

Lending Activity Patterns in CEE: Evidence from Ownership Structure Effects

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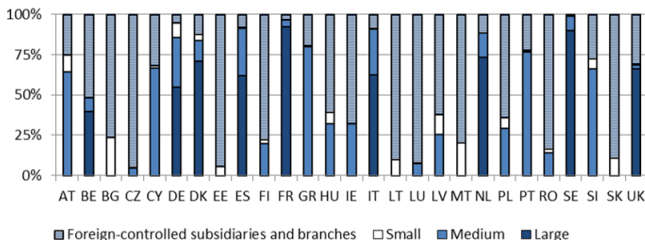
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Foreign-controlled banks

Total assets held by small, medium, and large domestic banks and foreign subsidiaries and branches (as % of total assets), 2011



Source: ECB consolidated banking data.

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)

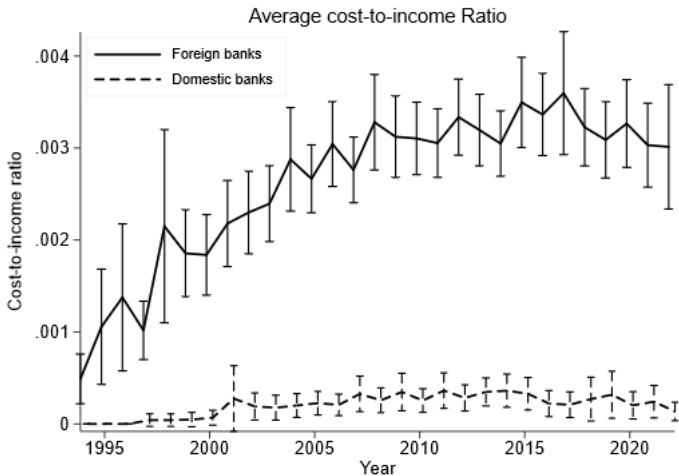
Contribution

- 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



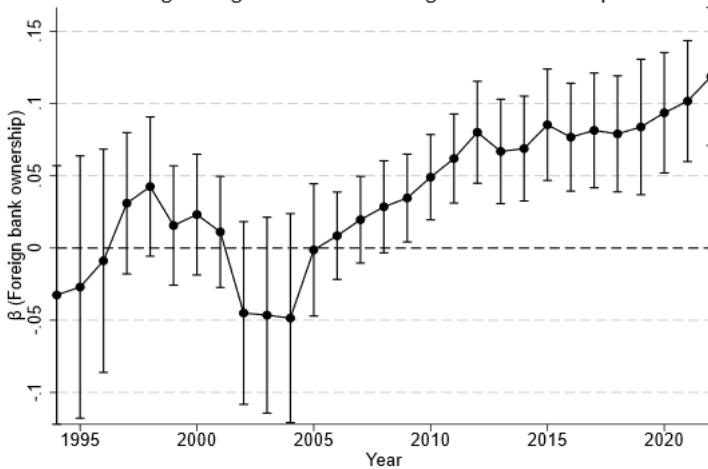
Effects of ownership type, Table 1 - first part

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Gross Loans to Total Asset					
Lending (lagged)	0.99*** (0.09)	0.71*** (0.09)	0.71*** (0.08)			
Banks foreign			0.02* (0.01)			0.04*** (0.01)
Banks domestic			-0.02 (0.01)			-0.01 (0.04)
Industry foreign			0.01 (0.01)			0.03 (0.03)
Industry domestic			0.01 (0.01)			0.01 (0.03)
Government			0.01 (0.02)			-0.01 (0.04)
Total assets / GDP (%)	-0.26 (0.16)	-0.28* (0.17)	-0.27* (0.16)	-0.07 (0.07)	-0.07 (0.07)	-0.08 (0.07)
Cost To Income Ratio (%)	-0.84 (0.73)	-1.77** (0.74)	-1.65** (0.71)	-3.56*** (1.19)	-3.38*** (1.23)	-3.36*** (1.22)
Net Interest Margin (%)	0.08 (0.10)	0.20* (0.12)	0.22* (0.12)	0.39** (0.18)	0.38** (0.18)	0.38** (0.18)
Non-interest income (%)	0.10* (0.05)	0.04 (0.06)	0.05 (0.06)	-0.02 (0.07)	0.06 (0.08)	0.07 (0.08)
Liquidity ratio	-0.12* (0.07)	-0.33*** (0.06)	-0.33*** (0.06)	-0.73*** (0.03)	-0.73*** (0.03)	-0.73*** (0.03)
Equity / Total Assets (%)	-0.35*** (0.12)	-0.46*** (0.17)	-0.46*** (0.17)	-0.71*** (0.24)	-0.75*** (0.24)	-0.75*** (0.24)
Loan Loss Reserve / Gross Loans (%)	0.03 (0.07)	0.22*** (0.06)	0.22*** (0.06)	0.77*** (0.29)	0.75*** (0.29)	0.76*** (0.29)

