1. Leverage Regulations and Treasury Market Participation: Evidence from Credit Line Drawdowns

2. Supervisory Policy Stimulus: Evidence from the Euro Area Dividend Recommendation

Discussion by Tim Landvoigt

Columbia University/Bank Policy Institute
2023 Bank Regulation Research Conference
March 1, 2023

PAPER 1. LEVERAGE REGULATIONS AND TREASURY MARKET PARTICIPATION

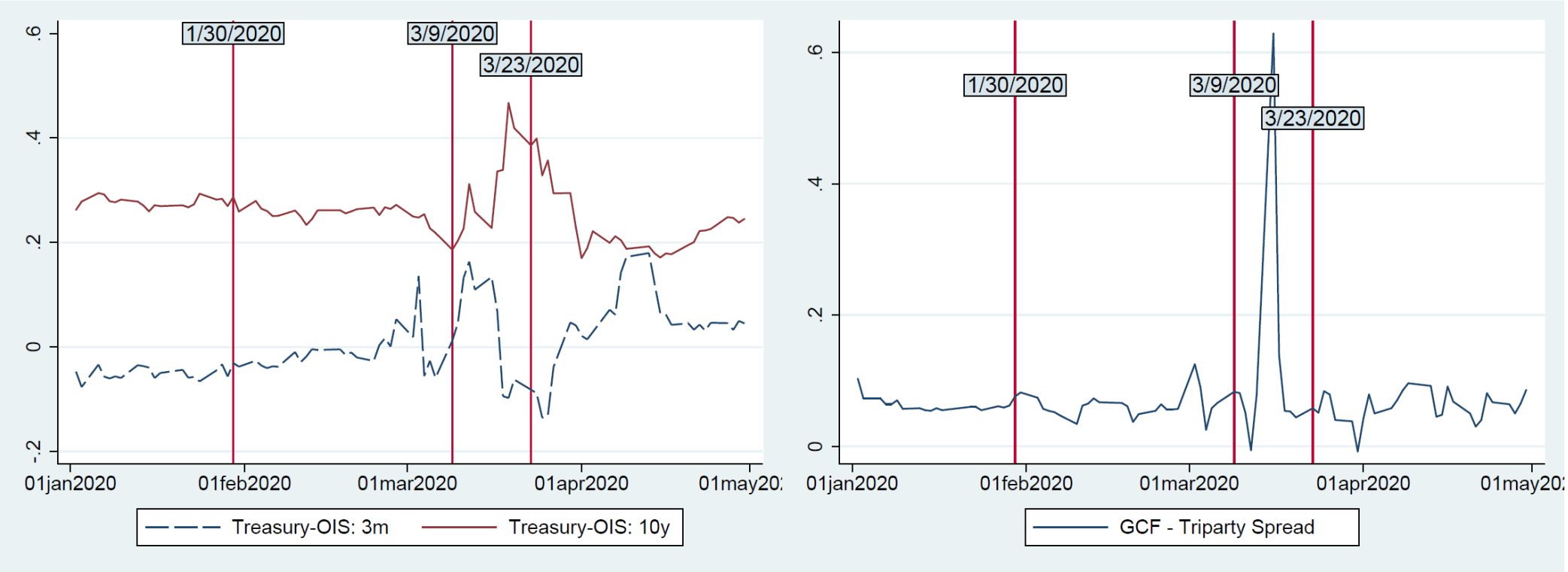
Motivation

- Largest banks also function as dealers in treasury market
- Risk-weighted capital requirements do not (substantially) interfere with market making for treasuries
  - T-bills have zero risk weight, long-dated treasuries small risk weights

- **But Supplementary Leverage Ratio (SLR) includes all assets and thus also treasuries**
- This paper: large credit line drawdowns in 2020 tightened SLRs for most banks, causing them to cut back on intermediation activity for treasuries. Two "experiments"
  1. Pandemic itself causes surprise increase in credit line utilization (March 2020)
  2. Fed enacts temporary exemption of reserves and treasuries from SLR (April 2020 – April 2021)

