Online Appendix

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Appendix 1: Exogenous variables and the resulting initial equilibrium under the baseline scenario.

	Initial equilibrium			Exogenous variables in the model	
Endogenously solved	r_t^{γ}=0.154	$k_{t+1,i}^{\delta}$=0.20	$e_{t+1,ii}^{\gamma}$ = 0.83	$Other_t^{\gamma}$=-11.0	$z_{\gamma,1}$=1.56
	r_t^{δ}=0.453	$k_{t+1,ii}^{\delta}$=0.21	$e_{t+1,i}^{\delta}$= 3.90	$Other_t^{\delta}$=-2.69	$z_{\delta,1}$=2.53
	r_t^{τ}=0.155	$k_{t+1,i}^{\tau}$=0.17	$e_{t+1,ii}^{\delta}$= 3.43	$Other_t^{\tau}$=27.06	$z_{\tau,1}$=3.3
	$r_{d,t}^{\gamma}$=0.04	$k_{t+1,ii}^{\tau}$=0.13	$e_{t+1,i}^{\tau}$= 10.59	$g_{\alpha^{\gamma},i,1}$=-0.75	$u_{i,1}$=3.61
	$r_{d,t}^{\delta}$=0.024	$\pi_{t+1,i}^{\gamma}$=0.26	$e_{t+1,ii}^{\tau}$= 7.31	$g_{\alpha^{\gamma},ii,1}$=-1.04	$u_{ii,1}$=0.1
	$r_{d,t}^{\tau}$=0.04	$\pi_{t+1,ii}^{\gamma}$= -0.34	$\tilde{R}_{t+1,i}$= 1.28	$g_{\beta^{\delta},i,1}$=-0.76	c_i^{γ}=0.214
	$\mu_{d,t}^{\gamma}$=11.47	$\pi_{t+1,i}^{\delta}$= 0.33	$\tilde{R}_{t+1,ii}$= 0.75	$g_{\beta^{\delta},ii,1}$=-1.04	c_{ii}^{γ}=0.129
	$\mu_{d,t}^{\delta}$=43.71	$\pi_{t+1,ii}^{\delta}$= -0.13	$\mu_t^{\alpha^{\gamma}}$= 10.83	$g_{\theta^{\tau},i,1}$=-0.75	c_i^{δ}=0.159
	$\mu_{d,t}^{\tau}$=65.32	$\pi_{t+1,i}^{\tau}$= 2.11	$\mu_t^{\beta^{\delta}}$= 14.59	$g_{\theta^{\tau},ii,1}$=-1.04	c_{ii}^{δ}=0.351
	$k_{t+1,i}^{\gamma}$= 0.138	$\pi_{t+1,ii}^{\tau}$= -1.17	$\mu_t^{\theta^{\tau}}$= 63.45	$a_{\alpha^{\gamma},1}$=-3.85	c_i^{τ}=0.024
	$k_{t+1,ii}^{\gamma}$= 0.09	$e_{t+1,i}^{\gamma}$=1.43	M= -16.81	$a_{\beta^{\delta},1}$=-3.35 $a_{\theta^{\tau},1}$=-2.08	c_{ii}^{τ}=0.042
Calibrated	$\bar{m}_t^{\gamma}$=9.39	$d_{\delta,t}^{\phi}$=33.79	$v_{t+1,i}^{\alpha^{\gamma}}$= 0.91	$a_{h^b,2_{(\forall h\in H^b)}}$= 1.41	e_t^{δ}=3.567
	$\bar{m}_t^{\delta}$=10.04	$d_{\tau,t}^{\phi}$=62.81	$v_{t+1,i}^{\beta^{\delta}}$= 0.90	$a_{h^b,3_{(\forall h\in H^b)}}$= 0.68	e_t^{τ}=8.48
	$\bar{m}_t^{\tau}$=54.95	d_t^{δ}=15.96	$v_{t+1,i}^{\theta^{\tau}}$= 0.91	A_t^{γ}=2.462	$\bar{\omega}$=1
	$d_{\gamma,t}^{\phi}$=11.03	μ_t^{τ}=11.96	$GDP_{t+1,\ i}$ = 89.83	A_t^{δ}=8.669	$\omega(\widetilde{\omega})$=0.2
				A_t^{τ}=31.903 e_t^{γ}=1.175	ρ_t=0.04
Arbitrarily selected	$v_{t+1,ii}^{\alpha^{\gamma}}$= 0.80	$v_{t+1,i}^{\gamma}$= 0.975	$v_{t+1,ii}^{\delta}$= 0.963	$g_{h,i,2_{(\forall h\in H^b)}}$=0.05	$u_{s,2_{(\forall s\in S)}}$=0.1
	$v_{t+1,ii}^{\beta^{\delta}}$= 0.80	$v_{t+1,ii}^{\gamma}$= 0.952	$v_{t+1,i}^{\tau}$= 0.997	$g_{h,ii,2_{(\forall h\in H^b)}}$=0.05	$z_{b,2_{(\forall b\in B)}}$=0.19
	$v_{t+1,ii}^{\theta^{\tau}}$= 0.80	$v_{t+1,i}^{\delta}$= 0.963	$v_{t+1,ii}^{\tau}$= 0.937	$g_{h,i,3_{(\forall h\in H^b)}}$=0.05	$z_{b,3_{(\forall b\in B)}}$=0.5
			$GDP_{t+1,\ ii}$ = 85.24	$g_{h,ii,3_{(\forall h\in H^b)}}$=0.1	$z_{b,4_{(\forall b\in B)}}$= 0.1
				$\bar{k}_{t+1,S(\forall s\in S)}^{\gamma}$ =0.11	$u_{s,2_{(\forall s\in S)}}$=0.1
				$\bar{k}_{t+1,S(\forall s\in S)}^{\delta}$ =0.16	r_t^A=0.045
				$\bar{k}_{t+1,S(\forall s\in S)}^{\tau}$ =0.13	ρ=0.95
				$\lambda_{ks(\forall b\in B,s\in S)}^{b}$ =0.1	$a_{\alpha^{\gamma},2}$=0.025
				$\lambda_{i(b\in B)}^{b}$ =0.9	$a_{\beta^{\delta},2}$=-0.12
				$\lambda_{ii(b\in B)}^{b}$ =1.1	$a_{\theta^{\tau},2}$=0.04

