Corridors of Power

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*The views expressed in this paper reflect solely those of the authors and do not necessarily reflect the official viewpoint of the European Central Bank, the Oesterreichische Nationalbank or the Eurosystem.
The interest rate corridor
The power of corridor design

\[ \Delta \text{Corridor width} \equiv \text{asymmetric change in policy rates} \]

**Theoretical literature**

- **Monetary stance** (e.g. Berentsen and Monnet, 2008; Hoerova and Monnet, 2010)
- **Market activity** (e.g. Bindseil and Jabłocki, 2011; Afonso and Lagos, 2015; Blasques et al., 2018)
- **Volatility** (e.g. Woodford, 2001; Whitesell, 2006; Lagos and Navarro, 2023)
- **Fragmentation** (e.g. Eisenschmidt et al., 2018; Vari, 2020)

**Empirical literature**

“[L]argely silent on the question as to why and how to set such a spread” (Arce et al., 2020)
This paper

**High-frequency event studies**

- Transaction-level TARGET2 data (unsecured overnight loans)
- Event windows of $+/- 7$ days
- RDiT *cum* RIF design

**Study effects of $\Delta$ corridor width**

- Impact on deal rate metrics
- Mechanism and heterogeneity
- Spill-overs and trade-offs
Step 1: eyeball econometrics (11/2013)
Step 2: quantile treatment effects (11/2013)
Step 3: RDiT *cum* RIF

For each case study, leverage full micro data to estimate:

$$i_{b,l,t}^{RIF} = \alpha + \beta I(\text{post})_t + \Gamma X_{b,l,t} + u_{b,l,t} \quad t \in [-7, 7]$$

- $i^{RIF}$ .............. deal rate estimand (IQR, standard deviation)
- $I(\text{post})$ .......... treatment indicator (1 if $t \geq 0$)
- $X$ .................. baseline controls (loan size, system liquidity, fine-tuning operations)

**Identification assumption:** $I(\text{post})$ orthogonal to deal rate components in $u$
### Case study findings

**Estimand: IQR(1-99) of deal rates**

<table>
<thead>
<tr>
<th></th>
<th>Widenings</th>
<th>Contractions</th>
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<tbody>
<tr>
<td>$\beta$ in bp</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>33.74***        7.80***  6.75***  4.61**</td>
<td>-0.50   -20.86*** -14.14*** 3.52</td>
</tr>
<tr>
<td></td>
<td>(6.73)            (2.21)   (1.35)  (1.91)</td>
<td>(6.12)  (0.88)  (1.12)  (5.48)</td>
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<tr>
<td>$\beta$ in SD</td>
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<tr>
<td></td>
<td>0.71***        0.95***  0.68***  0.54**</td>
<td>-0.02   -1.25*** -1.09*** 0.21</td>
</tr>
<tr>
<td></td>
<td>(0.14)            (0.27)   (0.14)  (0.22)</td>
<td>(0.24)  (0.05)  (0.09)  (0.33)</td>
</tr>
<tr>
<td>$\Delta c$ in bp</td>
<td>+100  +10  +5  +10</td>
<td>-50  -50  -25  -25</td>
</tr>
<tr>
<td>Observations</td>
<td>6,996  1,825  1,945  274</td>
<td>7,770  2,603  3,185  3,178</td>
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<tr>
<td>R-squared</td>
<td>0.01  0.07  0.06  0.04</td>
<td>0.01  0.21  0.18  0.00</td>
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</table>

Robust standard errors in parentheses. Statistical significance codes: ***: 0.01, **: 0.05, *: 0.1
Possible mechanisms: illustration for contractions

**Scenario 1:**

*exit into CB*

*balance sheet*

**Scenario 2:**

*endogenous deal*

*rate components*
Mechanism: empirical results favor scenario 2
Paper teaser

⇒ Deal rate dispersion
  ▶ Mechanism: shift in bargaining power for highest percentiles
  ▶ Treatment effect size sensitive to IQR definition

⇒ Heterogeneity over time: no simple story

⇒ Additional results
  ▶ Deal rate volatility, market activity/composition, placebos
  ▶ Are corridor width changes anticipated?
Policy relevance

1. **Mechanism**
   ▶ Central bank balance sheet
   ▶ Welfare implications

2. **Heterogeneity**
   ▶ Impact of $\Delta c \equiv$ empirical question
   ▶ How to communicate about the (expected) effects of $\Delta c$?

“This narrower spread [...] will limit the **potential scope** for **volatility** in short-term money market rates.”

– ECB Governing Council on 13 Mar 2024
Appendix


Policy-makers on corridor design

“The main aim of this re-widening of the corridor is to push the banks as much as possible into returning to their own interbank transactions. [W]e are trying to help revive the money market spontaneously.”
– ECB President J.-C. Trichet on 15 Jan 2009

[...]his change in interest rates [...] will help healthy banks that are located in stressed parts of the euro area to have an easier access to the interbank market. In this sense, it is an instrument for reducing fragmentation.”
– ECB President M. Draghi on 7 Nov 2013

“This narrower spread [...] is small enough to contain volatility but large enough to preserve incentives for money market activity.”
– ECB Executive Board member I. Schnabel on 14 March 2024
Step 1: eyeball econometrics (01/2009)

DFR \ MLF
$(0, 0.01] \ (0.01, 0.99] \ (0.99, 1]$
Step 2: quantile treatment effects (01/2009)
### Volatility

**Estimand:** standard deviation of deal rates

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<tr>
<td>( \beta ) in bp</td>
<td>10.95(^{*<strong>}) 2.93(^{</strong>}) −0.66 2.19(^{**})</td>
<td>−4.07(^{<em><strong>}) −4.46(^{</strong></em>}) −3.36(^{**}) −0.56</td>
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<tr>
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<td>(1.08) (1.15) (1.25) (1.03)</td>
<td>(0.97) (1.34) (1.36) (0.88)</td>
</tr>
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<td>( \Delta c ) in bp</td>
<td>+100 +10 +5 +10</td>
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The case of 05/2009
The case of 06/2014