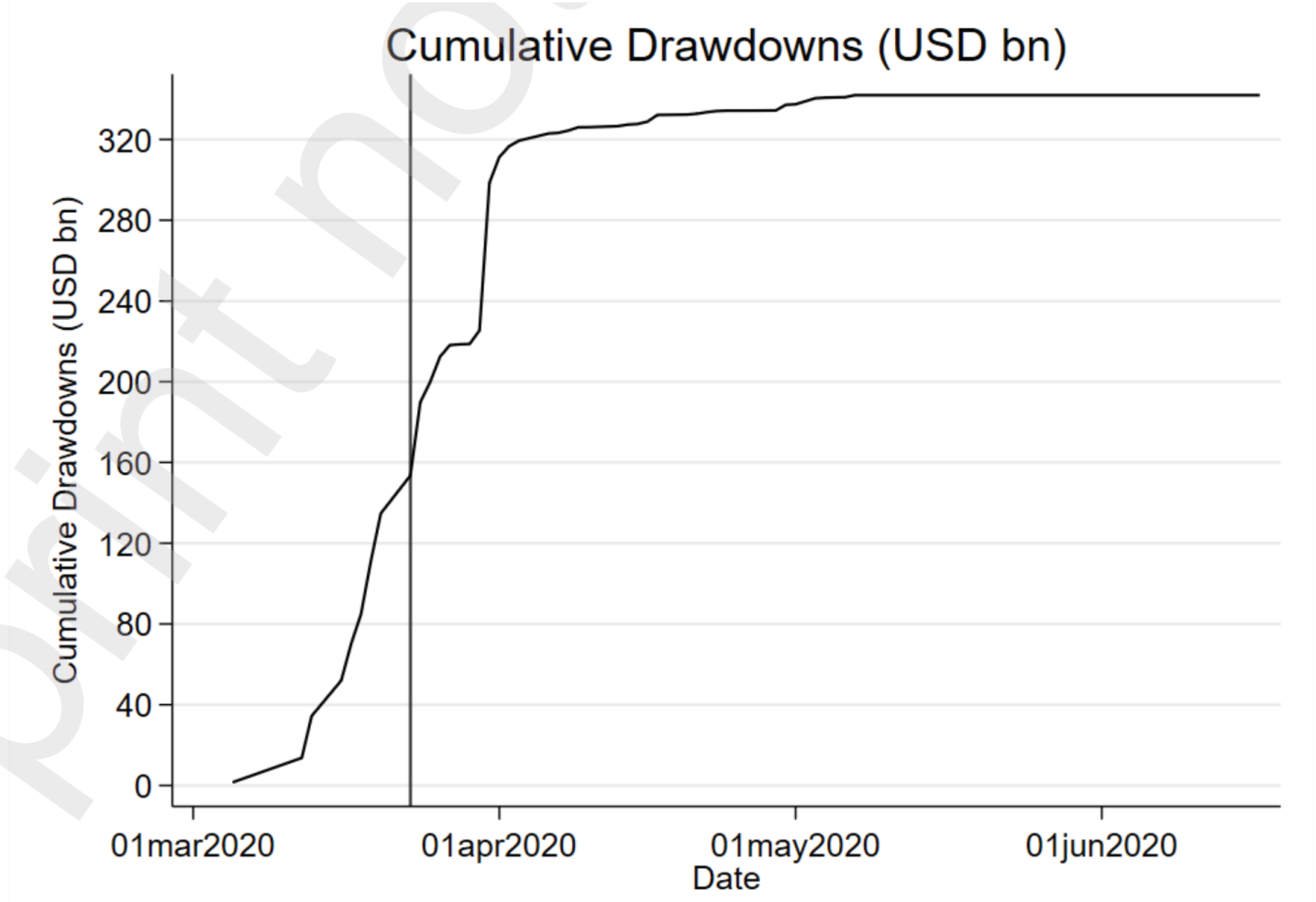
Turmoil in Treasury Market

Figure 6: **Treasury-OIS and GCF-Triparty Repo Spreads during the COVID-19 Crisis**