Effects of ownership type, Table 1 - second part

Inflation rate	-0.01** (0.01)	-0.01* (0.01)	-0.04*** (0.01)	-0.04*** (0.01)
Interest rate	-0.08* (0.04)	-0.07* (0.04)	-0.17* (0.09)	-0.18* (0.09)
GDP Growth	-0.06 (0.05)	-0.06 (0.05)	-0.04 (0.03)	-0.04 (0.03)
WGI: Control of Corruption	0.04** (0.02)	0.04*** (0.02)	0.07*** (0.02)	0.07*** (0.02)
WGI: Rule of Law	0.02 (0.02)	0.02 (0.02)	0.05* (0.03)	0.05* (0.03)
WGI: Voice and Accountability	-0.07*** (0.02)	-0.07*** (0.02)	-0.08*** (0.02)	-0.08*** (0.02)
WGI: Government Effectiveness	0.00 (0.01)	0.00 (0.01)	-0.01 (0.02)	-0.01 (0.02)
WGI: Political Stability	-0.02 (0.01)	-0.01 (0.01)	0.01 (0.02)	0.01 (0.02)
WGI: Regulatory Quality	0.00 (0.01)	0.00 (0.01)	-0.09*** (0.02)	-0.09*** (0.02)
Constant	0.09 (0.06)	0.37*** (0.08)	0.35*** (0.08)	0.85*** (0.03)
Observations	5,176	5,051	5,051	5,548
Number of banks	456	446	446	461
AR(1)	-7.03***	-4.49***	-4.59***	5,392
AR(2)	1.19	0.80	0.83	5,392
Hansen J statistic	65.13	94.85	94.20	451

