

# Collateral Easing and Asset Scarcity: How Money Markets Benefit from Low-Quality Collateral

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The views presented in this paper do not necessarily reflect those of Deutsche Bundesbank or the Eurosystem.

# Motivation

- A key task of central banks: lend to banks against good collateral at an appropriate price ([Bagehot, 1873](#))
- No consensus about optimal design of collateral policies & substantial differences in practice
- Recent work highlights a more proactive role of collateral policies for monetary policy ([Mésonnier et al., 2022](#); [Pelizzon et al., 2024](#))

# This Paper

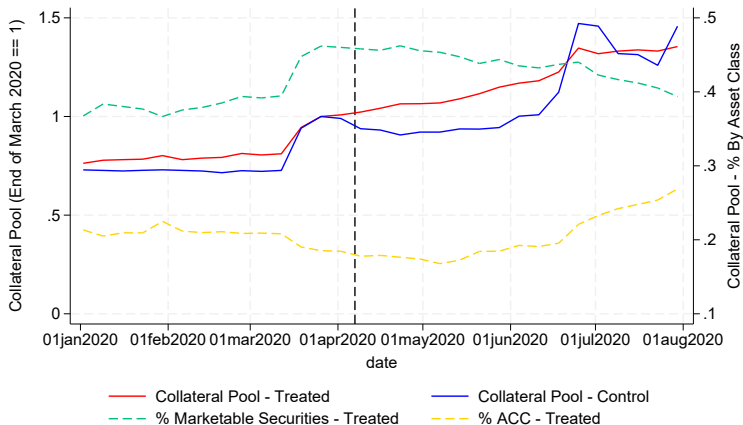
- **Research Question:** Can a shift towards a broader collateral framework promote (repo) market functioning?
- **Theory:** Lending against high-quality assets protects against losses, but can adversely affect liquidity creation in markets as good collateral gets locked up with the CB (Choi et al., 2021)
- **Contribution:** Empirical evidence on this channel is limited
- **Identification:** ACC framework extension of April 7, 2020 + Banks that pledge non-marketable collateral as treatment group

# Data

- Use of Collateral Database (**UCDB**)
  - collateral pool of banks in Eurosystem, bank-bond-level, weekly
  - also: credit claims (RCC vs. ACC), bank-level, weekly
  - sample of 129 euro-area based banks
- Money Market Statistical Reporting (**MMSR**)
  - transaction-level information on repos
  - centrally cleared, one-day maturity, collateralized by government bonds
  - sample of 37 euro-area based large banks
- Other data:
  - **IBSI**: A + L items; **SHS-G**: Securities-register
  - CSDB, EADB, Eikon, APP
- **Main sample**: January 1, 2020 until July 31, 2020

# Stylized Fact I

## Collateral Pool - Aggregates



# Stylized Fact II

## Collateral Pool - Asset Classes

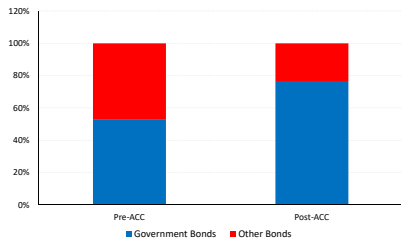


Figure 1: Control Group

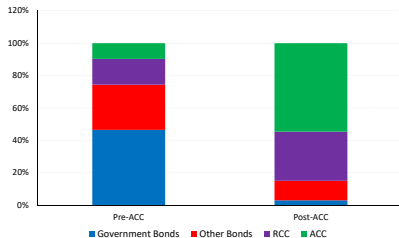


Figure 2: Treatment Group

# Collateral Pledged - DiD Regression

$$CollPledged_{b,s,t} = \beta_0 \times Post_t \times Treated_b (\times Government_s) + \mathbf{X}'_{b,t} \gamma + \alpha_{b,s} + \alpha_{s,t} + \varepsilon_{b,s,t}$$

Dependent variable:	Nominal Value Pledged scaled by Amount Outstanding			
	(1)	(2)	(3)	(4)
	All bonds	Other bonds	Government	All bonds
Post x Treated	0.0090 (0.15)	0.0665 (1.85)	-0.1188** (-2.49)	0.0674 (0.84)
Post x Treated x Government				-0.1992** (-2.22)
Adj. R2	.8673	.8633	.8585	.8673
Obs	682,937	500,902	182,035	682,937
Bond x Time FE	Yes	Yes	Yes	Yes
Bank x Bond FE	Yes	Yes	Yes	Yes

