

Online Appendix to International Banking
and Cross-Border Effects of Regulation:
Lessons from Turkey

Yusuf Soner Başkaya,^a Mahir Binici,^a and Turalay Keç
^aCentral Bank of the Republic of Turkey

Table A1. Exposure-Weighted Inward Transmission of Regulation—Cycle Interactions

	Prudential IndexC (1)	Capital Requirements (2)	Sector-Specific Capital Buffer (3)	LTV Ratio (4)	Reserve Requirements: Local (5)	Interbank Exposure Limits (6)	Concentration Ratios (7)
Cumulative Foreign-Exposure-Weighted Regulation (ExpP _{cum})	-0.639 (1.101)	15.812 (13.056)	-2.883 (5.548)	5.036** (2.209)	-3.130 (1.963)	-9.971** (4.221)	14.315*** (5.251)
Log Total Assets _{t-1}	-12.136*** (2.082)	-12.702*** (2.072)	-12.956*** (2.135)	-12.179*** (2.098)	-12.517*** (2.072)	-12.409*** (2.201)	-14.259*** (2.324)
Tier 1 Ratio _{t-1}	-0.370*** (0.076)	-0.390*** (0.074)	-0.402*** (0.081)	-0.377*** (0.075)	-0.385*** (0.074)	-0.369*** (0.083)	-0.457*** (0.097)
Illiquid Assets Ratio _{t-1}	-0.051 (0.042)	-0.031 (0.043)	-0.049* (0.028)	-0.032 (0.043)	-0.032 (0.040)	-0.051 (0.036)	-0.072* (0.043)
International Activity _{t-1}	-0.078 (0.053)	-0.092 (0.066)	-0.057 (0.055)	-0.064 (0.056)	-0.072 (0.066)	-0.076 (0.061)	0.003 (0.064)
Core Deposits Ratio _{t-1}	0.142*** (0.054)	0.130* (0.069)	0.129* (0.068)	0.120** (0.058)	0.127* (0.067)	0.105* (0.055)	0.097* (0.053)
BIS Financial Cycle (Host Country)*ExpP _{cum}	0.141 (0.099)	-1.555 (1.217)	0.375 (0.447)	-0.338** (0.146)	0.283 (0.188)	0.816*** (0.302)	-0.836** (0.399)
BIS Business Cycle (Host Country)*ExpP _{cum}	-0.052 (0.140)	2.093 (2.046)	-3.076* (1.802)	0.411 (0.296)	-0.061 (0.194)	-0.427* (0.254)	0.248 (0.382)
Observations	1,004	1,004	1,004	1,004	1,004	1,004	1,004
R ²	0.388	0.388	0.391	0.387	0.387	0.395	0.404
Adjusted R ²	0.340	0.339	0.343	0.339	0.338	0.347	0.356

Notes: This table reports the effects of changes in regulation and firm characteristics, business and financial cycles, and their interactions on log changes in total loans. The data are quarterly from 2006:Q1 to 2013:Q3 for a panel of forty-one domestic banks and domestic affiliates of foreign banks. Cumulative foreign-exposure-weighted regulation ExpP_{cum} is calculated as the weighted average of cumulative changes in foreign regulation weighted with total assets and liabilities of that bank in the respective foreign country. The unilateral cycle variables are controlled for by the fixed effects. For more details on the variables, see table 7 in the appendix in the main paper. Each column gives the result for the regulatory measure specified in the column headline. All specifications include bank and time fixed effects. Standard errors are clustered by banks. ***, **, and * indicate significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Table A2. Inward Transmission of Home Macroprudential Policy via Affiliates—Cycle Interactions