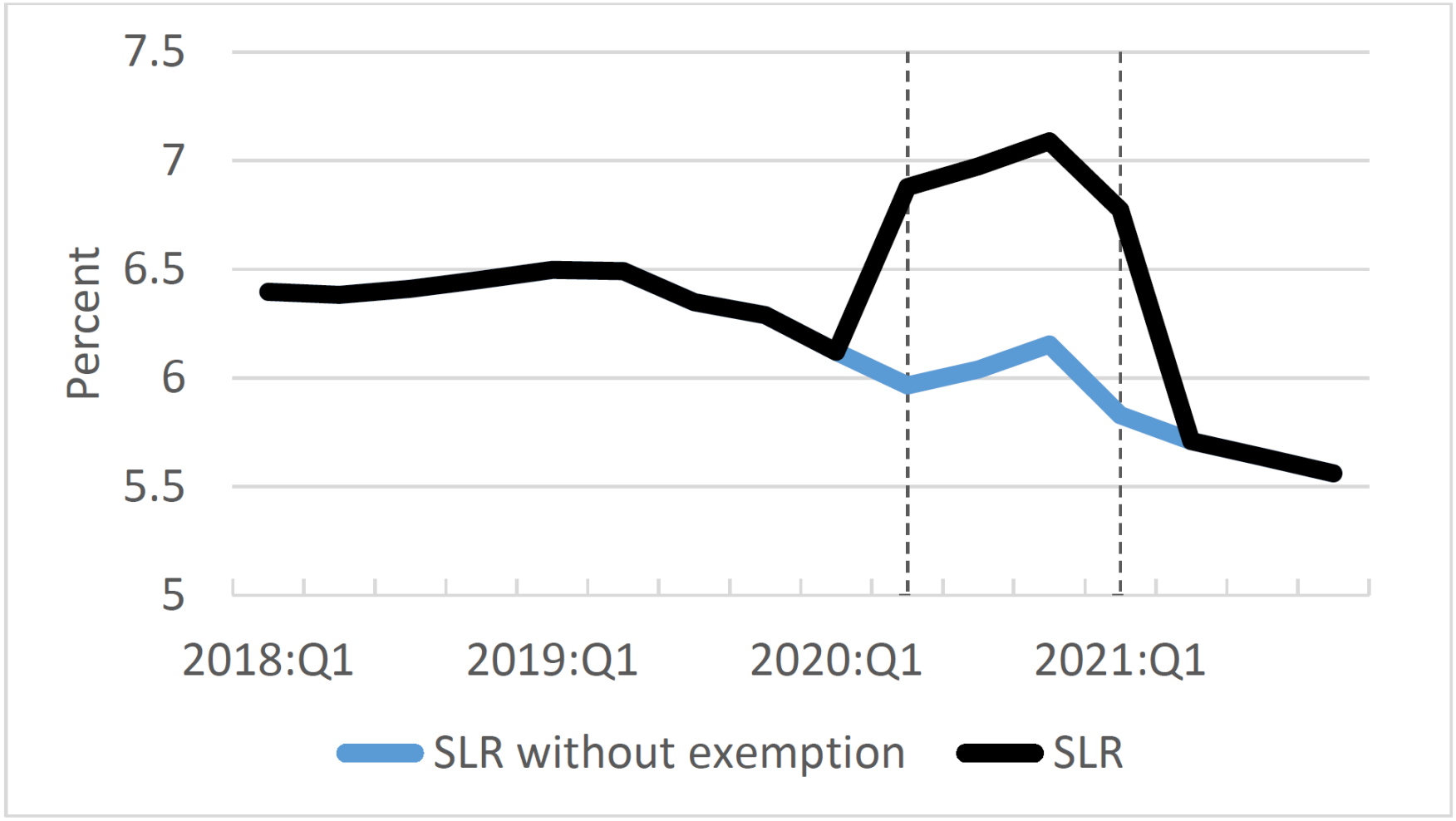
Source: He, Zhiguo and Nagel, Stefan and Song, Zhaogang, Treasury Inconvenience Yields During the Covid-19 Crisis

Credit Line Drawdowns



Source: Acharya, Viral V. and Engle, Robert F. and Steffen, Sascha, Why Did Bank Stocks Crash during COVID-19?

