The Monetary Policy Implications of Repo Markets

T. Linzert [1] B. Nguyen [1] A. Poinelli [1,4,5] L. Pelizzon[1,2] D. Tomio[1,3]

[1]ECB [2]SAFE - CPR [3]UVA Darden [4]Deutsche Bundesbank [5]Goethe University

This Paper's Contribution

Repo market is central both for placing cash ('liquidity-driven' repos) and to source collateral ('security-driven' repo). **Reduced collateral availability creates "specialness premium"**.

Using a dataset of non-anonymized, trade-by-trade, money market and funding transactions (SFTDS) in the German gov bond market we:

- **Show Specialness is Priced in Asset Swaps** Specialness captures collateral-value of the security, one-to-one relation with asset swap.
- **Describe Market Structure** Show that the public sector is the ultimate security lender and hedge funds and dealers the ultimate borrowers.
- **Link Repo Elasticity to Holdings** We show that a bond's specialness elasticity is a function of its holders's composition.

Data

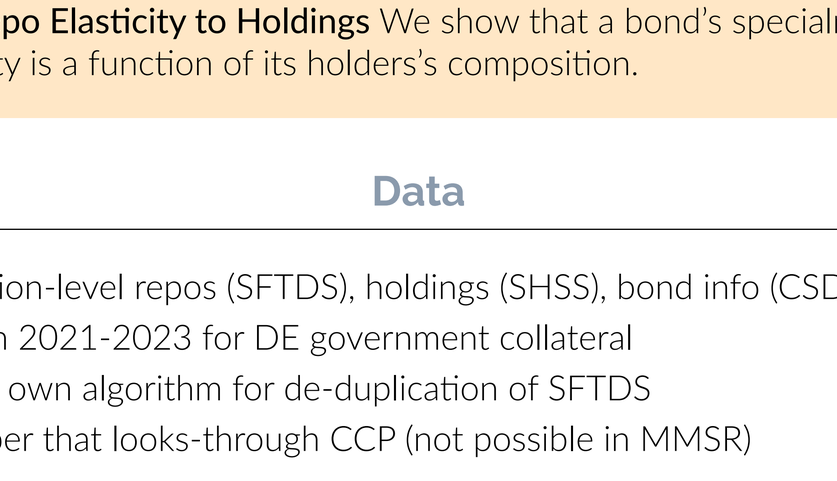
- Transaction-level repos (SFTDS), holdings (SHSS), bond info (CSDB), prices
- Focus on 2021-2023 for DE government collateral
- Develop own algorithm for de-duplication of SFTDS
- First paper that looks-through CCP (not possible in MMSR)

Repo specialness and the yield curve

Bunds' average specialness and asset swap spreads comove strongly in the time-series. Specialness is defined over the deposit facility rate. Asset swap spread are calculated off the €STR swap curve.

High specialness premia → higher bond prices, value as collateral.

Figure 1. Specialness and asset swap spreads move hand in hand.



Notes: Specialness is defined as repo rate minus DFR. The ASW is the yield corrected from the corresponding ESTR curve, net of CDS.

Specialness affects monetary policy transmission to the yield curve. But which economic agent prices this repo-yield curve relationship?

Gov't lends, Funds & Dealers borrow Bunds

- Four main actors: banks, securities dealers, government, hedge funds.
- GOV is net lender of securities/borrower of cash. Generally banks, dealers, and hedge funds are net borrowers of securities/lender of cash.
- Structure unchanged with QE, QT, interest rate environment

Table 1. Sectors net position in the Bunds' repo market (Foreign + EA)

Sector	2021	2022	2023
Foreign Central Banks	+0.3	-0.5	-0.7
Insurances and Pension Funds (ICPF)	-0.1	-0.4	-0.6
Banks (MFI)	+1.5	+4.2	-0.4
Dealers (OFI)	+3.5	+8.7	+9.7
Money Market Funds (MMF)	+0.1	+0.1	+0.1
Hedge Funds (IF)	+1.9	+3.1	+4.7
Government (GOV)	-7.3	-15.3	-12.7
Total	0	0	0

Notes: All values in EUR bn. Net positions calculated as volume of securites borrowed minus lent. Positive (negative) values for net securities borrower (lender) sectors. No values for households, NFC. Net positions comprise investors from EA and Foreign. Calculations on SFTDS.

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Contact: tomiod@darden.virginia.edu

Repo Lenders and Borrowers ≠ Bond Holders

- Repo market participation is orthogonal to cash bond holdings.
- Banks + OFI hold 3 bn but repo 100+ bn.