Source: Authors (2020).

Legend:

Endogenously-solved variables:

r_t^b: lending rate offered by bank *b* in period *t*

$r_{d,t}^b$: deposit rate offered by bank *b* in period *t*

$\mu_{d,t}^b$: Bank *b*'s debt in the interbank market in period *t*

$k_{t+1,i}^b$: Bank *b*'s capital adequacy ratio (CAR) in period *t+1* in state *i*

$k_{t+1,ii}^b$: Bank *b*'s capital adequacy ratio (CAR) in period *t+1* in state *ii*

$\pi_{t+1,i}^b$: Bank *b*'s profit in period *t+1* in state *i*

$\pi_{t+1,ii}^b$: Bank *b*'s profit in period *t+1* in state *ii*

$e_{t+1,i}^b$: Bank *b*'s capital in period *t+1* in state *i*

$e_{t+1,ii}^b$: Bank *b*'s capital in period *t+1* in state *ii*

$\tilde{R}_{t+1,i}$: Repayment rate expected by banks from interbank lending at period t+1 in state i

$\tilde{R}_{t+1,ii}$: Repayment rate expected by banks from interbank lending at period t+1 in state ii

$\mu_t^{a^b}$: Amount of money that agent a chooses to owe in the loan market of bank *b* at time t

$\bar{B}$: Government bonds

Calibrated variables:

$\bar{m}_t^b$: Amount of credit that bank *b* extends in the loan market in period *t*

$d_{b,t}^{\phi}$: Amount of money that agent ϕ chooses to deposit with bank *b* at time *t*

d_t^b: Bank *b*'s interbank lending in period *t*

μ_t^{τ}: Amount of money that bank τ owes in the interbank market in period t

$v_{t+1,i}^{a^b}$: Repayments rates of agent a^bin the loan market in period t+1 in state i