SLR Buffers Over Time



Regression Design

$$\Delta TPos_{it} = \beta \Delta CL_{it} + \beta' \Delta CL_{it} \times 1_{March2020} + \phi \Delta CL_{it} \times SLR_{iq-1} + \phi' \Delta CL_{it} \times 1_{March2020} \times SLR_{iq-1} + \alpha_{im} + Controls + \epsilon_{it}$$

- Regressions include direct effect of CL drawdowns on treasury positions
  - For the whole sample and separately for March 2020
- And interaction of these effects with bank-specific SLR buffer
  - For the whole sample and separately for March 2020
- Bank-month fixed effects control for macro conditions and fundamental differences between banks
- Also control for wide set of daily treasury market variables

Main Results

	BHC		
	$\Delta Total_{i,t}$	$\Delta RevRepo_{i,t}$	$\Delta Position_{i,t}$
Interaction Carve Out w/ Interaction March 2020			
$\beta : \Delta CL\,Outstanding_{i,t}$	1.026	0.856	0.155
	(0.869)	(0.750)	(0.389)
$\phi : \Delta CL\,Outstanding_{i,t} \times SLR_{i,q(t)-1}$	-1.075**	-0.899**	-0.166
	(0.517)	(0.451)	(0.248)
$\beta' : \Delta CL\,Outstanding_{i,t} \times 1_{Mar2020}$	-36.290***	-23.190***	-14.909***
	(6.681)	(5.994)	(1.409)
$\phi' : \Delta CL\,Outstanding_{i,t} \times SLR_{i,q(t)-1} \times 1_{Mar2020}$	24.782***	15.031***	11.042***
	(5.249)	(4.809)	(0.981)
$\beta'' : \Delta CL\,Outstanding_{i,t} \times 1_{CarveOut}$	3.412*	1.403	1.817*
	(1.946)	(2.134)	(1.012)
$\phi'' : \Delta CL\,Outstanding_{i,t} \times SLR_{i,q(t)-1} \times 1_{CarveOut}$	-1.199	-0.331	-0.786
	(1.198)	(1.181)	(0.622)
Est $\beta + \phi$	-0.050	-0.043	-0.011
	(0.397)	(0.344)	(0.161)
Est $\beta + \phi + (\beta' + \phi')$	-11.558***	-8.203***	-3.878***
	(1.564)	(1.346)	(0.462)
Est $\beta + \phi + (\beta'' + \phi''')$	2.163***	1.029	1.020**
	(0.771)	(0.964)	(0.406)
Adj Rsq	0.282	0.283	0.325
Obs	3961	3961	3961

CL Drawdown x SLR Powerful Predictor in March 2020

These effects disappear with SLR exemption

Comments

Narrow

1. Can we translate effects on positions into impacts on e.g. Treasury-OIS spreads to gauge ultimate market disruption caused by reduced SLR buffers?
2. Carve-out period coincides with massive QE by Fed – absorbed large fraction of new LT treasury supply and took pressure off dealer balance sheets. How to disentangle effects?

Broad

1. What is rationale for ever including Reserves + Tbills in SLR? Penalizing banks for holding cash?
2. Capital regulation views banks primarily as lenders and deposit takers. But large BHC act as key intermediaries in many markets (treasuries, corporate bonds, FX). How to better accommodate this role of banks in capital regulation?