Table 2. Repo participation VS holdings (Foreign vs EA)

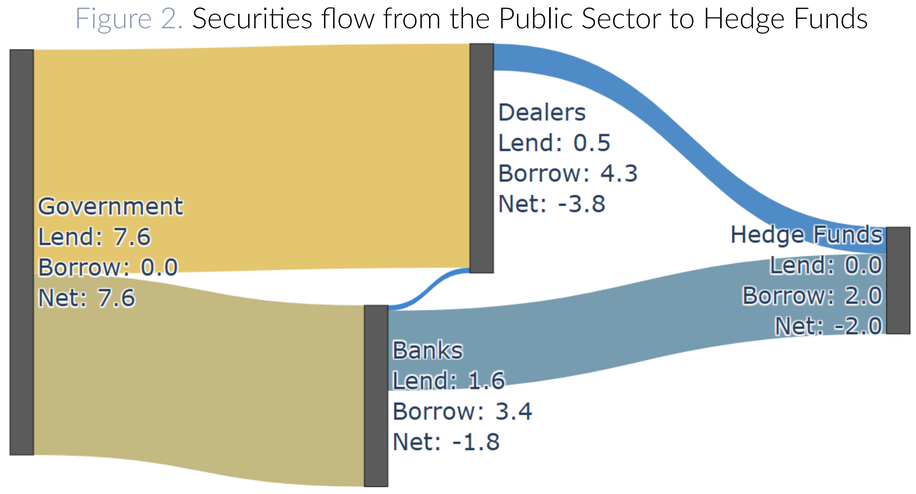
Sector	Holdings	Borrowed with Repo	Lent with Repo	Adjusted holdings	Adjustment (%)
EA ICPF	139	0	1	138	0%
EA MFI	1	78	89	-10	-1130%
EA OFI	2	17	14	5	+108%
EA IF	178	2	2	178	0%
Foreign	602	90	68	624	+4%

Notes: Col. 1-4 in EUR bn. Holdings from SHSS, repo volumes from SFTDS. Foreign holdings computed as residual of Bund's nominal value oustanding. Foreign repo positions comprise non EA-domiciled investors from all sectors. Values as of 2023.

The Bund's Repo Market Structure

- The public sector is the ultimate securities lender. Dealers, banks, and especially hedge funds are the ultimate securities borrowers.

Figure 2. Securities flow from the Public Sector to Hedge Funds



Notes: All values in EUR bn. Values as of 2021. Calculations on SFTDS.

Investors' Elasticities

- We estimate elasticity of repo specialness to traded volume. The more GOV (IF) trades the less (more) special bonds become.

Table 3. Investors' elasticity

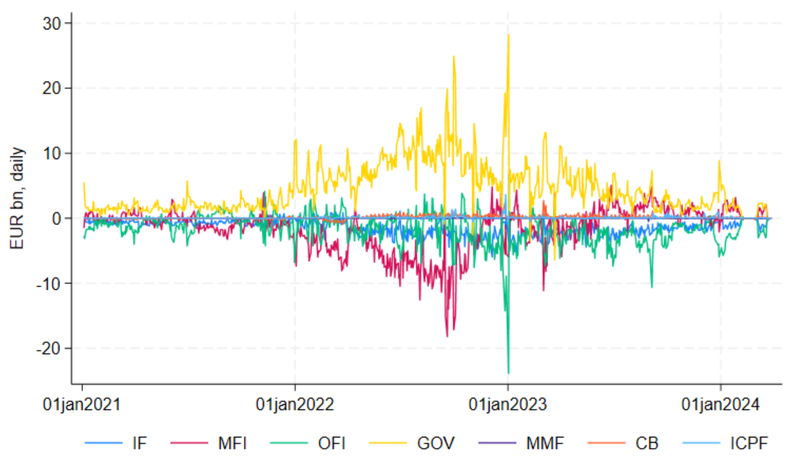
	Dependent: Δ Repo Specialness (bps)						
	IF	MFI	GOV	OFI	CB	ICPF	MMF
Signed volume (EUR bn)	**0.71*****	-0.00	**-1.20*****	-0.06	-0.68	0.39	-1.86

Notes: All coefficients in bps. We use Date-FE and control for lagged specialness. SE clustered at the date-level. Signed volumes are daily, by investor, and based on whether a client lends or borrows from a dealer. Sample 2021-2024.

Specialness Earners and Payers

MFI and OFI have matched books, IF are net specialness payers, GOV earns specialness.

Figure 3. Government (and, at time, banks) profit from lending high-specialness bonds and borrowing low-specialness bonds. Hedge funds and dealers pay the specialness spread.



Notes: profits coming from lending securities is the difference between specialness for bonds lent multiplied by amount lent, minus the specialness on bonds borrowed multiplied by amount borrowed.

Conclusions & What's Next

- Specialness affects yield curve, thus monetary policy transmission. Pricing of specialness is linked to participation in the repo market.
- Two prominent final players in the repo market: IF borrow securities, GOV lends them, key for repo market functioning.
- Repo participation does not mirror bond holdings and preferred habitat: intermediaries, like banks, redistribute collateral and run matched books.
- Further avenues of inquiry:
  - Impact of repo participation on the pricing of specialness and how it affects the cash market pricing and functioning? Does this participation impact swap curves?
  - How does the securities lending market interact with the repo market? Do some investors specialize on lending securities on either side?