$\text{GDP}_{t+1,\,i}$: GDP in period t+1 in state i

Arbitrarily selected:

$v_{t+1,ii}^{a^b}$: Repayments rates of agent a^bin the loan market in period t+1 in state ii

$v_{t+1,i}^b$: Repayment rate of bank *b* in period *t+1* in state *i*

$v_{t+1,ii}^b$: Repayment rate of bank *b* in period *t+1* in state *ii*

$\text{GDP}_{t+1,\,ii}$: GDP in period t+1 in state ii

Exogeneous variables in the model

$Other_t^b$: The 'other' items in the balance sheet of bank *b* in period *t*

$g_{a^b,i,1}$: household's repayment rate functional form for agent *a* in regards to bank *b* in state *i*

$g_{a^b,ii,1}$: household's repayment rate functional form for agent *a* in regards to bank *b* in state *ii*

$a_{a^b,1}$: household's demand for loans functional form for for agent *a* in regards to bank *b*

$z_{b,1}$: deposit supply functional form for bank *b*

$u_{i,1}$: GDP function form in state *i*

$u_{ii,1}$: GDP function form in state *ii*

c_i^b: coefficient of risk aversion in the utility function of bank *b* in state *i*

c_{ii}^{γ}: coefficient of risk aversion in the utility function of bank *b* in state *ii*

$a_{h^b,3_{(\forall h \in H^b)}}$: household's demand for loans functional form

$a_{h^b,4_{(\forall h \in H^b)}}$: household's demand for loans functional form

A_t^b: Other assets of bank *b* in period *t*

e_t^b: Bank b's capital in period t
$\bar{\omega}$: Risk weight on consumer loans
$\omega(\widetilde{\omega})$: Risk weight on investment (risk weight on market book)
ρ_t: Interbank rent in period t
$g_{h,i,2_{(\forall h \in H^b)}}$: elements of the household's repayment rate functional form in state *i*
$g_{h,ii,2_{(\forall h \in H^b)}}$: elements of the household's repayment rate functional form in state *ii*
$g_{h,i,3_{(\forall h \in H^b)}}$: elements of the household's repayment rate functional form in state *i*
$g_{h,ii,3_{(\forall h \in H^b)}}$: elements of the household's repayment rate functional form in state *ii*
$\bar{k}^{\gamma}_{t+1,S(\forall s \in S)}$: *Capital adequacy requirements*
$\lambda^b_{ks(\forall b \in B, s \in S)}$: *Non-pecuniary penalty for capital adequacy requirement violation of bank b in state s*
$\lambda^b_{i(b \in B)}$: *Non-pecuniary penalty for capital adequacy requirement violation of bank b in state i*
$\lambda^b_{ii(b \in B)}$: *Non-pecuniary penalty for capital adequacy requirement violation of bank b in state ii*
$u_{s,3_{(\forall s \in S)}}$: elements of the GDP functional form
$z_{b,2_{(\forall b \in B)}}$: elements of the deposit supply form
$z_{b,3_{(\forall b \in B)}}$: elements of the deposit supply form
$z_{b,4_{(\forall b \in B)}}$: elements of the deposit supply form
$u_{s,2_{(\forall s \in S)}}$: elements of the GDP functional form
r_t^A: The rate of return on market book in period t
ρ: Probability that state i will occur in the next period
$a_{a^b,2}$: elements of the household's demand for loans functional form for agent a in relation to bank b

Notes: $b \in B = \{\gamma, \delta, \tau\}$; $a \in A = \{\alpha, \beta, \theta, \phi\}$

Appendix 2: Detailed tables with the directional changes in the endogenous variables under the theoretical model.

Table A1: Directional changes in the endogenous variables in the model caused by deteriorating NPL ratios of Bank γ ('high NPLs') and Bank δ ('moderate NPLs').