## Repo Activity - Bank x Bond Level

$$Y_{b,s,t} = \beta_0 \times Post_t \times Treated_b + \mathbf{X}'_{b,t} \gamma + \alpha_{b,s} + \alpha_{s,t} + \varepsilon_{b,s,t}$$

Dependent variable:	Net Lending	Gross Lending	Gross Borrowing	Specialness
	(1)	(2)	(3)	(4)
Post x Treated	0.5015** (2.64)	0.4107*** (3.03)	-0.0908 (-0.66)	-0.2306 (-0.94)
Adj. R2	.4223	.4562	.472	.7205
Obs	132,810	132,810	132,810	85,904
Bond x Time FE	Yes	Yes	Yes	Yes
Bank x Bond FE	Yes	Yes	Yes	Yes



## Repo Activity - Where do the bonds come from?

Dependent variable:	Net Lending	Gross Lending	Gross Borrowing
	(1)	(2)	(3)
Post x Treated x $D_{\text{Pledged}}$	0.3466 (0.76)	0.0877 (0.23)	-0.2589 (-1.27)
Post x Treated x $D_{\text{Held}}$	0.8946*** (6.10)	0.8500*** (7.74)	-0.0446 (-0.43)
Adj. R2	.4218	.4559	.4718
Obs	132,810	132,810	132,810
Bond x Time FE	Yes	Yes	Yes
Bank x Bond FE	Yes	Yes	Yes

# Repo Activity - Bond Level

Dependent variable:	Net Lending	Gross Lending	Gross Borrowing	Reuse Amount	Specialness	Rate Dispersion
	(1)	(2)	(3)	(4)	(5)	(6)
Post x Frac <sub>Pledged</sub>	0.0114 (1.54)	0.0029 (0.38)	-0.0085 (-1.35)	0.0058 (1.02)	-0.0013 (-0.43)	0.0149 (1.10)
Post x Frac <sub>Held</sub>	0.0117 (0.74)	0.0376*** (2.78)	0.0259* (2.04)	0.0236** (2.26)	-0.0159** (-2.55)	-0.0413** (-2.43)
Adj. R2	.4996	.6285	.6374	.6334	.5426	.4400
Obs	11,128	11,128	11,128	11,128	11,128	11,128
Bank x Bond FE	Yes	Yes	Yes	Yes	Yes	Yes
Issuer x Maturity x Time FE	Yes	Yes	Yes	Yes	Yes	Yes

# Concluding Remarks

- **Summary:**

Broader collateral framework improves repo market functioning (in line with [Choi et al.](#)) as additional bond supply reduces asset scarcity

- **Policy Implications:**

- ① Lower asset scarcity implies smoother monetary policy transmission (passthrough to repo rates; see [Nguyen et al., 2023](#))
- ② With sizable B/S and floor-based monetary policy frameworks ( $\Rightarrow$  OFR), collateral policies can be especially useful to promote monetary policy implementation ([Brandao-Marques & Ratnovski, 2024](#))
- ③ Our paper provides valuable insights about potential effects of pre-positioning of collateral (e.g. [King, 2016](#); [G30 Working Group on the 2023 Financial Crisis, 2024](#)) on repo market functioning

# References

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- Mésonnier, J.-S., O'Donnell, C., & Toutain, O. (2022). The Interest of Being Eligible. *Journal of Money, Credit and Banking*, 54(2-3), 425–458.
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- Pelizzon, L., Riedel, M., Simon, Z., & Subrahmanyam, M. G. (2024). Collateral Eligibility of Corporate Debt in the Eurosystem. *Journal of Financial Economics*, 153, 103777.

# **APPENDIX**

# Related Literature (1/2)

- **Role of collateral in monetary policy: Empirical**

- ① Banks pledging behavior

- Fecht et al. (2016); De Roure McLaren (2021); Drechsler et al. (2016); Lenzi et al. (2023); Cassola and Koulischer (2019)

- ② Bank lending behavior

- Hüttl and Kaldorf (2022); Bignon et al. (2016); Mésonnier et al. (2022)

- ③ Securities Lending

- This paper!

- **Role of collateral in monetary policy: Theory**

- Koulischer & Struyven (2014); Choi, Santos, Yorulmazer (2021)

## Related Literature (2/2)

- **Asset scarcity in repo markets**

Arrata et al. (2020); Aggarwal et al. (2021); Baltzer et al. (2022)

Greppmair and Jank (2023)

- **Value of asset eligibility**

Chen et al (2023); Corradin and Rodriguez-Moreno (2016); Pelizzon et al. (2023)

- **Unconventional central bank refinancing operations**

Benetton and Fantino (2021); Da Silva et al (2021); Carpinelli and Crosigniani (2021)