	HomeP _{cum} = Prudential IndexC (1)	HomeP _{cum} = Capital Requirements (2)	HomeP _{cum} = Sector-Specific Capital Buffer (3)	HomeP _{cum} = LTV Ratio (4)	HomeP _{cum} = Reserve Requirements: Local (5)	HomeP _{cum} = Interbank Exposure Limits (6)	HomeP _{cum} = Concentration Ratios (7)
Cumulative Home-Country Regulation (HomeP _{cum})	0.990*** (0.369)	0.198 (1.408)	3.995 (3.242)	1.726*** (0.408)	1.366*** (0.283)	-4.996 (3.739)	2.463* (1.418)
Log Total Assets _{t-1}	-14.689*** (3.321)	-10.638*** (3.603)	-11.531*** (3.306)	-0.667 (1.493)	-12.109*** (3.439)	-22.147*** (7.435)	-16.891*** (6.403)
Tier 1 Ratio _{t-1}	-0.535*** (0.248)	-0.366 (0.239)	-0.369 (0.229)	0.401* (0.218)	-0.440* (0.226)	-0.579* (0.329)	-0.411 (0.343)
Illiquid Assets Ratio _{t-1}	-0.199*** (0.074)	-0.221** (0.092)	-0.178** (0.090)	-0.557*** (0.102)	-0.219** (0.103)	-0.542*** (0.185)	-0.214*** (0.069)
Core Deposits Ratio _{t-1}	0.072 (0.096)	0.109 (0.099)	0.082 (0.091)	0.011 (0.040)	0.049 (0.078)	0.072 (0.116)	0.084 (0.107)
BIS Financial Cycle (Home Country)	0.131* (0.079)	0.143* (0.075)	0.095 (0.058)	0.244*** (0.045)	0.216*** (0.076)	0.948*** (0.227)	0.128 (0.131)
BIS Business Cycle (Home Country)	0.213 (0.368)	0.639** (0.257)	0.204 (0.191)	-1.908*** (0.367)	1.093** (0.503)	-0.075 (1.405)	-1.921* (1.042)
BIS Financial Cycle *HomeP _{cum}	0.057 (0.040)	-0.044 (0.042)	-0.113 (0.125)	0.157*** (0.020)	0.114** (0.057)	-0.543*** (0.127)	0.256*** (0.096)
BIS Business Cycle *HomeP _{cum}	0.353* (0.211)	-1.464*** (0.514)	-0.204 (1.945)	0.024 (0.116)	0.747** (0.313)	0.186 (0.524)	0.907*** (0.312)
Observations	404	404	404	67	404	256	272
R ²	0.416	0.415	0.408	0.915	0.416	0.494	0.513
Adjusted R ²	0.328	0.326	0.318	0.766	0.328	0.376	0.405

Notes: This table reports the effects of changes in regulation and firm characteristics, business and financial cycles, and their interactions on log changes in total loans. The data are quarterly from 2006:Q1 to 2013:Q3 for foreign affiliates of domestic banks. The number of bank changes across specifications ranges from sixteen to five. HomeP_{cum} refers to the cumulative changes in regulation in the home (i.e., parent-bank) country of foreign affiliates. For more details on the variables, see table 7 in the appendix in the main paper. Each column gives the result for the regulatory measure specified in the column headline. All specifications include time and bank fixed effects. Standard errors are clustered by banks. ***, **, and * indicate significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Table A3. Inward Transmission of Home vs. Host Macroprudential Policy via Affiliates

	HomeP = HostP = Prudential IndexC (1)	HomeP = HostP = Capital Require- ments (2)	HomeP = HostP = Sector-Specific Capital Buffer (3)	HomeP = HostP = HostP = LTV Ratio (4)	HomeP = HostP = Reserve Requirements: Foreign (5)	HomeP = HostP = Reserve Requirements: Local (6)	HomeP = HostP = Interbank Exposure Limits (7)	HomeP = HostP = Concen- tration Ratios (8)
Home-Country Regulation (HomeP _{sum})	4.512*** (1.700)	-1.983 (3.996)	4.862** (2.507)	4.745 (3.549)	-9.679*** (2.332)	-2.825 (2.352)	10.23*** (2.742)	12.78** (6.338)
Host-Country Regulation (HostP _{sum})	2.096*** (0.668)	1.972 (2.694)	-5.815*** (1.877)	2.606 (2.098)	6.035*** (0.746)	1.004 (0.834)		
Log Total Assets _{t-1}	-6.701** (2.187)	-6.153** (2.678)	-7.347*** (2.065)	-22.567*** (6.859)	-8.430*** (2.076)	-7.465*** (2.232)	-7.921*** (2.642)	-6.748*** (2.493)
Tier 1 Ratio _{t-1}	-0.174 (0.207)	0.080 (0.207)	0.030 (0.205)	2.598*** (0.905)	-0.244 (0.239)	-0.125 (0.210)	-0.149 (0.219)	0.208 (0.219)
Illiquid Assets Ratio _{t-1}	-0.141 (0.087)	-0.132 (0.090)	-0.144* (0.085)	-0.698*** (0.153)	-0.174** (0.088)	-0.172* (0.093)	0.016 (0.142)	0.066 (0.111)
Core Deposits Ratio _{t-1}	0.027 (0.094)	0.009 (0.103)	0.034 (0.085)	-0.070 (0.153)	0.043 (0.095)	0.029 (0.109)	-0.156 (0.145)	0.015 (0.135)
BIS Financial Cycle (Home Country)	0.001 (0.048)	-0.060 (0.063)	-0.014 (0.053)	0.074*** (0.009)	0.039 (0.045)	0.009 (0.049)	-0.052 (0.154)	-0.118* (0.068)
BIS Business Cycle (Home Country)	-0.122 (0.196)	-0.123 (0.277)	0.023 (0.194)	-2.595** (1.178)	-0.057 (0.180)	-0.149 (0.276)	-1.666 (1.223)	-1.129* (0.628)
BIS Financial Cycle (Host Country)	1.080*** (0.264)	0.807*** (0.251)	1.120*** (0.238)	2.214*** (0.179)	1.016*** (0.253)	1.286*** (0.220)	0.834*** (0.145)	0.695*** (0.113)
BIS Business Cycle (Host Country)	0.653*** (0.131)	0.720*** (0.165)	0.831*** (0.162)	-1.058* (0.580)	0.572*** (0.132)	0.742*** (0.156)	1.274** (0.629)	1.092*** (0.344)
Observations	393	393	393	27	393	393	246	264
R ²	0.297	0.225	0.251	0.876	0.289	0.281	0.244	0.311
Adjusted R ²	0.240	0.163	0.192	0.731	0.233	0.233	0.173	0.248