Endogenous variable	Bank γ	Bank δ	Bank τ
r^b(lending rate)	-~+-++~ | +~	-+--+~ | -	-~+-++~ | +~
r_d^b(deposit rate)	00000 | 0	-+--+~ | -	00000 | 0
$\bar{m}_t^b$(credit in the loan market)	+~-+~-- | -~	+~-+--~ | -~	+~-+~-- | -~
π_i^b (profit in state i)	-~+~-+~+~ | -~	+~+-++~ | +~	-+~-+~+~ | -~
π_{ii}^b (profit in state ii)	-~+-+~+~ | -~	+~+~-~+~+~ | +~	-+~-+~+~ | +~
e_i^b(capital in state i)	-~+-~++~ | +~	+~+~-~+~+~ | +~	0+-++~ | +~
e_{ii}^b (capital in state ii)	-~+-~++~ | +~	+~+-~+~+~ | +~	-~+-++~ | +~
$\mu_{d,t}^b$(debt in interbank market)	+-+-~-~ | +~	-~+-++~ | +	+-~+--~ | -~
k_i^b (CAR in state i)	-~+-++~ | +~	++-++~ | +	-~+-++~ | +~
k_{ii}^b (CAR in state ii)	-~+-~++~ | +~	++-++~ | +	-~+-++~ | +~
v_i^b(repay. rate in state i)	--+~--~ | -	-~-+~-~-~ | -~	+~-+~--~ | -~
v_{ii}^b(repay. rate in state ii)	+~-+~-+~ | -~	+~-~+~--~ | -~	+~-+~--~ | -~
GDP_i	+~-+--~ | -~		
GDP_{ii}	+~-+--~ | -~		
M	+-+--~ | +~		

Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend
Source: Authors (2020).
Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend.

Table A2:Directional changes in the endogenous variables in the model under 'Nationalisation' scenario.

Endogenous variable	Bank γ	Bank δ	Bank τ
r^b(lending rate)	-++~+~+~ | +~	-+-~-~-~ | -~	-+--~-~ | -~
r_d^b(deposit rate)	00000 | 0	+~-+~-+~ | -~	00000 | 0
$\bar{m}_t^b$(credit in the loan market)	+--~-~-~ | -~	+-+~+~+~ | +~	+-+~+~+~ | +~
π_i^b (profit in state i)	-~+-~-~-~ | -~	-~+~-~-~-~ | -~	-~+--~-~ | -~
π_{ii}^b (profit in state ii)	+~--~-~-~ | -~	-~+~-~-~-~ | -~	-~+-~-~-~ | -~
e_i^b(capital in state i)	+~+-~+~+~ | +~	+~+~-~-~-~ | -~	-~+-~-~-~ | -~
e_{ii}^b (capital in state ii)	+~++~+~+~ | +~	-~+-~-~-~ | -~	-~+-~-~-~ | -~
$\mu_{d,t}^b$(debt in interbank market)	-~--~-~-~ | -~	----~-~ | -	----- | -
k_i^b (CAR in state i)	-~++~+~+~ | +~	-~+--~-~ | -~	-~+--~-~ | -~
k_{ii}^b (CAR in state ii)	-~++~+~+~ | +~	-+--- | -	-+---~ | -
v_i^b(repay. rate in state i)	+~--~+~+~ | +~	-~++~-~-~ | -	-~-+++~ | +~
v_{ii}^b(repay. rate in state ii)	+--~+~-~ | -~	+---~- | -	++~--~-~ | -
GDP_i	+-+~+~+~ | +~		
GDP_{ii}	+-+~+~+~ | +~		
M	+-+~++ | +~		

Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend
Source: Authors (2020).

Table A3: Directional changes in the endogenous variables in the model under 'Government-assisted merger' scenario without any capital injection (Merger 1).

