

Online APPENDIX

Table A1 Robustness Tests: Loan Growth and Macroeconomic Cycles with Adjusted GDP Growth

Dependent variable:				
Loan growth adj.	Specification 1	Specification 2	Specification 3	Specification 4
GDP growth adj.	-0.6706*** [0.0900]	-0.3663*** [0.0757]	-0.3698*** [0.0936]	-0.3049*** [0.0765]
Bank size	-0.0513*** [0.0121]	-0.1303*** [0.0136]	-0.1301*** [0.0141]	-0.0479*** [0.0122]
Equity	1.8026*** [0.1265]	1.6864*** [0.1258]	1.6868*** [0.1260]	1.8016*** [0.1270]
Loans to assets	-1.2420*** [0.0192]	-1.2521*** [0.0191]	-1.2521*** [0.0191]	-1.2375*** [0.0193]
Deposits to liabilities	0.0219 [0.0556]	0.046 [0.0552]	0.046 [0.0552]	0.0191 [0.0558]
Inflation	-1.9717*** [0.2585]		-0.0198 [0.3146]	
Unemployment		2.3134*** [0.1754]	2.3055*** [0.2152]	
Intercept	1.9991*** [0.2302]	3.0582*** [0.2454]	3.0556*** [0.2488]	1.8463*** [0.2303]
Quarter dum.	Yes	Yes	Yes	Yes
Obs.	7575	7575	7575	7575
Banks	367	367	367	367
Adj.R2	0.3885	0.3981	0.398	0.3837

Notes: *Loan growth adj.* is the change in the level of gross loans (in %) between quarter of *t* and *t-4*; *GDP growth* is the change in the level of GDP on the country level (in %) between quarter of *t* and *t-4*; *Inflation* is the rate of inflation at the country level at quarter-end; *Unemployment* is the rate of registered unemployment at the country level at quarter-end; *Bank size* is the natural logarithm of total assets; *Equity* is the relation of total equity to total assets in *t-4*; *Loans to assets* is the relation of total loans to total assets in *t-4*; *Deposits to liabilities* is the relation of total deposits to total liabilities in *t-4*. Estimations are performed including bank- and time fixed effects. Standard errors are given in parentheses; ***, ** and * denote significance levels at 1%, 5% and 10% respectively.

Table A2 Robustness Tests: Loan Growth and Macroeconomic Cycles with Lagged Loan Growth

Dependent variable:				
Loan growth	Specification 1	Specification 2	Specification 3	Specification 4
Loan growth (t-1)	-0.0581* [0.0315]	-0.0568* [0.0319]	-0.0641** [0.0319]	-0.0637** [0.0324]
GDP growth	-0.2746*** [0.0653]	-0.2729*** [0.0653]	-0.2739*** [0.0658]	-0.2733*** [0.0659]
Regional unemployment growth			-0.0473** [0.0224]	-0.0497** [0.0230]
Unemployment		0.0206 [0.1124]		-0.0641 [0.1143]
Inflation	-0.1976*** [0.0759]	-0.1878** [0.0840]	-0.1800** [0.0762]	-0.2077** [0.0834]
Bank size	-0.0061 [0.0062]	-0.0067 [0.0074]	-0.004 [0.0062]	-0.0022 [0.0074]
Equity	-0.0868 [0.1236]	-0.094 [0.1345]	-0.0522 [0.1219]	-0.032 [0.1318]
Loans to assets	-0.2090*** [0.0311]	-0.2100*** [0.0324]	-0.2042*** [0.0311]	-0.1995*** [0.0326]
Deposits to liabilities	0.2038** [0.0952]	0.2076** [0.0962]	0.2046** [0.0956]	0.1944** [0.0961]
Intercept	0.1363 [0.1142]	0.1426 [0.1252]	0.092 [0.1117]	0.071 [0.1234]
N	8311	8311	8311	8311
chi2	423.4695	420.1796	426.7525	429.177
sargan	1094.26	1094.266	1094.085	1093.531
sarganp	0.000	0.000	0.000	0.000
hansen	354.9541	355.4809	356.01	356.4328
hansenp	0.2172	0.2006	0.1951	0.1908
ar2	-1.5517	-1.5107	-1.7723	-1.7447
ar2p	0.1207	0.1309	0.0764	0.081

Notes: *Loan growth* is the change in the level of gross loans (in %) between quarter of t and $t-1$; *GDP growth* is the change in the level of GDP on the country level (in %) between quarter of t and $t-1$; *Regional unemployment growth* is the change in the level of unemployment rate on the regional ("poviat") level (in %) between quarter of t and $t-1$; *Inflation* is the rate of inflation at the country level at quarter-end; *Unemployment* is the rate of registered unemployment at the country level at quarter-end; *Bank size* is the natural logarithm of total assets; *Equity* is the relation of total equity to total assets lagged by one quarter; *Loans to assets* is the relation of total loans to total assets lagged by one quarter; *Deposits to liabilities* is the relation of total deposits to total liabilities lagged by one quarter. Estimations are performed using the two-step system GMM estimator. Standard errors are given in parentheses; ***, ** and * denote significance levels at 1%, 5% and 10% respectively.

