# Lending Activity Patterns in CEE: Evidence from Ownership Structure Effects

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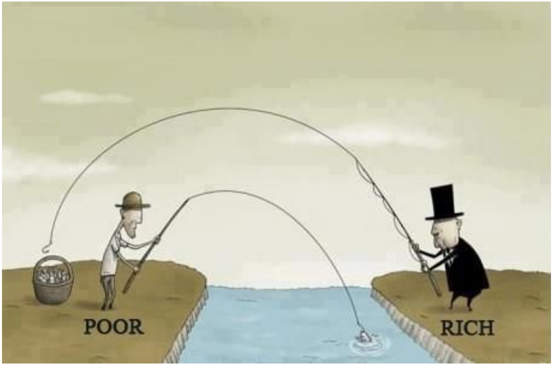
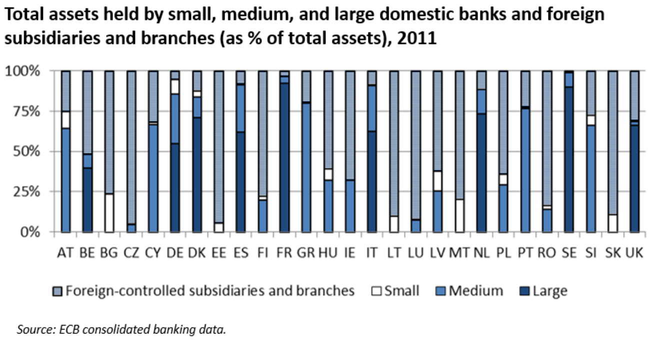
# Motivation



# Foreing-controlled banks



# Motivation

- post-socialist transition brought large-scale banking reforms in CEE
  - shift from state-owned to privatized banks in the 1990s
  - entry of foreign strategic investors (Bonin et al., 2005; Clarke et al., 2005)
  - aimed to stabilize banking systems and align with EU norms
- dominance of foreign banking groups reshaped credit markets

# Early Benefits of Foreign Ownership

- improved governance, risk management (Fries & Taci, 2005; Hanousek et al., 2012)
- enhanced capital adequacy, better loan portfolios (de Haas & van Lelyveld, 2006)
- greater financial intermediation and macro-financial credibility
- lending patterns and credit efficiency
  - foreign banks introduced credit discipline and reduced political interference
  - SMEs benefited from diversified financial products
  - pre-crisis: stronger profitability, stability among foreign banks

# GFC and Exposure to External Shocks

- parent bank retrenchment during 2008–2009 crisis (Cull & Pería, 2013)
- internal capital markets amplified transmission of global shocks
- "Home bias"led to local credit contractions (de Haas & van Lelyveld, 2014)
- depreciation of the currencies in CEECs (to improve competitiveness and deal with capital flight)
    - forex interventions belong to unconventional monetary policy tools after the financial crisis in the Czech Republic, Japan, Denmark, Switzerland, New Zealand, Poland and Israel
    - depreciation shocks were identified in Romania, Latvia, Hungary, Poland, Slovenia, UK and (currently) in the Czech Republic

# Ownership and Lending Behavior

- foreign banks remained more stable lenders post-crisis
- domestic banks showed pro-cyclical lending and political bias
- rising concern over crowding out and distorted credit allocation
- rise of Economic Nationalism
  - policy responses favoring domestic control (Brana & Lahet, 2017)
  - re-nationalization in Hungary; hesitation to join eurozone
  - backlash over dividend outflows to parent banks (IMF, 2020)

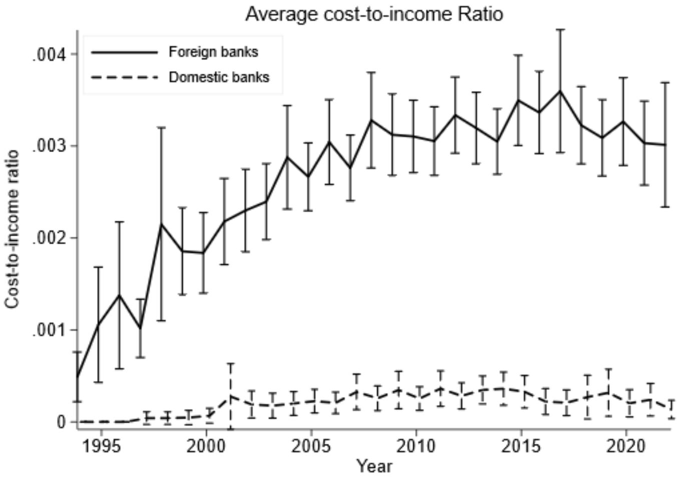
# Contribution

- we identify systematic differences in credit supply between foreign- and domestically owned banks
- we focus on bank financial indicators (bank specifics)
- we highlight how ownership mediates the transmission of financial characteristics into credit supply
- we analyze long time period (1994–2022) and cover several crises