Endogenous variable	Bank γ	Bank δ	Bank τ
r^b(lending rate)	n/a	++++~+ | +	+~++++ | +
r_d^b(deposit rate)	n/a	++~+++ | +	00000 | 0
$\bar{m}_t^b$(credit in the loan market)	n/a	-~---~-~ | -~	--~--~-~ | -~
π_i^b (profit in state i)	n/a	-+~+~+~+~ | +~	+~+~-~+~+~ | +~
π_{ii}^b (profit in state ii)	n/a	+~+~+~+~+~ | +~	-~-~-~-~-~ | -~
e_i^b(capital in state i)	n/a	-~0+~+~0 | +~	0+~000 | 0
e_{ii}^b (capital in state ii)	n/a	+~+++~+~ | +~	+~++~+~+~ | +~
$\mu_{d,t}^b$(debt in interbank market)	n/a	+~++~++~ | +~	--~--~-~ | -~
k_i^b (CAR in state i)	n/a	+~+~++~+~ | +~	++~+~+~+~ | +~
k_{ii}^b (CAR in state ii)	n/a	+~+~++~+~ | +~	+~+~++~+~ | +~
v_i^b(repay. rate in state i)	n/a	-~-~--~-~ | -~	+~+~+~+~+~ | +~
v_{ii}^b(repay. rate in state ii)	n/a	-~-~--~-~ | -~	-~-~-~-~-~ | -~
GDP_i	-~-~--~-~ | -~		
GDP_{ii}	-~-~--~-~ | -~		
M	+~+~++~+~ | +~		

Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend
Source: Authors (2020).

Table A4: Directional changes in the endogenous variables in the model under 'Government-assisted merger' scenario with an instant capital injection (Merger 2).

Endogenous variable	Bank γ	Bank δ	Bank τ
r^b(lending rate)	n/a	----- | -	----- | -
r_d^b(deposit rate)	n/a	----~-~ | -	00000 | 0
$\bar{m}_t^b$(credit in the loan market)	n/a	+++++~ | +	+++++ | +
π_i^b (profit in state i)	n/a	-~-~-~-~-~ | -~	--~-~-~-~ | -~
π_{ii}^b (profit in state ii)	n/a	-~-~-~-~-~ | -~	--~-~--~ | -~
e_i^b(capital in state i)	n/a	-~-~-~-~-~ | -~	+++++ | +
e_{ii}^b (capital in state ii)	n/a	-~-~-~-~-~ | -~	+++++ | +
$\mu_{d,t}^b$(debt in interbank market)	n/a	-----~ | -	----- | -
k_i^b (CAR in state i)	n/a	----- | -	----- | -
k_{ii}^b (CAR in state ii)	n/a	----- | -	----- | -
v_i^b(repay. rate in state i)	n/a	-~-~-~-~-~ | -~	--~--~-~ | -~
v_{ii}^b(repay. rate in state ii)	n/a	+~++++ | +	-+~+++ | +
GDP_i	+++++ | +		
GDP_{ii}	+++++ | +		
M	+++++ | +		

Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend
Source: Authors (2020).

Table A5: Directional changes in the endogenous variables in the model under 'Bad bank' scenario with a gradual capital injection (Bad bank 1).

Endogenous variable	Bank γ	Bank δ	Bank τ
r^b(lending rate)	-+~+---- | -	--~----~- | -	------- | -
r_d^b(deposit rate)	0000000 | 0	++~+~+~+~+~ | +~	0000000 | 0
$\bar{m}_t^b$(credit in the loan market)	+++++++ | +	+++++++ | +	+++++++ | +
π_i^b (profit in state i)	+------ | -	----~--~-~ | -	------- | -
π_{ii}^b (profit in state ii)	------- | -	------~- | -	------- | -
e_i^b(capital in state i)	++++++ | +	------~- | -	------- | -
e_{ii}^b (capital in state ii)	++++++ | +	-------~ | -	------- | -
$\mu_{d,t}^b$(debt in interbank market)	------- | -	------- | -	------- | -
k_i^b (CAR in state i)	------- | -	------- | -	------- | -
k_{ii}^b (CAR in state ii)	------- | -	------- | -	------- | -
v_i^b(repay. rate in state i)	+++++++ | +	+------ | -	++~-~--~-- | -~
v_{ii}^b(repay. rate in state ii)	+++++++ | +	-++++++ | +	+++++++ | +
GDP_i	+++++++ | +		
GDP_{ii}	+++++++ | +		
M	+++++++ | +		

Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend
Source: Authors (2020).

