

# **Regional loan market structure, bank lending rates and monetary transmission**

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Discussion

by

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## Research Question

- What is the role of “regional bank market structure” for the level of loan rates?
- Is the pass-through of monetary policy different depending upon “regional bank market structure? Is there a difference in speed of this pass-through?
- Highly relevant in Euro Area
  - given most SMEs are bank dependent
  - Common monetary policy (but possibly heterogeneous pass-through)
  - Banks’ initial conditions quite heterogeneous stemming from the ZLB, excess reserves, deposit beta, ...

# Contribution and Data

- Contribution
  - Empirical studies mostly look cross-country with aggregate data, or within a single country with more granular data
  - This paper exploits within-country regional bank market structure variation in a cross-country setting
- Data
  - Anacredit:
    - All new €loans with maturity less than 3 years ( $>50\text{k€} < 10$  million €, and  $\text{PD} < 10\%$ , to SMEs (at most 50 employees) since January 2022
    - Granted by a single bank
    - Around 500,000 observations regarding new loans
    - Allows to compute regional market structure proxies

# Findings

- From the abstract:
  - **Levels:** Higher rates when regional market concentration is higher
    - Also when a bank's regional market share is higher
  - **Pass-through in recent monetary policy cycle:** slower with high loan market concentration but only when banks have low regional market share
- My reading: not a clear message – what is the big takeaway?

Pass-through results do not provide a consistent picture within and across the employed methods

# Methodology

- Level regressions

$$lr_{i,b,j,t} = \alpha_{b,s(j),t,c(j)} + \alpha_{size(j),s(j),t,c(j)} + \beta_1 HHI_{r(j)} + \gamma_1' X_i + \gamma_2' R_{r(j)} + \gamma_3 PD_{s(j),r(j),t} + \varepsilon_{i,b,j,t} \quad (1)$$

- Pass-through regressions – Diff-in-Diff comparing starting quarter to later quarters in concentrated versus less concentrated regions

$$lr_{i,b,j,t} = \alpha_{b,s(j),t,c(j)} + \alpha_{size(j),s(j),r(j)} + \beta_1 HHI_{r(j)} Post_t + \gamma_1' X_i + \gamma_2 PD_{s(j),r(j),t} + \varepsilon_{i,b,j,t} \quad (2)$$

$$lr_{i,b,j,t} = \alpha_{b,s(j),t,c(j)} + \alpha_{size(j),s(j),r(j)} + \beta_1 HHI_{r(j)} Post + \beta_2 Top3_{b,r(j)} Post + \beta_3 HHI_{r(j)} Top3_{b,r(j)} Post + \beta_4 Top3_{b,r(j)} + \beta_5 HHI_{r(j)} Top3_{b,r(j)} + \gamma_1' X_i + \varepsilon_{i,b,j,t}$$

- HHI is above or below median *within a country*
- Includes *bank-sector-time-country* fixed effects and *ILST* fixed effects

# Comments (1)—identifying your contribution

- Taking a step back to move forward?
  - Cross-country analysis as in other papers (that employ less granular data)
    - Allows to compare to the literature and to show where previous analysis may have fallen short, and strengthen your contribution
    - Understand where identification of results comes from – your analysis exploits within-country variation in a cross-country setting
  - Inclusion of *bank-country-sector-time-(region)* fixed effects
    - Control for market power in funding markets; bank sector specialization, ...
    - Assumes independence between funding and loan markets.
    - These fixed effects are now used to absorb all of these but deserve a separate analysis
      - What do they buy you?
      - With what are they correlated? Deposit beta? Excess reserves?

# Comments (1) – cont'd

- Add more descriptive statistics showing your cross-country and within-country variation – map of Euro Area -- run regressions country by country