# Data

- 461 commercial banks in CEECs (Bureau van Dijk/Moodys) in the years 1994 – 2022 (5,548 observations)
  - gross loans (gross loans to total assets) and selected banking controls (total assets, cost-to-income ratio, non-interest income, net interest margin, liquidity ratio, financial leverage, loan loss reserves)
  - ownership structure (banks, industry, government)
- selected macroeconomic shocks
  - economic activity indicator (GDP), inflation (HICP), policy interest rates (marginal lending facility), depreciation shocks (NEER)
  - institutional quality (World Governance Indicators, WGI)
- outliers were removed outside the 5% and 95% percentile

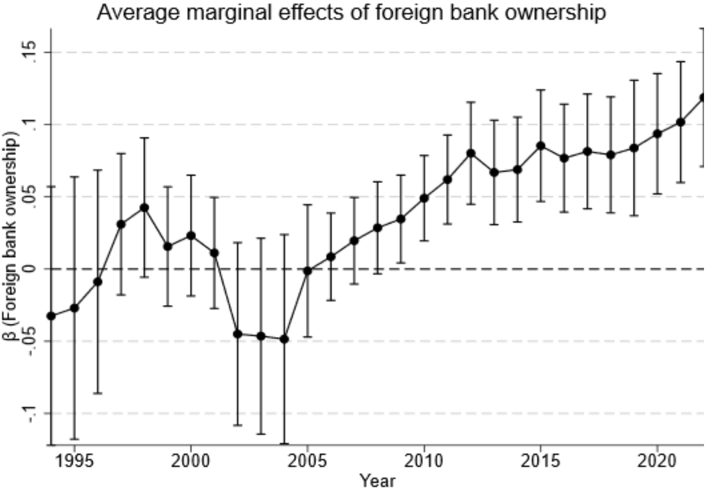
# Foreign vs. domestic bank ownership



# Bank lending and macroeconomic fundamentals

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Dependent variable: lending activity | | | | | |
| Lending (lagged) | | | | 0.987*** | 0.706*** | 0.710*** |
| | | | | (0.089) | (0.086) | (0.084) |
| Banks foreign | | | 0.043*** | | | 0.016* |
| | | | (0.013) | | | (0.008) |
| Banks domestic | | | -0.007 | | | -0.020 |
| | | | (0.041) | | | (0.014) |
| Industry foreign | | | 0.027 | | | 0.014 |
| | | | (0.027) | | | (0.013) |
| Industry domestic | | | 0.012 | | | 0.008 |
| | | | (0.027) | | | (0.011) |
| Government | | | -0.010 | | | 0.012 |
| | | | (0.041) | | | (0.017) |
| Total assets / GDP (%) | -0.069 | -0.068 | -0.083 | -0.264 | -0.279* | -0.271* |
| | (0.070) | (0.069) | (0.072) | (0.163) | (0.166) | (0.161) |
| Cost To Income Ratio (%) | -3.563*** | -3.383*** | -3.361*** | -0.843 | -1.767** | -1.646** |
| | (1.190) | (1.226) | (1.218) | (0.728) | (0.739) | (0.710) |
| Non-interest income (%) | -0.020 | 0.064 | 0.067 | 0.103* | 0.042 | 0.054 |
| | (0.073) | (0.081) | (0.081) | (0.052) | (0.062) | (0.061) |
| Net Interest Margin (%) | 0.393** | 0.377** | 0.382** | 0.083 | 0.196* | 0.220* |
| | (0.175) | (0.175) | (0.176) | (0.102) | (0.115) | (0.120) |
| Liquidity ratio | -0.728*** | -0.733*** | -0.731*** | -0.121* | -0.334*** | -0.326*** |
| | (0.027) | (0.028) | (0.028) | (0.070) | (0.063) | (0.060) |
| Equity / Total Assets (%) | -0.714*** | -0.747*** | -0.747*** | -0.347*** | -0.464*** | -0.464*** |
| | (0.243) | (0.238) | (0.238) | (0.123) | (0.167) | (0.165) |
| Loan Loss Reserve / Gross Loans (%) | 0.768*** | 0.753*** | 0.756*** | 0.032 | 0.217*** | 0.218*** |
| | (0.285) | (0.288) | (0.288) | (0.074) | (0.057) | (0.058) |
| Constant | 0.849*** | 0.920*** | 0.900*** | 0.090 | 0.367*** | 0.348*** |
| | (0.030) | (0.038) | (0.038) | (0.064) | (0.082) | (0.075) |
| Macroeconomic controls | NO | YES | YES | NO | YES | YES |
| WGI controls | NO | YES | YES | NO | YES | YES |
| No of observations | 5,548 | 5,392 | 5,392 | 5,176 | 5,051 | 5,051 |
| No of banks | 461 | 451 | 451 | 456 | 446 | 446 |
| AR(1) | | | | -7.03*** | -4.49*** | -4.59*** |
| AR(2) | | | | 1.19 | 0.8 | 0.83 |
| Hansen | | | | 65.13 | 94.85 | 94.2 |