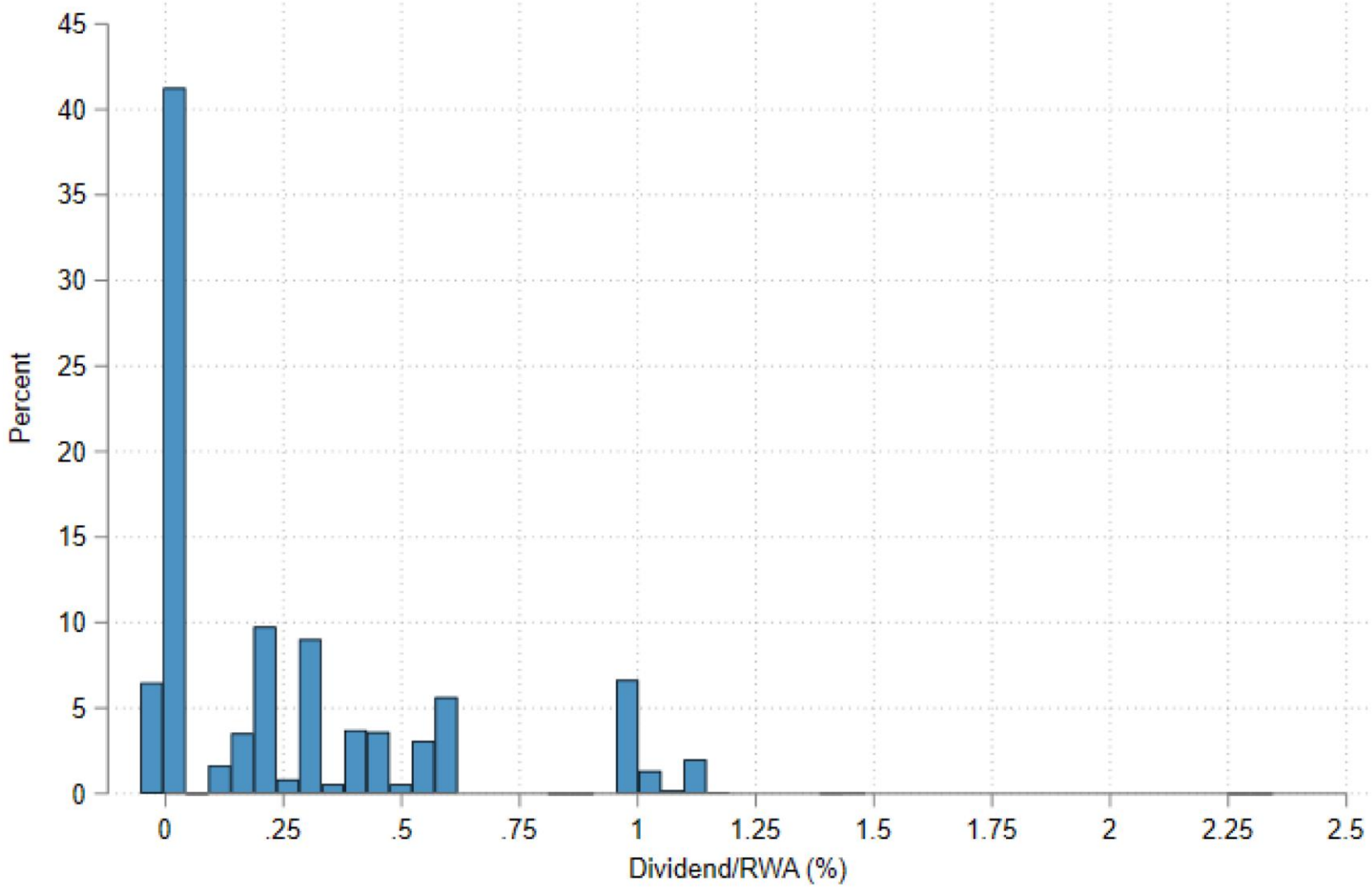
PAPER 2. EVIDENCE FROM THE EURO AREA DIVIDEND RECOMMENDATION

Motivation

- At onset of pandemic, wide set of policies in Euro area aimed at spurring bank lending to firms (hard to keep track of all the acronyms!)
  - ECB quantitative easing: TLTRO, APP, PEPP
  - Fiscal policy: government guarantees for corporate loans

- Less well known/studied policy: ECB “recommendation” issued to Euro area banks on March 27, 2020 to retain all dividend payouts planned for 2020
- Goal: strengthen equity capital buffer to increase
  - resilience in case of loan losses
  - credit extension to firms and households

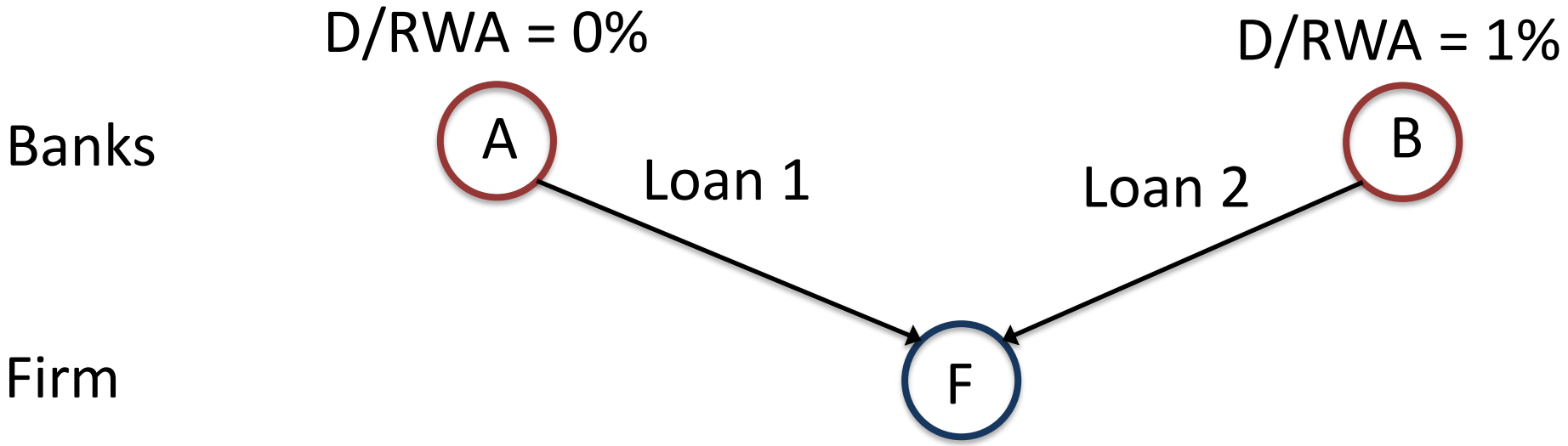
Bank Distribution of €11.8 Billion Retained