Average marginal effects of foreign bank ownership

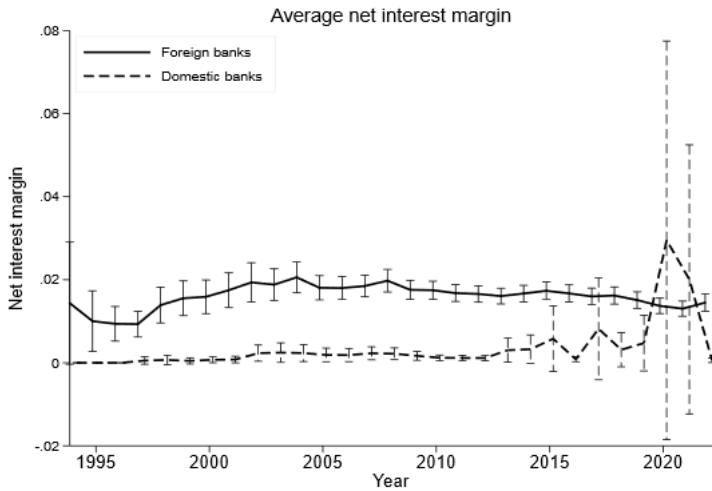


Effects of foreign bank ownership, Table 2 - first part

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Dependent variable: Gross Loans to Total Asset					
Lending (lagged)	0.71 ^{***} (0.07)	0.58 ^{***} (0.05)	0.57 ^{***} (0.05)			
Total assets / GDP x Foreign banks	-0.05 (0.03)	-0.04 (0.04)	-0.03 (0.03)	0.07 (0.05)	0.08 (0.05)	0.06 (0.06)
Total assets / GDP x Domestic banks	0.33 ^{**} (0.14)	0.30 (0.20)	0.15 (0.22)	-0.04 (0.23)	0.00 (0.22)	-0.03 (0.23)
Cost-to-income ratio (%) x Foreign banks	-1.93 ^{**} (0.76)	-2.27 ^{***} (0.85)	-2.15 ^{***} (0.80)	-2.60 ^{**} (1.05)	-2.61 ^{**} (1.10)	-2.62 ^{**} (1.10)
Cost-to-income ratio (%) x Domestic banks	-3.25 [*] (1.82)	-3.67 (2.27)	-2.92 (2.05)	-9.16 (6.14)	-9.71 (6.26)	-9.18 (6.11)
Net interest margin x Foreign banks (%)	0.53 ^{***} (0.19)	0.68 ^{***} (0.21)	0.56 ^{***} (0.17)	0.79 ^{***} (0.27)	0.78 ^{***} (0.29)	0.68 ^{**} (0.29)
Net interest margin x Domestic banks (%)	-0.03 (0.09)	0.00 (0.10)	0.01 (0.10)	0.31 (0.22)	0.30 (0.22)	0.27 (0.20)
Non-interest income x Foreign banks	0.10 (0.08)	0.07 (0.10)	0.04 (0.09)	-0.05 (0.12)	0.03 (0.13)	-0.01 (0.13)
Non-interest income x Domestic banks	0.25 ^{**} (0.11)	0.29 ^{**} (0.12)	0.27 ^{**} (0.11)	0.47 ^{***} (0.18)	0.49 ^{***} (0.18)	0.49 ^{***} (0.17)
Liquidity ratio	-0.33 ^{***} (0.06)	-0.43 ^{***} (0.04)	-0.43 ^{***} (0.04)	-0.74 ^{***} (0.03)	-0.74 ^{***} (0.03)	-0.74 ^{***} (0.03)
Equity / Total Assets (%)	-0.40 ^{**} (0.17)	-0.46 ^{**} (0.19)	-0.49 ^{***} (0.19)	-0.72 ^{***} (0.24)	-0.74 ^{***} (0.24)	-0.75 ^{***} (0.24)
Loan Loss Reserve / Gross Loans (%)	0.25 ^{***} (0.09)	0.35 ^{***} (0.11)	0.32 ^{***} (0.10)	0.75 ^{***} (0.28)	0.76 ^{***} (0.29)	0.74 ^{***} (0.29)

Effects of foreign bank ownership, Table 2 - second part

Inflation rate	-0.01 (0.01)	-0.01 (0.01)	-0.03*** (0.01)	-0.04*** (0.01)		
Interest rate	-0.09* (0.05)	-0.07 (0.05)	-0.16* (0.09)	-0.16* (0.09)		
GDP Growth	-0.07 (0.07)	-0.03 (0.08)	-0.05* (0.03)	-0.05* (0.03)		
WGI: Control of Corruption		0.05*** (0.01)		0.07*** (0.02)		
WGI: Rule of Law		0.02 (0.02)		0.04 (0.03)		
WGI: Voice and Accountability		-0.06*** (0.02)		-0.08*** (0.02)		
WGI: Government Effectiveness		-0.01 (0.01)		-0.01 (0.02)		
WGI: Political Stability		-0.01 (0.02)		0.01 (0.02)		
WGI: Regulatory Quality		-0.02 (0.01)		-0.09*** (0.02)		
Constant	0.30*** (0.05)	0.41*** (0.04)	0.45*** (0.04)	0.83*** (0.03)	0.84*** (0.03)	0.91*** (0.04)
Observations	5,176	5,051	5,051	5,548	5,392	5,392
Number of banks	456	446	446	461	451	451
AR(1)	-9.00***	-7.07***	-7.01***			
AR(2)	1.27	0.93	0.94			
Hansen J statistic	47.03	71.93	78.36			



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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