**Table 1: Descriptive statistics for regional HHI and CR3**

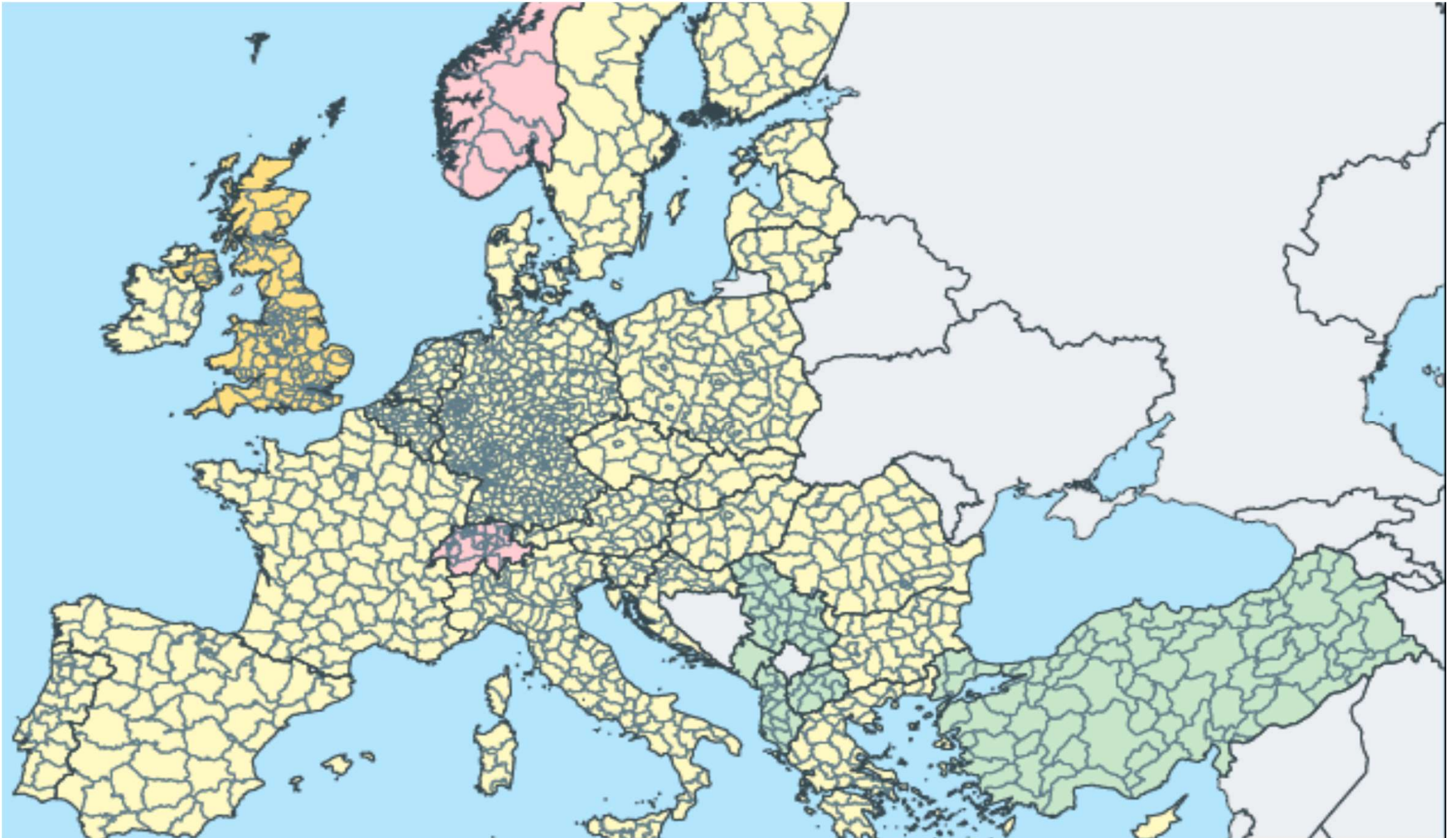
	NUTS-3		NUTS-2	
	HHI	CR3	HHI	CR3
Mean	15.67	55.67	13.32	50.62
Standard Deviation	9.57	15.34	7.57	18.57
75. - 25. percentile	9.16	19.77	10.31	26.06
Share Sum of Squares within	0.55	0.55	0.27	0.24
Correlation	0.83		0.94	
Number of observations	924		178	

Note: HHI rescaled to lie in range from zero to 100, CR3 in per cent. Values for HHI and CR3 referring to December 2021. Including off-balance-sheet-amounts; loans to small- and medium-sized companies only, on banking group level. “75. – 25. percentile” denotes the difference between the 75. and the 25. percentile of the distribution. “Share Sum of Squares within” denotes the share of the sum of squares within countries (with one minus this share being the share of sum of squares between countries).

- HHI very precisely measured using granular data
  - <->dummy variable in regression within country
  - Is within-country variation the most important? Does it matter if you do across-country?
- 924 NUTS3 regions of which Germany has 401 NUTS3 (and 28 NUTS2)



# Comments (1)-cont'd



- NUTS3



## Comments (2)—detail on banks helping in identification

- Identification comes from banks that are active in several regions – these are not random banks – would want to understand how these banks differ relative to other banks.
- The importance of the included loan types differ across countries and banks
- Policy surprises and timing
  - Large banks may be slower in loan granting decisions – more noisy?

## Comment (3) –other bank-firm and loan characteristics

- Is regional market structure picking up other characteristics?
  - Relationship lending and monetary policy rate pass through (e.g., Berger et al, 2024 show for the US that pass-through is much lower for relationship loans)
    - Sample split for relationship versus other loans?
- Other loan characteristics
  - Volume, collateral, risk-taking by banks?

## Smaller and/or unrealistic (?) comments

- How to interpret level regression results in period with great monetary policy shocks?
- Why not use large firms as a control group?
- Deal with border effects by looking at firms closer to the centroid within NUTS
- Create firm-specific HHI by creating circles around the firm
- HHI ranges between 0 and 100 – typically the scale is either from 0 to 1, or from 0 to 10,000.

## Concluding remarks

- Great research question and some promising initial results
- Role of other bank-firm and loan characteristics?
- Taking a step back to move forward?