Table A3 Robustness Tests: Loan Growth and Macroeconomic Cycles with Asset Quality

Dependent variable: Loan growth	Specification 1	Specification 2	Specification 3	Specification 4
GDP growth	-0.3938*** [0.0748]	-0.3397*** [0.0732]	-0.4055*** [0.0743]	-0.3654*** [0.0731]
Inflation rate	0.0264 [0.0984]		0.0206 [0.0949]	
Unemployment	1.1088*** [0.1127]		1.2393*** [0.1136]	
Bank size	-0.0708*** [0.0065]	-0.0269*** [0.0052]	-0.0769*** [0.0068]	-0.0246*** [0.0052]
Equity	0.9270*** [0.0684]	1.0335*** [0.0682]	0.9700*** [0.0673]	1.0690*** [0.0674]
Loans to assets	-0.2681*** [0.0105]	-0.2630*** [0.0106]	-0.2704*** [0.0111]	-0.2628*** [0.0112]
Deposits to liabilities	-0.0044 [0.0332]	-0.0079 [0.0334]	-0.0216 [0.0323]	-0.0333 [0.0326]
NPL	0.0002 [0.0003]	0.0007** [0.0003]		
LLP			-0.0043 [0.0031]	-0.0026 [0.0031]
Intercept	1.2698*** [0.1134]	0.5950*** [0.0963]	1.3749*** [0.1162]	0.5707*** [0.0968]
Quarter dum.	Yes	Yes	Yes	Yes
No. of observations	8652	8652	8029	8029
No. of banks	367	367	364	364
Adj.R-squared	0.15	0.16	0.16	0.15

Notes: *Loan growth* is the change in the level of gross loans (in %) between quarter of t and $t-1$; *GDP growth* is the change in the level of GDP on the country level (in %) between quarter of t and $t-1$; *Inflation* is the rate of inflation at the country level at quarter-end; *Unemployment* is the rate of registered unemployment at the country level at quarter-end; *Bank size* is the natural logarithm of total assets; *Equity* is the relation of total equity to total assets lagged by one quarter; *Loans to assets* is the relation of total loans to total assets lagged by one quarter; *Deposits to liabilities* is the relation of total deposits to total liabilities lagged by one quarter; *NPL* is the ratio of non-performing loans to total loans lagged by one quarter; *LLPROV* is the ratio of loan loss provisions to total assets lagged by one quarter. Estimations are performed including bank- and time fixed effects. Standard errors are given in parentheses; ***, ** and * denote significance levels at 1%, 5% and 10% respectively.

Table A4 Robustness Tests: Loan Growth and Regional Economic Cycles with Asset Quality

Dependent variable: Loan growth	Specification 1	Specification 2	Specification 3	Specification 4
GDP growth	-0.4321*** [0.0751]	-0.3425*** [0.0732]	-0.4560*** [0.0747]	-0.3657*** [0.0730]
Regional unemployment growth	-0.0384*** [0.0146]	-0.0434*** [0.0146]	-0.0431*** [0.0148]	-0.0479*** [0.0148]
Inflation	-0.4398*** [0.0860]		-0.4664*** [0.0838]	
Bank size	-0.0299*** [0.0054]	-0.0242*** [0.0053]	-0.0290*** [0.0054]	-0.0222*** [0.0053]
Equity	1.0458*** [0.0685]	1.0550*** [0.0686]	1.0832*** [0.0675]	1.0904*** [0.0677]
Loans to assets	-0.2612*** [0.0106]	-0.2618*** [0.0106]	-0.2613*** [0.0112]	-0.2615*** [0.0112]
Deposits to liabilities	-0.0116 [0.0334]	-0.0061 [0.0334]	-0.0367 [0.0325]	-0.0321 [0.0326]
NPL	0.0005 [0.0003]	0.0007** [0.0003]		
LLP			-0.0028 [0.0031]	-0.0026 [0.0031]
Intercept	0.6574*** [0.1002]	0.5434*** [0.0978]	0.6589*** [0.1005]	0.5246*** [0.0978]
Quarter dum.	Yes	Yes	Yes	Yes
No. of observations	8206	8206	8029	8029
No. of banks	360	360	364	364
Adj.R-squared	0.149	0.146	0.151	0.148

Notes: *Loan growth* is the change in the level of gross loans (in %) between quarter of t and $t-1$; *GDP growth* is the change in the level of GDP on the country level (in %) between quarter of t and $t-1$; *Regional unemployment growth* is the change in the level of unemployment rate on the regional ("poviat") level (in %) between quarter of t and $t-1$; *Inflation* is the rate of inflation at the country level at quarter-end; *Bank size* is the natural logarithm of total assets; *Equity* is the relation of total equity to total assets lagged by one quarter; *Loans to assets* is the relation of total loans to total assets lagged by one quarter; *Deposits to liabilities* is the relation of total deposits to total liabilities lagged by one quarter; *NPL* is the ratio of non-performing loans to total loans lagged by one quarter; *LLPROV* is the ratio of loan loss provisions to total assets lagged by one quarter. Estimations are performed including bank- and time fixed effects. Standard errors are given in parentheses; ***, ** and * denote significance levels at 1%, 5% and 10% respectively.