Empirical Approach

- To control for confounding differences between banks and borrowing firms, paper adopts Khwaja & Mian (2008) approach
- Focus on firms that have outstanding loans from at least two different banks

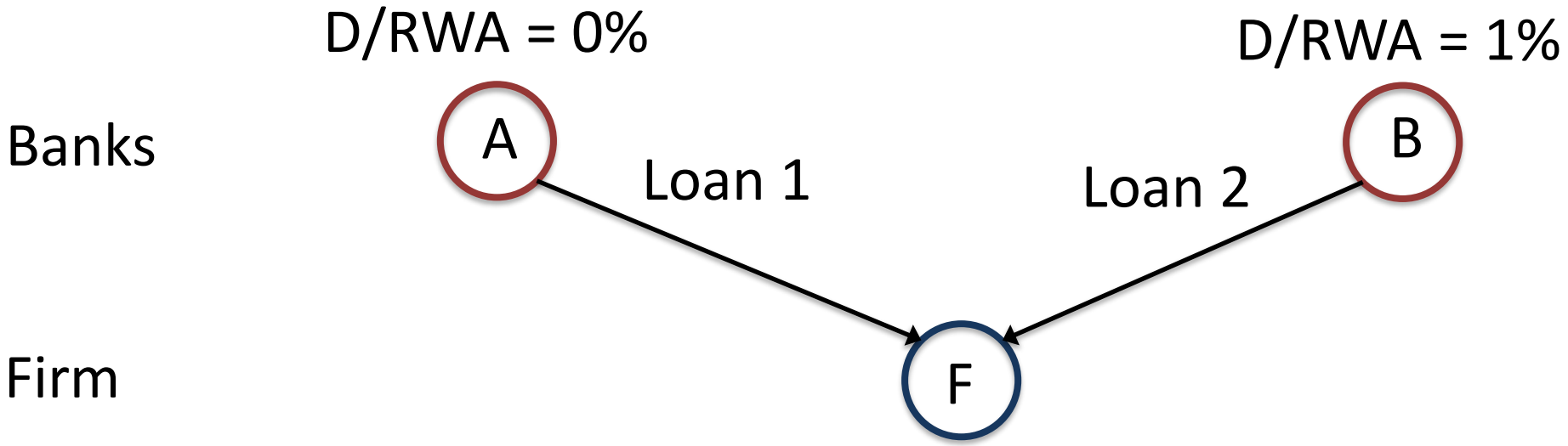
Key Hypothesis: Since bank B retains relatively more dividends, should expand lending more than bank A



Main Result 1

- For every 1% of retained D/RWA, bank B on average expanded its lending to firm F by an additional 4.4%

Key Hypothesis: Since bank B retains relatively more dividends, should expand lending more than bank A