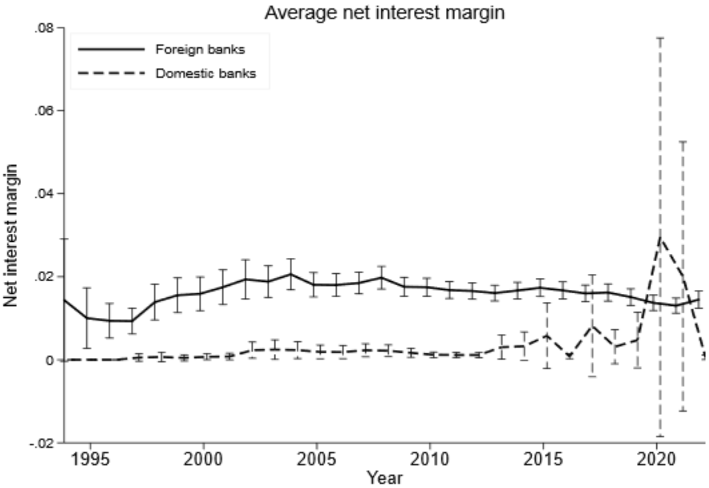
# Bank lending and macroeconomic fundamentals



# Foreign vs. domestic bank ownership

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| | Dependent variable: lending activity | | | | | |
| Lending (lagged) | | | | 0.574*** | 0.974*** | 0.981*** |
| Liquidity ratio | -0.741*** | | | -0.433*** | | |
| Liquidity ratio x Foreign banks | | -0.507*** | -0.534*** | | -0.064 | -0.085 |
| Liquidity ratio x Domestic banks | | -0.552*** | -0.524*** | | -0.051 | -0.098 |
| Equity / Total Assets % | -0.749*** | | | -0.488*** | | |
| Equity / Total assets (%) x Foreign banks | | 0.245** | 0.051 | | 0.076 | -0.060 |
| Equity / Total assets (%) x Domestic banks | | -0.423*** | -0.549*** | | 0.011 | -0.147 |
| Loan Loss Reserve / Gross Loans % | 0.739*** | | | 0.322*** | | |
| Loan loss reserves / Gross loans (%) x Foreign b | | 0.477*** | 0.458*** | | 0.027 | 0.001 |
| Loan loss reserves / Gross loans (%) x Domestic | | 0.731** | 0.348 | | 0.038 | -0.021 |
| Total assets / GDP x Foreign banks | 0.061 | | 0.178** | -0.032 | | -0.005 |
| Total assets / GDP x Domestic banks | -0.033 | | 0.583*** | 0.146 | | 0.644** |
| Cost-to-income ratio (%) x Foreign banks | -2.620** | | 0.369 | -2.155*** | | 0.853 |
| Cost-to-income ratio (%) x Domestic banks | -9.183 | | 5.628 | -2.918 | | 2.767 |
| Non-interest income x Foreign banks | -0.012 | | 0.084 | 0.038 | | 0.075 |
| Non-interest income x Domestic banks | 0.489*** | | 0.576*** | 0.274** | | 0.067 |
| Net interest margin (%) x Foreign banks | 0.676** | | 1.204*** | 0.561*** | | 0.533** |
| Net interest margin (%) x Domestic banks | 0.273 | | 0.380 | 0.014 | | 0.022 |
| Constant | 0.909*** | 0.728*** | 0.664*** | 0.456*** | 0.072 | 0.033 |
| Other bank controls | NO | YES | YES | NO | YES | YES |
| Macroeconomic controls | NO | YES | YES | NO | YES | YES |
| WGI controls | NO | YES | YES | NO | YES | YES |
| No of observations | 5,392 | 5,392 | 5,392 | 5,051 | 5,051 | 5,051 |
| No of banks | 451 | 451 | 451 | 446 | 446 | 446 |
| AR(1) | | | | -7.01*** | -6.09*** | -5.65*** |
| AR(2) | | | | 0.94 | 1.06 | 1.24 |
| Hansen | | | | 78.36 | 89.59 | 91.88 |

# Foreign vs. domestic bank ownership



# Conclusions

- recent literature show that the foreign-owned banks exhibited stronger performance metrics than their domestic counterparts
  - we identify higher cost-to-income ratio in foreign owned banks
  - foreign owned banks apply higher interest margins
- increasing effect of of foreign bank ownership on lending activity
  - especially after the financial crisis
  - impact of "internal capital market"
- the results are largely robust to changes in specification forms and for different sub-samples:
  - bank size, crises periods, expansions and recessions

# Conclusions

- our evidence indicates that foreign banks operate with a higher cost-to-income ratio, yet they maintain higher net interest margins
  - weaker cost efficiency is offset by superior revenue generation capacity
  - lending interest rates are generally at a similar level across banks due to the highly competitive market
  - cheaper funding sources through their parent institutions or international markets
  - household savings represent a significant share of banks' funding base (in CEECs)
  - foreign banks may be perceived as more stable and trustworthy (reputation effect), households are willing to place savings with foreign banks at lower deposit rates

# Implications

- characteristics of the financial sector are important for the optimal design of monetary and economic policy
- international mergers increase the need for the international coordination of banking regulations

Thank you for your attention . . .

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