313.825***	25.651***
	(2.614)	(2.041)	(4.847)	(2.292)	(5.210)	(3.943)	(6.403)	(2.521)	(6.826)	(5.245)
Constant	265.092***	34.808***	8.302	20.739***	14.918	33.525***	116.966***	51.474***	119.571***	42.449***
	(5.457)	(5.358)	(0.957)	(7.648)	(1.532)	(10.372)	(6.077)	(5.879)	(7.202)	(24.131)
Observations	1,617,025	976,702	506,801	471,391	412,338	371,400	1,223,968	1,093,490	1,081,353	867,803
Adjusted R^2	0.491	0.261	0.126	0.086	0.075	0.060	0.369	0.259	0.265	0.268
Industry Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table: The effect of Rule 201 on **Put** option trading volume, moneyness/maturity splits

◂ Results: Put Trading Volume

Appendix

	M1/T1	M1/T2	M2/T1	M2/T2	M3/T1	M3/T2	M4/T1	M4/T2	M5/T1	M5/T2
Triggered	684.889**	95.473**	165.539***	46.845***	121.105***	16.040***	334.779***	109.938***	446.450***	136.936***
	(2.371)	(2.462)	(5.990)	(4.057)	(5.925)	(9.766)	(3.348)	(2.584)	(4.921)	(5.053)
Constant	337.266***	47.859***	9.324	16.781***	18.636**	17.966***	87.474***	55.650***	99.243***	67.007***
	(4.670)	(4.903)	(0.883)	(4.015)	(2.173)	(29.993)	(3.134)	(5.642)	(2.871)	(6.208)
Observations	1,667,157	1,232,530	723,803	716,133	633,147	593,231	990,622	1,184,602	781,284	860,270
Adjusted R^2	0.507	0.308	0.236	0.112	0.094	0.236	0.337	0.267	0.250	0.212
Industry Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Time Fixed Effects	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Table: The effect of Rule 201 on **Call** option trading volume, moneyness/maturity splits

◂ Results: Call Trading Volume