Table A6: Directional changes in the endogenous variables in the model under 'Bad bank' scenario with an instant capital injection (Bad bank 2).

Endogenous variable	Bank γ	Bank δ	Bank τ
r^b(lending rate)	-0-~0000 | 0	--~-~0-~--~ | -~	-000000 | 0
r_d^b(deposit rate)	0000000 | 0	-+~+~+~+~+~ +~ | +~	0000000 | 0
$\bar{m}_t^b$(credit in the loan market)	+0-~0-~-~0 | -~	+0-~0000 | 0	--~000-~0 | -~
π_i^b (profit in state i)	-+~+~+~+~+~ +~ | +~	-0-~0000 | 0	-~00-~000 | 0
π_{ii}^b (profit in state ii)	-+~+~+~+~+~ +~ | +~	-~0-~0000 | 0	-~00+~000 | 0
e_i^b(capital in state i)	+0+~00+~0 | +~	-~000000 | 0	-~000000 | 0
e_{ii}^b (capital in state ii)	++~+~+~+~+~ +~ | +~	-000000 | 0	-~00-~000 | 0
$\mu_{d,t}^b$(debt in interbank market)	-00-~000 | 0	-0-0000 | 0	-+~00000 | 0
k_i^b (CAR in state i)	-~+~+~+~+~+~ +~+~ | +~	-+~00+~00 | 0	-~-~-~-~-~+~-~ | -~
k_{ii}^b (CAR in state ii)	-+~+~+~+~+~ +~ | +~	-+~00+~00 | 0	--~-~-~-~-~-~ | -~
v_i^b(repay. rate in state i)	+-~--~-~-~-~ | -~	+000000 | 0	-~+~+~+~+~+~+~ | +~
v_{ii}^b(repay. rate in state ii)	+-~-~-~-~00 | -~	+00-~000 | 0	+-~-~0-~-~0 | -~
GDP_i	+000000 | 0		
GDP_{ii}	+000000 | 0		
M	+0-~00-~0 | 0		

Note: +(-) substantial increase (decrease); +~(-~) weak increase (decrease); 0 – no change; | overall trend.
Source: Authors (2020).

Appendix 3: Variables – definitions and sources.

Type	Variable	Definition	Proxy	Source
Bank-level variable	Loans/Total Assets	The ratio of net loans to Total Assets indicates how much of the total assets of the company are tied up in loans. It is used as proxy for measuring liquidity. The higher the ratio, the more illiquid the bank is.	bank's liquidity	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Loan growth	Year-on-year loan growth expressed as a percentage.	bank's activity level	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Loan Loss Reserves / NPLs	Total value of reserves on risk loans over non-performing loans (%). A loan loss reserves are the expenses set aside as an allowance for uncollected loans and loan payments. This provision is used to cover a number of factors associated with potential loan losses.	bank's risk level	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	ROAE	Return on average equity is a measure of the return on shareholder funds (%). It refers to the performance of a company over a financial year. This ratio is an adjusted version of the return of equity that measures the profitability of a company.	bank's profitability	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Liquid Assets / Total Deposits & Borrowings	The ratio of the value of liquid assets (easily converted to cash) to total deposits and borrowings. Liquid assets include cash and due from banks, trading securities and at fair value through income, loans and advances to banks, reverse repos and cash collaterals. Deposits and borrowings include total customer deposits (current, savings and term) and short term borrowing (money market instruments, CDs and other deposits).	bank's liquidity	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Total Assets	Total assets (in mln USD) expressed in logarithmic form. TA is defined as the assets owned by the entity that has economic value whose benefits can be derived in the future.	bank's market power, diversification, bank's size	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Total capital ratio	The ratio measures the amount of a bank's capital in relation to the amount of risk it is taking. It is a measure of a bank's capital. It is expressed as a percentage of a bank's risk-weighted credit exposures. The enforcement of regulated levels of this ratio is intended to protect depositors and promote financial stability.	bank's capital	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Total equity / total assets	The ratio measures the amount of protection afforded by the bank by the equity they invested in.	bank's capital	S&P Global Market Intelligence, BankFocus/ BankScope