Main Result 2

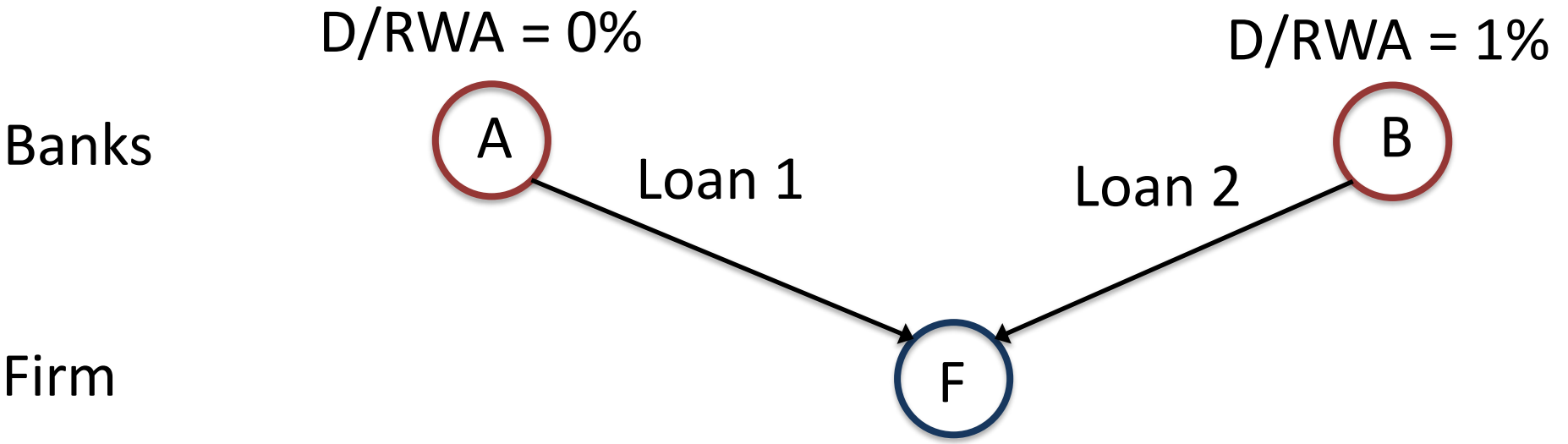
Dep.var.: Lending Growth$_{bft}$	Guarantees		Distance MDA	
	(1)	(2)	(3)	(4)
(Dividends/RWA)$_{bt}$	1.480	1.878	5.101	6.490
	(0.090)*	(0.098)*	(0.000)***	(0.000)***
(Share of Loan Guarantees)$_{bft} > 0$	0.312	0.315		
	(0.000)***	(0.000)***		
(Share of Loan Guarantees)$_{bft} > 0 \times (Dividends/RWA)_{bt}$	5.436	5.379		
	(0.009)***	(0.016)**		
Distance MDA$_{bt}$ =< p25			0.003	
			(0.721)	
Distance MDA$_{bt}$ =< p25 $\times (Dividends/RWA)_{bt}$			-5.797	-7.292
			(0.007)***	(0.017)**

Comment #1: Dependent Variable and Aggregation

- Outcome variable in all regression is credit growth at the firm-bank pair
- This is helpful for clean identification, but can be hard to interpret