Notes: This table reports the effects of changes in parent-country regulation and firm characteristics on log changes in total loans. The data are quarterly from 2006:Q1 to 2013:Q3 for domestic affiliates of foreign banks. HomeP refers to the changes in regulation in the home (i.e., parent-bank) country of foreign affiliates. HostP refers to the changes in regulation in the host country of foreign affiliates and thus changes only over time. For more details on the variables, see table 7 in the appendix in the main paper. Each column gives the result for the regulatory measure specified in the column headline. All specifications include time and bank fixed effects. Standard errors are clustered by banks. ***, **, and * indicate significance at the 1 percent, 5 percent, and 10 percent level, respectively.

Table A4. Inward and Outward Transmission of Macroprudential Policy—Including All Instruments Jointly

	P = ExpP Inward A1 (1)	P = ExpP Inward A1 (2)[†]	P = HomeP Inward B1 (3)
Log Total Assets _{t-1}	-8.802*** (1.175)	-10.606*** (3.040)	-20.132*** (3.372)
Tier 1 Ratio _{t-1}	-0.096 (0.168)	-0.314 (0.236)	-0.954*** (0.227)
Illiquid Assets Ratio _{t-1}	-0.082 (0.098)	-0.095 (0.108)	-0.363** (0.155)
Core Deposits Ratio _{t-1}	-0.035 (0.097)	-0.024 (0.100)	0.080 (0.141)
BIS Financial Cycle	-0.408*** (0.086)	9.679*** (2.755)	1.179*** (0.135)
BIS Business Cycle	1.779*** (0.231)	-14.617*** (3.845)	-3.260*** (1.009)
P = Capital Requirements	-9.932 (11.540)	-21.29* (12.630)	-12.420 (10.230)
P = Sector-Specific Capital Buffer	11.260 (12.020)	1.812 (16.250)	
P = Loan-to-Value Ratio	17.080* (9.438)	10.790 (9.073)	
P = Reserve Requirements: Local	11.510 (9.199)	-15.110 (12.530)	21.810 (14.020)
P = Interbank Exposure Limits	27.370** (8.667)	3.036 (12.870)	-42.170*** (8.184)
P = Concentration Ratios	28.810 (30.130)	22.470 (23.900)	19.530*** (3.780)
Observations	500	500	170
R ²	0.293	0.370	0.731
Adjusted R ²	0.220	0.269	0.608
<p>Notes: This table reports the effects of changes in regulation and firm characteristics on log changes in total loans by destination country. The data are quarterly from 2006:Q1 to 2013:Q3 for all domestic banks and domestic affiliates of foreign banks. The columns report results on the different specifications: Inward specification, table 3 and Inward table 6. Foreign-exposure-weighted regulation ExpP is calculated as the weighted average of changes in foreign regulation where the weights are total assets and liabilities of the bank in the respective foreign country. HomeP refers to the changes in regulation in the home (i.e., parent-bank) country of foreign affiliates. DestP refers to the changes in regulation in the destination country of the loan. For each prudential measure P, the reported coefficient is the sum of the contemporaneous term and two lags, with the corresponding standard errors for joint significance in parentheses. For more details on the variables, see table 7 in the appendix of the main paper. All specifications include bank fixed effects, and specifications 2 and 3 also include time fixed effects. Standard errors are clustered by banks. ***, **, and * indicate significance at the 1 percent, 5 percent, and 10 percent level, respectively. [†]Specification 1 includes only bank fixed effects, while specification 2 includes both bank and time fixed effects.</p>			