Type	Variable	Definition	Proxy	Source
Bank-level variable	Loan Loss Reserves / Gross Loans	Total value of reserves on risk loans over total loans (%). It indicates the ability of a bank to absorb losses from non-performing loans. It helps to determine the quality of loans.	bank's risk level	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	Net Interest Margin	The difference between the interest income generated by banks and the amount of interest paid out to their lenders, relative to the amount of their assets (%)	bank's profitability	S&P Global Market Intelligence, BankFocus/ BankScope
Bank-level variable	General intervention dummy	Dummy equals to 1 if a bank has received any of the following government interventions: bailout (nationalisation), sale of a bank (merger), 'bad' bank. Dummy equals to 0 for all the other banks.	government intervention	National central banks
Bank-level variable	Bailout dummy	Dummy equals to 1 if a bank was nationalised, i.e. subject to a public financial support in exchange for ownership. Dummy equals to 0 for all the other banks.	government intervention	National central banks
Bank-level variable	Government-assisted merger dummy	Dummy equals to 1 if a bank has been taken over by another bank with help of a government. Dummy equals to 0 for all the other banks.	government intervention	National central banks
Bank-level variable	'Bad' bank dummy	Dummy equals to 1 if a bank was subject to a restructuring process in the form of a separate entity to transfer to its toxic assets. Dummy equals to 0 for all the other banks.	government intervention	National central banks
Industry-level variable	Concentration ratio	The assets of three largest banks as a share of assets of all banks in the economy (%)	market competition	World Bank Financial Structure Database (July 2018)
Industry-level variable	Bank deposits to GDP	Demand, time and saving deposits in deposit money banks as a share of GDP (%)	size of the banking sector	World Bank Financial Structure Database (July 2018)
Country-level variable	GDP growth rate	Annual percentage growth of rate of GDP at market prices based on constant local currency (annual)	-	World Bank Development Indicators (2019)
Country-level variable	Inflation	Annual percentage change in consumer price index (annual), in logarithms	-	IMF (2019)
Country-level variable	Current account balance	The sum of net exports of goods and services, net primary income, and net secondary income expressed as a ratio of GDP (%)	-	IMF (2019)
Country-level variable	Currency crisis	Dummy =1 indicating the currency crisis occurring in the same year as systemic banking crisis	-	Laeven and Valencia (2018)
Country-level variable	Business extent of disclosure index	Disclosure index measures the extent to which investors are protected through disclosure of ownership and financial information. The index ranges from 0 to 10, with higher values indicating more disclosure.	-	World Bank, Doing Business project (2019)

Type	Variable	Definition	Proxy	Source
Country-level variable	Legal origin	Classification of legal origin following La Porta et al. (1999): French, German, Scandinavian, British, Socialist	-	La Porta et al. (1999)
Country-level variable	Developing country	Dummy = 1 indicating if a country is a developing country	-	World Bank (2019)

Source: Authors (2020).

Appendix 4: Summary statistics for the industry- and country-level variables.

Variable name	n	Mean	Median	Minimum	Maximum	Standard deviation
Concentration ratio	4,911	56.043	56.588	24.740	100	18.752
GDP growth rate	5,180	1.727	1.842	-13.126	25.117	3.338
Inflation (ln)	4,395	.750	.670	-4.791	6.964	1.072
Currency crisis (Yes=1; Otherwise=0)	5,182	.185	0	0	1	.388
Developing country (Yes=1; Otherwise=0)	5,182	.1777	0	0	1	.382
Financial crisis ’08 (Yes=1; Otherwise=0)	5,182	.214	0	0	1	.410
US (Yes=1; otherwise=0)	5,182	.316	0	0	1	.465
Business extent of disclosure index	3,403	6.963	7.4	1	10	1.668
Credit boom index (Yes=1, Otherwise=0)	5,182	.187	0	0	1	.391

Notes: This table shows the summary statistics for the industry- and country-level variables used in the empirical analysis on the impact of government interventions on banks performance. All variable definitions and data sources are provided in Annex 4.
Source: Authors’ calculation (2020).