Loan 1: €2m credit line, used €1m

Loan 2: €200k credit line, used €100k

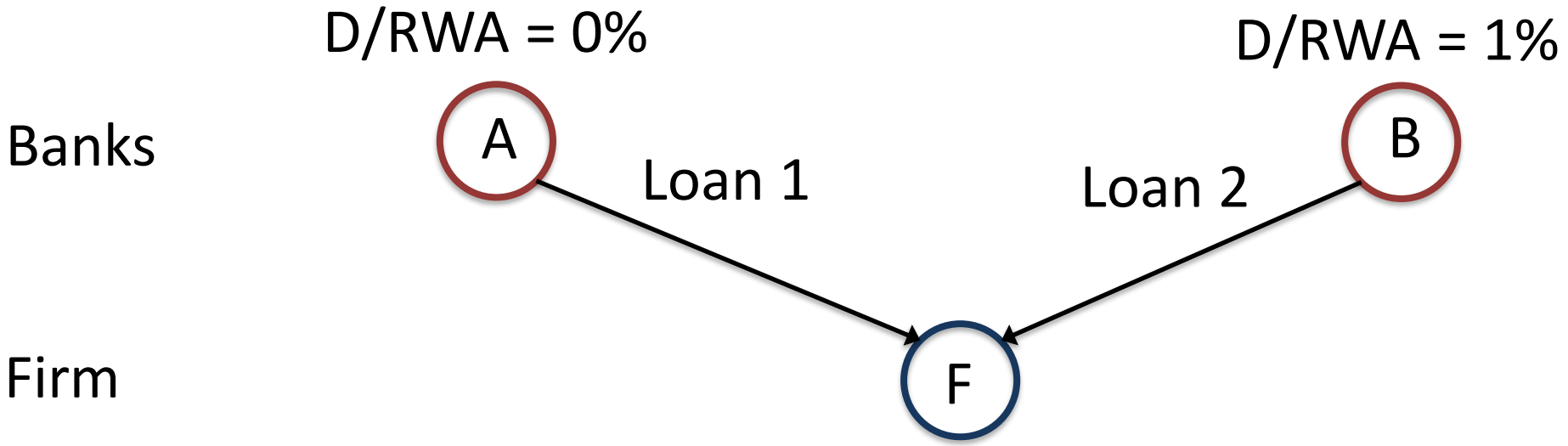


Comment #1: Dependent Variable and Aggregation

- Say in this example, bank A's credit line use increases by €200k, and bank B's by €100k
- Then larger credit growth for bank B (100%) than for bank A (20%), yet bank A increased lending by double € amount

Loan 1: €2m credit line,
used €1m → €1.2m

Loan 2: €200k credit line,
used €100k → €200k



Comment #1: Dependent Variable and Aggregation

- More general point: how do we get back from relative credit growth to aggregate additional lending; not obvious

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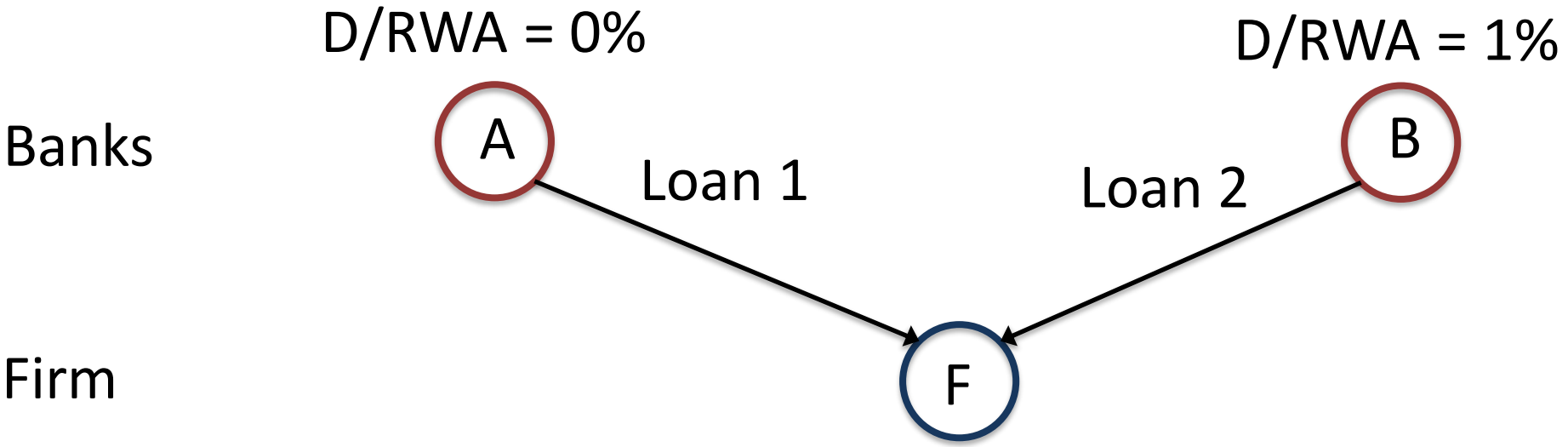

Comment #2: Big Picture Take Aways?

- Policy was temporary and known to be temporary
  - How did actual dividend distributions look like in 2021 and 2022? Any relationship with D/RWA variable constructed for 2020? Maybe negative effect
- Interaction with loan guarantees soaks up almost complete effect
  - Effectiveness of policy hinged on simultaneous fiscal backstop for lending programs
  - Both policies seem closely linked
- Are there lessons for bank dividend payouts in normal times?
  - Superficial reading of results could invite idea that restricting bank dividend payouts more generally would spur lending
  - But temporary nature of policy during very special time period should caution against generalizations