

The Paradox of Conservative Haircuts

Discussant: Yiming Ma

Columbia Business School

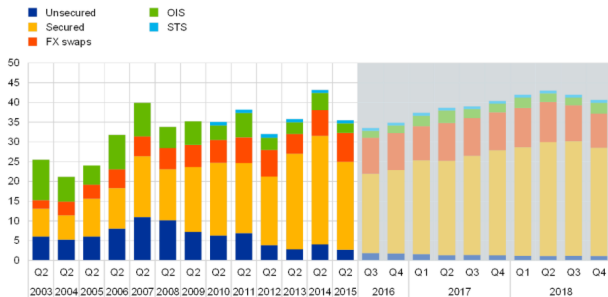
May 19, 2023

Repo Markets are Important

- Repos are now the predominant form of short-term funding
 - Euro-area: 3.9 trillion in 2020
 - US: \$4.6 trillion in 2020
 - Increasingly substituted for unsecured funding after the GFC
 - Key: collateral mitigates counterparty risk

Market share of the cumulative volume per quarter per segment

(EUR trillions)



Repo Markets may still be Fragile

- E.g. Run on repo (backed by private asset-backed securities) during the GFC
- OTC repo market
 - Bilateral contracts, subject to counterparty risk
- CCP repo market
 - Not exposed to counterparty risk but to the default risk of the CCP

Question: Can we make the repo market safer by having a CCP repo market with higher collateral requirement?

This is an Important Question

Three main findings

- 1 Borrowers with lower credit ratings tend to use the CCP market over the OTC market
- 2 Higher CCP haircuts push the safest borrowers from the CCP market to the OTC market
- 3 Collateral-constrained borrowers are most affected by higher CCP haircuts

This is an Important yet Difficult Question

- Great data
 - Transaction-level data
 - Time, volume, haircut, repo rate, borrower's and lender's identities, and the repo term
 - OTC and CCP repos registered through the Moscow Exchange
 - From January 2013 to June 2016
- Key institutional detail
 - The CCP sets the same security-specific haircuts for all traders whereas in the OTC market haircuts are set bilaterally
 - Note:
 - This is used as an identification strategy
 - But it is also a key channel: CCP haircuts do not discriminate against low-risk borrowers but OTC haircuts do

Main Comments

- 1 Make use of repo rates
- 2 Make use of borrower-level information
- 3 Consider OTC market structure
- 4 What is the big picture implication?

1. Make Use of Repo Rates

- Current findings for selection of borrowers into OTC versus CCP markets
 - “The same lender is more likely to trade with a safer borrower in the OTC repo market than in the CCP repo market”
 - “that when a borrower becomes riskier by one tercile, she is 15.5% less likely to trade in the OTC repo”
- The probability of trading is dependent not only on the collateral requirements but also on the bilaterally negotiated repo rate!
- Suggest to show
 - 1 For the same borrower, how does their repo rate on the CCP versus OTC market differ?
 - 2 How does the CCP versus OTC repo rate differ by the type of borrower

2. Make Use of Borrower-Level Information

- Current findings for “higher haircuts” driving safer borrowers from OTC to CCP selection
 - “a change in the CCP-OTC haircuts difference leads to an increase in the borrowers’ average credit risk in the CCP repo market and a decrease in the average borrower’s credit risk in the OTC repo market”
- Market (security-month) level results originate from borrower level behavior!
- More direct tests:
 - 1 For borrowers with the same security as collateral, how do shocks to CCP haircut affect their trading volumes in CCP versus OTC?
 - 2 For borrowers with the same security as collateral, how do shocks to CCP haircut affect their interest rates in CCP versus OTC?
 - 3 How do (1) and (2) vary by borrower characteristics?

3. Consider OTC Market Structure

- OTC markets often follow a core-periphery structure

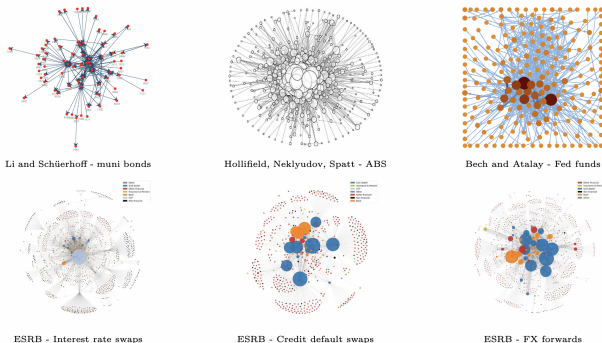
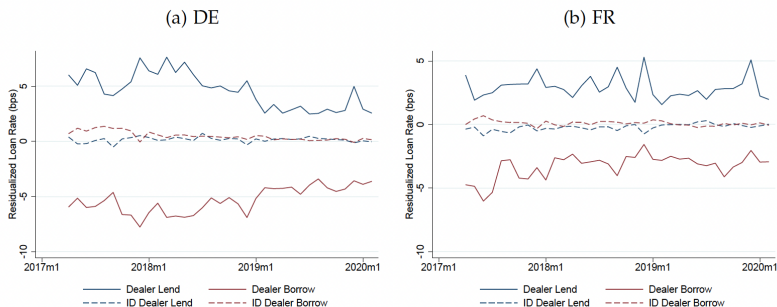


Figure 1: Core-periphery trading networks in OTC markets

Source: Wang 2020

3. Consider OTC Market Structure

- Core banks/dealers trade at very different rates from Periphery/non-dealer banks
- E.g. In the European OTC repo market:



Source: Eisenschmidt, Ma, and Zhang 2022

4. Big Picture Implication

- If we take the results at face value, what do we learn?
- Higher CCP haircuts → safer borrowers move to the OTC market → riskiest investors remain in the CCP market

4. Big Picture Implication

- If we take the results at face value, what do we learn?
- Higher CCP haircuts → safer borrowers move to the OTC market → riskiest investors remain in the CCP market
- ① What does this mean for the CCP market?
 - Does the haircut adjustment compensate for the pool of riskier investors? In part addressed in Appendix model

4. Big Picture Implication

- If we take the results at face value, what do we learn?
- Higher CCP haircuts → safer borrowers move to the OTC market → riskiest investors remain in the CCP market
- ① What does this mean for the CCP market?
 - Does the haircut adjustment compensate for the pool of riskier investors? In part addressed in Appendix model
- ② What does this mean for the OTC market?
 - The borrowers that switch from CCP to OTC are safer than the CCP pool but riskier than the OTC pool, right?
 - Does that make the OTC market riskier?

4. Big Picture Implication

- If we take the results at face value, what do we learn?
- Higher CCP haircuts → safer borrowers move to the OTC market → riskiest investors remain in the CCP market
- ① What does this mean for the CCP market?
 - Does the haircut adjustment compensate for the pool of riskier investors? In part addressed in Appendix model
- ② What does this mean for the OTC market?
 - The borrowers that switch from CCP to OTC are safer than the CCP pool but riskier than the OTC pool, right?
 - Does that make the OTC market riskier?
- ③ What does this mean for the CCP+OTC market?
 - Is the redistribution of borrowers ideal for the overall repo market?

- Addresses a very important question with fantastic data
- Some suggestions
 - Make use of repo rates
 - Make better use of borrower-level information
 - Consider OTC market structure
 - Big picture implications